INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: August 6, 2007

RE: ASA Linden, LLC / 107-24506-00061

FROM: Nisha Sizemore
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, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 03/23/06

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(317) 232-8603
(800) 451-6027
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Glen Wooley
ASA Linden, LLC
203 West County Road 1100 North
Linden, Indiana 47955

August 6, 2007

Re: 107-24506-00061
Second Significant Revision to
FESOP No. 107-21453-00061

Dear Mr. Wooley:

ASA Linden, LLC was issued a Federally Enforceable State Operating Permit (FESOP) No. 107-21453-00061 on February 8, 2006, for the construction and operation of an ethanol production plant. A letter requesting changes to this permit was received on March 23, 2007. Pursuant to the provisions of 326 IAC 2-8-11(f), a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

This source has not completed the construction of this new plant and has requested to modify the plant design permitted in FESOP No. 107-21453-00061, issued on February 8, 2006. However, this revision will not increase the ethanol production rate at this plant. The revision consists of deleting the restriction of 438 hours per year of thermal oxidizer bypass for the DDGS cooling drum (EU046); adding PM/PM10 and VOC emission limits on the cooling drum exhaust stream (EP007); revising the heat inputs of each of the DDGS dryers to 45 MMBtu/hr; adding PM/PM10 emissions limits on the scrubber controlling the fermentation process; adding the fugitive PM/PM10 emissions associated with the DDGS flat storage; revising the truck traffic emissions to reflect a realignment of the facility's roads; adding a condition to not allow the use of anti-skid materials, rock salt, or other chemical deicers to remove ice and snow from source hauling roads or parking areas; revising storage tank VOC emissions and update the descriptive information of Tank T006; revising equipment leak VOC emissions to reflect updated equipment vendor information; revising the cooling tower PM/PM10 emissions to reflect a lower cooling water TDS content; adding an hourly operating limit to the biomethanator flare; and deleting the VOC emission estimates from DDGS Storage, Conveyor, and Loadout, because no VOC emissions are expected from these operations.

The following conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval 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.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval 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.

5. All requirements and conditions of this approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

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 is a copy of the revised permit.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Jason Renzaglia, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7893 to speak directly to Mr. Renzaglia. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-6878.

Sincerely/Original Signed by:

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/JR

cc: File – Montgomery County
Montgomery County Health Department
Air Compliance Section Inspector – Jim Thorpe
Compliance Data Section
Administrative and Development
Technical Support and Modeling
Billing, Licensing, and Training Section – Dan Stamatkin

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NEW SOURCE REVIEW AND FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR QUALITY

ASA Linden, LLC
203 West County Road 1100 North
Linden, Indiana 47955

(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 provision 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.

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.

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

Operation Permit No.: F107-21453-00061	
Issued by: Paul Dubenetzky, Assistant Commissioner Office of Air Quality	Issuance Date: February 8, 2006 Expiration Date: February 8, 2011

First Significant Permit Revision No: 107-22874-00061, issued October 6, 2006

Second Significant Permit Revision No: 107-24506-00061	Affected Pages:
Signed by/Original Signed By: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: August 6, 2007 Expiration Date: February 8, 2011

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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 A.3, and A.4 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:	203 West County Road 1100 North, Linden, Indiana 47955
Mailing Address:	5010 Riverside Drive, Suite 350, Irving, Texas 75039
General Source Phone:	(214) 740-6800
SIC Code:	2869
Source Location Status:	Montgomery Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Source Definition [326 IAC 2-8-1] [326 IAC 2-7-1(22)]

The following two (2) companies are located on adjacent properties and have a supporting relationship:

(a) Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), an existing grain elevator (SIC 5153), which started operation in 1972.

(b) ASA Linden, LLC (Plant ID #107-00061), a new ethanol production plant (SIC 2869). All the grain received at the ethanol plant will be from Cargill AgHorizons - Linden Grain Elevator.

Since these two (2) plants are located on adjacent properties and have a supporting relationship, IDEM, OAQ has determined that these two (2) plants are considered one (1) single source for purposes of determining the potential to emit regulated air pollutants and applicable requirements under the Clean Air Act (as amended by the 1990 Clean Air Act Amendments), Title 40 of the Code of Federal Regulations (CFR), and Title 326 of the Indiana Administrative Code (IAC). Separate FESOPs will be issued to Plant #107-00009 and #107-00061 solely for administrative purposes.

A.3 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) corn conveyor, identified as EU001, approved for construction in 2005, with a maximum throughput rate of 420 tons of corn per hour, controlled by baghouse CE001, with emissions exhausted through stack EP001.

(b) Four (4) hammermills, identified as EU002 through EU005, approved for construction in 2005, each with a maximum throughput rate of 36 tons of corn per hour, controlled by baghouse CE002, with emissions exhausted through stack EP002.

(c) One (1) fermentation process, approved for construction in 2005, with a maximum throughput rate of 13,470 gallons of ethanol per hour, and consisting of the following:

(1) Seven (7) fermenters, identified as EU025 through EU031, controlled by CO_2 scrubber CE004, with emissions exhausted through stack EP004.

(2) One (1) beer well, identified as EU032, controlled by CO_2 scrubber CE004, with emissions exhausted through stack EP004.

(d) Two (2) thermal oxidizer with heat recovery steam generator (TO/HRSG) systems, identified as CE003 and CE006, approved for construction in 2005, each with a nominal heat input rate of 143 MMBtu/hr, using natural gas as fuel, with emissions exhausted through stack EP003.

(e) One (1) distillation process, approved for construction in 2005, with a maximum throughput rate of 13,470 gallons of ethanol per hour, controlled by the TO/HRSG systems (CE003 and CE006), with emissions exhausted through stack EP003. This process consists of the following:

(1) One (1) mixer, identified as EU006.

(2) Two (2) slurry tanks, identified as EU007 and EU008.

(3) One (1) flash tank, identified as EU009.

(4) One (1) cook cube, identified as EU010.

(5) Four (4) liquifaction tanks, identified as EU011 through EU014.

(6) Two (2) yeast tanks, identified as EU015 and EU016.

(7) One (1) beer column, identified as EU017.

(8) One (1) side stripper, identified as EU018.

(9) One (1) rectifier column, identified as EU019.

(10) One (1) 190 proof condenser, identified as EU020.

(11) Molecular sieves, identified as EU021.

(12) One (1) 200 proof condenser, identified as EU022.

(f) Two (2) natural gas fired DDGS dryers, identified as EU039 and EU040, approved for construction in 2005, with a nominal combined heat input rate of 90.0 MMBtu/hr and each with a maximum throughput rate of 25 tons/hr of DDGS, controlled by the multicyclones C60 and C61 and the TO/HRSG system CE003, exhausted to stack EP003.

(g) Two (2) natural gas fired DDGS dryers, identified as EU042 and EU043, approved for construction in 2005, with a nominal combined heat input rate of 90.0 MMBtu/hr and each with a maximum throughput rate of 25 tons/hr of DDGS, controlled by multicyclones C70 and C71 and the TO/HRSG system CE006, with emissions exhausted to stack EP003.

(h) One (1) DDGS cooling drum, identified as EU046, approved for construction in 2005, with a maximum throughput rate of 100 tons/hr of DDGS, controlled by a baghouse, identified as CE008, and exhausting through stack EP007, and the TO/HRSG systems CE003 and CE006, exhausting to stack EP003. Note: A portion of the exhaust from the baghouse

CE008 exhausts to each of two (2) TO/HRSG systems CE003 and CE006 to provide combustion air.

(i) One (1) DDGS handling and loadout operation, approved for construction in 2005, with a maximum throughput rate of 120 tons/hr of DDGS, controlled by baghouse CE005, with emissions exhausted to stack EP005, and consisting of the following:

(1) Two (2) DDGS storage bins, identified as EU035;

(2) One (1) DDGS conveyor, identified as EU036; and

(3) One (1) DDGS truck/rail loadout spout, identified as EU037.

(j) One (1) ethanol loading rack for both railcar and truck loading, identified as EU047, approved for construction in 2005, with a maximum throughput rate of 48,000 gallons per hour. Railcars are dedicated to carrying denatured ethanol product. Trucks are not dedicated to carrying denatured ethanol. Both the railcar loading and truck loading processes are controlled by the enclosed flare CE009, which has a maximum heat input capacity of 6.4 MMBtu/hr and exhausts through stack EP008.

A.4 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) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(b) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

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

(d) Forced and induced draft cooling tower system not regulated under a NESHAP, including a cooling tower which has a maximum flow rate of 55,000 gallons per minute.

(e) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(f) Heat exchanger cleaning and repair.

(g) Process vessel degassing and cleaning to prepare for internal repairs.

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

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

(j) Stationary fire pumps, including one (1) diesel fire pump, identified as EU048, approved for construction in 2005, with a maximum power output rate of 290 horsepower, and exhausting to stack EP009.

(k) 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) tons per year of any combination of HAPs:

(1) Two (2) denatured ethanol storage tanks, identified as T001 and T002, approved for construction in 2005, each with a maximum capacity of 1,500,000 gallons.

(2) One (1) 200 proof storage tank, identified as T003, approved for construction in 2005, with a maximum capacity of 200,000 gallons.

(3) One (1) denaturant storage tank, identified as T004, approved for construction in 2005, with a maximum capacity of 200,000 gallons.

(4) One (1) 190 proof storage tank, identified as T005, approved for construction in 2005, with a maximum capacity of 200,000 gallons.

(5) One (1) corrosion inhibitor storage tank, identified as T006, approved for construction in 2005, with a maximum capacity of 2,300 gallons.

(6) One (1) methanator, approved for construction in 2005, controlled by one of the thermal oxidizers CE003 and CE006, and exhausting to stack EP003, or controlled by the 6.4 MMBtu/hr biomethanator flare CE007, and exhausting to stack EP006, when the thermal oxidizers CE003 and CE006 are not in operation.

A.5 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 Permit Term [326 IAC 2-8-4(2)] [326 IAC 2-1.1-9.5]

(a) This permit, F107-21453-00061, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

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

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

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

B.4 Enforceability [326 IAC 2-8-6]

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

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

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

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

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

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

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

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

B.8 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.9 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.10 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

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

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

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

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

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

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) immediately upon startup of plant operations, for the source as described in 326 IAC 1-6-3. At a minimum, the PMPs shall include:

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

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

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

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

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

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

(b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

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

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

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

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

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

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

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

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

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

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

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

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

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

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

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

(a) All terms and conditions of permits established prior to F107-21453-00061 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

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

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

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

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

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement

that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

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

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

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

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

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

(1) That this permit contains a material mistake.

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

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

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

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

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

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

Request for renewal shall be submitted to:

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

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

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

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

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

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

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

(4) The Permittee notifies the:

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

and

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

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

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

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

(b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

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

(a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-8-4(3)] [326 IAC 2-8-5] [62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) 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 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 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the following plan submitted on April 20, 2006:

(a) Fugitive particulate matter emissions from paved roads and parking lots shall be controlled by cleaning and vacuum sweeping on an as needed basis.

C.8 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.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

C.10 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 Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

C.11 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.12 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 immediately upon startup of plant 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 upon startup of plant 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 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.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 have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale.

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

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

C.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 within ninety (90) days of permit issuance.

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 IAC2-1.1-1(1).

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

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

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

Stratospheric Ozone Protection

C.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) corn conveyor, identified as EU001, approved for construction in 2005, with a maximum throughput rate of 420 tons of corn per hour, controlled by baghouse CE001, with emissions exhausted through stack EP001.

(b) Four (4) hammermills, identified as EU002 through EU005, approved for construction in 2005, each with a maximum throughput rate of 36 tons of corn per hour, controlled by baghouse CE002, with emissions exhausted through stack EP002.

(i) One (1) DDGS handling and loadout operation, approved for construction in 2005, with a maximum throughput rate of 120 tons/hr of DDGS, controlled by baghouse CE005, with emissions exhausted to stack EP005, and consisting of the following:

(1) Two (2) DDGS storage bins, identified as EU035;

(2) One (1) DDGS conveyor, identified as EU036; and

(3) One (1) DDGS truck/rail loadout spout, identified as EU037.

Insignificant Activity:

(h) 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 2-1 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 thereunder, as well as other applicable local, state, and federal requirements.

D.1.2 Federally Enforceable State Operating Permit [326 IAC 2-8]

The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application.

Effective Date of the Permit

D.1.3 Effective Date of the Permit [IC 13-15-5-3]

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

D.1.4 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.1.5 PM and PM10 Emissions [326 IAC 2-2] [326 IAC 2-8-4]

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

Unit Description	Baghouse ID	PM Emission Limit (lbs/hr)	PM10 Emission Limit (lbs/hr)
Corn Conveyor EU001	CE001	1.29	1.29
Hammermills EU002 through EU005	CE002	1.20	1.20
DDGS Handling and Loadout Operations	CE005	0.39	0.39

Combined with the PM10 emissions from other emission units and the PM10 emissions from Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), the PM10 emissions from the entire source are limited to less than 100 tons/yr. Combined with the PM emissions from other emission units, and the PM emissions from Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), the PM emissions from the entire source are limited to less than 250 tons/yr. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (PSD) are not applicable.

D.1.6 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	Corn Conveyor	420	66.9
EU002	Hammermill	36	41.6
EU003	Hammermill	36	41.6
EU004	Hammermill	36	41.6
EU005	Hammermill	36	41.6
EU035	DDGS Storage	120	53.1
EU036	DDGS Conveyor	120	53.1
EU037	DDGS Loadout	120	53.1

The pounds per hour limitations were calculated using the following equation:

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

D.1.7 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 any control devices.

Compliance Determination Requirements

D.1.8 Particulate Control

(a) In order to comply with Conditions D.1.5(a) and D.1.6, 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	Corn Conveyor	CE001
EU002	Hammermill	CE002
EU003	Hammermill	CE002
EU004	Hammermill	CE002
EU005	Hammermill	CE002
EU035	DDGS Storage	CE005
EU036	DDGS Conveyor	CE005
EU037	DDGS Loadout	CE005

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

In order to demonstrate compliance with Conditions D.1.5(a) and D.1.6, the Permittee shall perform PM and PM10 testing for baghouses CE001, CE002, and CE005 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. PM-10 includes filterable and condensible PM-10.

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

D.1.10 Visible Emissions Notations

(a) Visible emission notations of the baghouse stack exhausts (stacks EP001, EP002, and EP005) 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.1.11 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the corn conveyor (EU001), the hammermills (EU002 through EU005), and the DDGS handling and loadout operations (EU035 through EU037), 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.

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.1.12 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.1.13 Record Keeping Requirements

(a) To document compliance with Condition D.1.10, the Permittee shall maintain records of daily visible emission notations of the baghouse stack exhausts. 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) To document compliance with Condition D.1.11, the Permittee shall maintain daily records of pressure drop for baghouses during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

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

SECTION D.2 FACILITY OPERATION CONDITIONS – Fermentation Process

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

(c) One (1) fermentation process, approved for construction in 2005, with a maximum throughput rate of 13,470 gallons of ethanol per hour, and consisting of the following:

(1) Seven (7) fermenters, identified as EU025 through EU031, controlled by CO_2 scrubber CE004, with emissions exhausted through stack EP004.

(2) One (1) beer well, identified as EU032, controlled by CO_2 scrubber CE004, with emissions exhausted through stack EP004.

(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.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 thereunder, as well as other applicable local, state, and federal requirements.

D.2.2 Federally Enforceable State Operating Permit [326 IAC 2-8]

The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application.

Effective Date of the Permit

D.2.3 Effective Date of the Permit [IC 13-15-5-3]

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

D.2.4 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.2.5 VOC and HAP Emissions [326 IAC 2-2] [326 IAC 2-8-4] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4 (FESOP), emissions from wet scrubber CE004, which is used to control the emissions from the fermentation process, shall comply with the following:

(1) VOC emissions shall not exceed 10.2 lbs/hr.

(2) Acetaldehyde emissions shall not exceed 1.18 lbs/hr.

(3) Total HAP emissions shall not exceed 1.26 lbs/hr.

(4) PM/PM10 emissions shall not exceed 0.20 lbs/hr.

Combined with the PM/PM10, VOC, and HAP emissions from other emissions units and the VOC and HAP emissions from Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), the PM/PM10 and VOC emissions from the entire source are 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 2-4.1 (MACT) are not applicable.

D.2.6 VOC Emissions [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following:

(a) The VOC emissions from the fermentation process shall be controlled by wet scrubber CE004.

(b) The overall VOC control efficiency for the wet scrubber CE004 (including the capture efficiency and absorption efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 20 ppmv.

D.2.7 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in Condition D.2.8 except when otherwise specified in 40 CFR 60, Subpart VV.

D.2.8 Equipment Leaks of VOC [326 IAC 12] [40 CFR 60, Subpart VV]

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

D.2.9 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.2.10 VOC and HAP Control

In order to comply with Conditions D.2.5 and D.2.6, wet scrubber CE004 shall be in operation and control emissions from the fermentation process at all times that this process is in operation.

D.2.11 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] [326 IAC 8-5-6]

In order to verify compliance with Conditions D.2.5 and D.2.6, the Permittee shall perform PM/PM10, VOC (including emission rate, and overall control efficiency), and Acetaldehyde testing for scrubber CE004 within 60 days after achieving the maximum capacity, but not later than 180 days after initial startup, utilizing methods as approved by the Commissioner. PM10 includes filterable and condensible 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.

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

D.2.12 Parametric Monitoring [326 IAC 8-5-6]

The Permittee shall monitor and record the pressure drop and flow rate of scrubber CE004, at least once per day when the associated fermentation process is in operation. When for any one reading, the pressure drop across the scrubber is outside the normal range of 1.0 and 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 - Compliance Response Plan - Response to Excursions or Exceedances. When for any one reading, the flow rate of any of the scrubbers is less than the minimum of 40 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.

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

D.2.13 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document compliance with Condition D.2.12, the Permittee shall maintain daily records of pressure drop and flow rate for scrubber CE004 during normal operation. The Permittee shall include in its daily record when a pressure drop or flow rate reading is not taken and the reason for the lack of a pressure drop or flow rate reading (e.g. the process did not operate that day).

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

SECTION D.3 FACILITY OPERATION CONDITIONS – TO/HRSG Systems, Distillation, DDGS Drying, and DDGS Cooling

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

(d) Two (2) thermal oxidizer with heat recovery steam generator (TO/HRSG) systems, identified as CE003 and CE006, approved for construction in 2005, each with a nominal heat input rate of 143 MMBtu/hr, using natural gas as fuel, with emissions exhausted through stack EP003.

(e) One (1) distillation process, approved for construction in 2005, with a maximum throughput rate of 13,470 gallons of ethanol per hour, controlled by the TO/HRSG systems (CE003 and CE006), with emissions exhausted through stack EP003. This process consists of the following:

(1) One (1) mixer, identified as EU006.

(2) Two (2) slurry tanks, identified as EU007 and EU008.

(3) One (1) flash tank, identified as EU009.

(4) One (1) cook cube, identified as EU010.

(5) Four (4) liquifaction tanks, identified as EU011 through EU014.

(6) Two (2) yeast tanks, identified as EU015 and EU016.

(7) One (1) beer column, identified as EU017.

(8) One (1) side stripper, identified as EU018.

(9) One (1) rectifier column, identified as EU019.

(10) One (1) 190 proof condenser, identified as EU020.

(11) Molecular sieves, identified as EU021.

(12) One (1) 200 proof condenser, identified as EU022.

(f) Two (2) natural gas fired DDGS dryers, identified as EU039 and EU040, approved for construction in 2005, with a nominal combined heat input rate of 90.0 MMBtu/hr and each with a maximum throughput rate of 25 tons/hr of DDGS, controlled by the multicyclones C60 and C61 and the TO/HRSG system CE003, exhausted to stack EP003.

(g) Two (2) natural gas fired DDGS dryers, identified as EU042 and EU043, approved for construction in 2005, with a nominal combined heat input rate of 90.0 MMBtu/hr and each with a maximum throughput rate of 25 tons/hr of DDGS, controlled by multicyclones C70 and C71 and the TO/HRSG system CE006, with emissions exhausted to stack EP003.

(h) One (1) DDGS cooling drum, identified as EU046, approved for construction in 2005, with a maximum throughput rate of 100 tons/hr of DDGS, controlled by a baghouse, identified as CE008, and exhausting through stack EP007, and the TO/HRSG systems CE003 and CE006, exhausting to stack EP003. Note: A portion of the exhaust from the baghouse CE008 exhausts to each of two (2) TO/HRSG systems CE003 and CE006 to provide combustion air.

(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.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 thereunder, as well as other applicable local, state, and federal requirements.

D.3.2 Federally Enforceable State Operating Permit [326 IAC 2-8]

The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application.

Effective Date of the Permit

D.3.3 Effective Date of the Permit [IC 13-15-5-3]

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

D.3.4 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.3.5 FESOP Limits [326 IAC 2-2] [326 IAC 2-8-4] [326 IAC 2-4.1]

(a) Pursuant to 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following emission limits for the baghouse CE008 which controls a portion of the exhaust from the DDGS cooling drum (EU046) and exhausts through Stack EP007:

(1) PM/PM10 emissions shall not exceed 0.64 lbs/hr.

(2) VOC emissions shall not exceed 0.0183 lbs/ton DDGS.

(3) The total DDGS produced shall not exceed 370,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The TO/HRSG systems (CE003 and CE006) are used to control the emissions from the distillation process, the DDGS dryers (EU039, EU040, EU042, and EU043), and a portion of the DDGS cooling drum exhaust (EU046). Pursuant to 326 IAC 2-8-4 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, emissions from the TO/HRSG systems stack EP003 shall not exceed the following.

(1) PM emissions shall not exceed 7.45 lbs/hr.

(2) PM10 emissions shall not exceed 7.45 lbs/hr.

(3) VOC emissions shall not exceed 8.50 lbs/hr.

(4) CO emissions shall not exceed 20.91 lbs/hr.

(5) SO_2 emissions shall not exceed 18.63 lbs/hr.

(6) NOx emissions shall not exceed 21.17 lbs/hr.

(7) Acetaldehyde emissions shall not exceed 0.72 lbs/hr.

(8) Total HAP emissions shall not exceed 2.19 lbs/hr.

Combined with the PM/PM10, VOC, SO_2, CO, NOx, and HAP emissions from other emission units, and the PM/PM10, SO_2, VOC, CO, NOx, and HAP emissions from Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), the PM/PM10, SO_2, 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 2-4.1 (MACT) are not applicable.

D.3.6 VOC Emissions [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following:

(a) The VOC emissions from the distillation process shall be controlled by the TO/HRSG system CE003 or CE006.

(b) The VOC emissions from the DDGS dryers (EU039, EU040) shall be controlled by the TO/HRSG system CE003.

(c) The VOC emissions from the DDGS dryers (EU042, EU043) shall be controlled by the TO/HRSG system CE006.

(d) The overall VOC control efficiency for each of the TO/HRSG systems CE003 and CE006 (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 10 ppmv.

D.3.7 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the TO/HRSG systems CE003 and CE006, except when otherwise specified in 40 CFR Part 60, Subpart Db.

D.3.8 NOx Emissions [326 IAC 12-1] [40 CFR 60, Subpart Db]

(a) Pursuant to 40 CFR 60.44b, the NOx emissions from the TO/HRSG systems (CE003 and CE006) shall not exceed 0.1 lbs/MMBtu.

(b) Pursuant to 40 CFR 60.48b(b), except for 40 CFR 60.48b(g), (h), and (i), the Permittee shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides emissions discharged to the atmosphere.

D.3.9 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in Condition D.3.10 except when otherwise specified in 40 CFR 60, Subpart VV.

D.3.10 Equipment Leaks of VOC [326 IAC 12] [40 CFR 60, Subpart VV]

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

D.3.11 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from each of the 143 MMBtu/hr TO/HRSG systems (CE003 and CE006) shall be limited to 0.25 pounds per MMBtu heat input.

The limit was calculated using the following equation:

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

Where Pt = emission rate limit (lbs/MMBtu)
Q = total source heat input capacity (MMBtu/hr)

D.3.12 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)
EU039	DDGS Dryer	25.0	35.4
EU040	DDGS Dryer	25.0	35.4
EU042	DDGS Dryer	25.0	35.4
EU043	DDGS Dryer	25.0	35.4
EU046	DDGS Cooling Drum	100	51.3

The pounds per hour limitations were calculated using one of the following equations:

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

D.3.13 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.3.14 VOC and HAP Control

In order to comply with Conditions D.3.5 and D.3.6, the TO/HRSG systems (CE003 and CE006) shall be in operation and control emissions from the following units as follows:

(a) the distillation process units at all times that these units are in operation;

(b) the DDGS dryers (EU039, EU040, EU042, and EU043) at all times that these units are in operation; and

(c) the DDGS cooling drum (EU046) at all times that EU046 is in operation.

D.3.15 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] [326 IAC 2-2] [40 CFR 60, Subpart Db] [326 IAC 8-5-6]

(a) In order to demonstrate compliance with Conditions D.3.5(b), D.3.6, D.3.11, and D.3.12, the Permittee shall perform PM, PM10, VOC (including emission rate and overall control efficiency), NOx, SO_2, CO, and Acetaldehyde testing for the TO/HRSG systems stack (EP003) within 60 days after achieving maximum capacity, but not later than 180 days after initial startup, utilizing methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10. 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.3.8(a) and pursuant to 40 CFR 60.46b(e), the Permittee shall conduct the performance test as required under 40 CFR 60.8 using the continuous system for monitoring nitrogen oxides under 40 CFR 60.48(b). For the initial compliance test, nitrogen oxides from the TO/HRSG systems stack (EP003) are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under 40 CFR 60.44b. Following the date on which the initial performance test is completed, the Permittee shall upon request determine compliance with the nitrogen oxides standards under 40 CFR 60.44b through the use of a 30-day performance test.

(c) In order to demonstrate compliance with Conditions D.3.5(a) and D.3.12, the Permittee shall perform PM, PM10, and VOC testing for the DDGS cooling drum stack (EP007) 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.

D.3.16 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12] [40 CFR 60, Subpart Db]

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 40 CFR 60.47b and 60.48b, a continuous monitoring system shall be calibrated, maintained, and operated for measuring NOx, which meets the performance specifications of 326 IAC 3-5-2.

(b) Pursuant to 326 IAC 3-5-4, if revisions are made to the continuous monitoring standard operating procedures (SOP), the Permittee shall submit updates to the department biennially.

(c) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5, 326 IAC 10-4, 40 CFR 60, or 40 CFR 75.

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

D.3.17 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust from the TO/HRSG systems stack EP003 shall be performed once per day during normal daylight operations. A trained employee 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.3.18 Thermal Oxidizer Temperature [326 IAC 8-5-6]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on each of the TO/HRSG systems (CE003 and CE006) for measuring operating temperature. For the purpose of this condition, continuous means no less than once per minute. The output of this system shall be recorded as a 3-hour average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizers 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.3.5 and D.3.6, 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.3.19 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.3.5 and D.3.6, as approved by IDEM.

(b) The duct pressure or fan amperage shall be observed at least once per day when the TO/HRSG systems are 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.

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

D.3.20 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document compliance with Condition D.3.5(a)(3), the Permittee shall maintain monthly records of the amount of DDGS produced.

(b) To document compliance with Condition D.3.17, the Permittee shall maintain records of daily visible emission notations of the stack EP003. 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.3.18, the Permittee shall maintain continuous temperature records for the thermal oxidizers and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(d) To document compliance with Condition D.3.19, the Permittee shall maintain daily records of the duct pressure or fan amperage for the thermal oxidizers. The Permittee shall include in its daily record when a pressure or fan amperage reading is not taken and

the reason for the lack of a pressure or fan amperage reading (e.g. the process did not operate that day).

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

D.3.21 Recordkeeping Requirements [40 CFR 60, Subpart Db] [326 IAC 12]

(a) Pursuant to 40 CFR 60.49b(d), the Permittee shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for natural gas 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.

(b) Pursuant to 40 CFR 60.49b(g), the Permittee shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date.

(2) The average hourly nitrogen oxides emission rates (expressed as NO2) (ng/J or lb/million Btu heat input) measured or predicted.

(3) The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu 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 nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under 40 CFR 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 continuous monitoring system.

(9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

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

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

D.3.22 Reporting Requirements [40 CFR 60, Subpart Db] [326 IAC 12]

(a) Pursuant to 40 CFR 60.49b(a), the Permittee shall submit notification of the date of initial startup, as provided by 40 CFR 60.7. This notification shall include the information specified in 40 CFR 60.49b(a)(1) through (4).

(b) Pursuant to 40 CFR 60.49b(b), the Permittee shall submit performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B.

(c) Pursuant to 40 CFR 60.49b(h), the Permittee shall submit excess emission reports for any excess emissions which occurred during the reporting period.

(d) Pursuant to 40 CFR 60.49b(i), the Permittee shall submit reports containing the information recorded under 40 CFR 60.49b(g) and Condition D.3.21(b).

(e) Pursuant to 40 CFR 60.49b(v), the Permittee may submit electronic quarterly reports for NOx in lieu of submitting the written reports required. The format of each quarterly electronic report shall be coordinated with IDEM, OAQ. 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, 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 Permittee shall coordinate with IDEM, OAQ to obtain their agreement to submit reports in this alternative format.

(f) Pursuant to 40 CFR 60.49b(w), the Permittee shall submit the above reports each six (6) month period. All reports shall be submitted to the Administrator and IDEM, and shall be postmarked by the 30th day following the end of the reporting period.

SECTION D.4 FACILITY OPERATION CONDITIONS – Ethanol Loading Rack

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

(j) One (1) ethanol loading rack for both railcar and truck loading, identified as EU047, approved for construction in 2005, with a maximum throughput rate of 48,000 gallons per hour. Railcars are dedicated to carrying denatured ethanol product. Trucks are not dedicated to carrying denatured ethanol. Both the railcar loading and truck loading processes are controlled by the enclosed flare CE009, which has a maximum heat input capacity of 6.4 MMBtu/hr and exhausts through stack EP008.

(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.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.

D.4.2 Federally Enforceable State Operating Permit [326 IAC 2-8]

The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application.

Effective Date of the Permit

D.4.3 Effective Date of the Permit [IC 13-15-5-3]

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

D.4.4 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.4.5 FESOP Limits [326 IAC 2-2] [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 ethanol loading rack (EU047):

(a) The Permittee shall use flare CE009 to control the emissions from the loading rack when this unit is in operation.

(b) The denatured ethanol loadout shall not exceed 123.9 MM gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) NOx emissions from flare CE009 shall not exceed 0.0168 lbs/kgal of denatured ethanol loaded.

(d) CO emissions from flare CE009 shall not exceed 0.0392 lbs/kgal of denatured ethanol loaded

(e) The ethanol loading rack (EU047) shall utilize the submerged loading method.

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

Combined with the VOC, CO, NOx, and HAP emissions from other emission units, and the VOC, CO, NOx, and HAP emissions from Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), 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 2-4.1 (MACT) are not applicable.

D.4.6 VOC Emissions [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following:

(a) The VOC emissions from the ethanol loading rack (EU047) shall be collected and controlled by enclosed flare CE009 when this unit is in operation.

(b) The overall efficiency for the enclosed flare CE009 (including the capture efficiency and destruction efficiency) shall be at least 98%.

D.4.7 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in Condition D.4.8 except when otherwise specified in 40 CFR 60, Subpart VV.

D.4.8 Equipment Leaks of VOC [326 IAC 12] [40 CFR 60, Subpart VV]

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

D.4.9 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.4.10 VOC and HAP Control

In order to comply with Conditions D.4.5 and D.4.6, enclosed flare CE009 shall be in operation and control emissions from the ethanol loading rack (EU047) at all times when this unit is in operation.

D.4.11 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.4.5 and D.4.6, the Permittee shall perform VOC (including emission rate and overall control efficiency), CO, and NOx testing for enclosed flare CE009 within 60 days after achieving the maximum production, 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.4.12 Flare Pilot Flame [326 IAC 8-5-6]

In order to comply with Conditions D.4.5 and D.4.6, the Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when the ethanol loading rack is in operation.

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

D.4.13 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document compliance with Condition D.4.5(b), the Permittee shall maintain monthly records of the amount of denatured ethanol loadout.

(b) To document compliance with Condition D.4.12, the Permittee shall maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when the loading rack is in operation.

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

D.4.14 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.5(b) 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.5 FACILITY OPERATION CONDITIONS – Fire Pump and Biomethanator

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

(j) Stationary fire pumps, including one (1) diesel fire pump, identified as EU048, approved for construction in 2005, with a maximum power output rate of 290 horsepower, and exhausting to stack EP009.

(k) 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) tons per year of any combination of HAPs:

(6) One (1) methanator, approved for construction in 2005, controlled by one of the thermal oxidizers CE003 and CE006, and exhausting to stack EP003, or controlled by the 6.4 MMBtu/hr biomethanator flare CE007, and exhausting to stack EP006, when the thermal oxidizers CE003 and CE006 are not in operation.

(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.5.1 FESOP Limits [326 IAC 2-2] [326 IAC 2-8-4] [326 IAC 2-4.1]

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

(a) The operating hours for the diesel fire pump (EU048) shall not exceed 250 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The NOx emissions from the diesel fire pump (EU048) shall not exceed 8.99 lbs/hr.

(c) The CO emissions from the diesel fire pump (EU048) shall not exceed 1.94 lbs/hr.

(d) The operating hours for the biomethanator flare (CE007) shall not exceed 876 hours per twelve (12) consecutive month period with compliance determined at the end of each month. The biomethanator gas shall be combusted in either the TO/HRSG systems or the biomethanator flare during all times of biomethanator operation.

Combined with the CO and NOx emissions from other emission units, and the CO and NOx emissions from Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), the CO and NOx emissions from the entire source are each 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.

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

D.5.2 Record Keeping Requirements

(a) To document compliance with Condition D.5.1(a), the Permittee shall maintain monthly records of the operating hours for the diesel fire pump (EU048).

(b) To document compliance with Condition D.5.1(d), the Permittee shall maintain monthly records of the operating hours for the biomethanator flare (CE007).

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

D.5.3 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.5.1(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.6 FACILITY OPERATION CONDITIONS – Storage Tanks

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

(k) 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) tons per year of any combination of HAPs:

(1) Two (2) denatured ethanol storage tanks, identified as T001 and T002, approved for construction in 2005, each with a maximum capacity of 1,500,000 gallons.

(2) One (1) 200 proof storage tank, identified as T003, approved for construction in 2005, with a maximum capacity of 200,000 gallons.

(3) One (1) denaturant storage tank, identified as T004, approved for construction in 2005, with a maximum capacity of 200,000 gallons.

(4) One (1) 190 proof storage tank, identified as T005, approved for construction in 2005, with a maximum capacity of 200,000 gallons.

(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 Volatile Organic Compounds (VOC) [326 IAC 8-9]

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 tank T004:

(a) The types of volatile petroleum liquid stored;

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

(c) 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.6.2 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60, Subpart Kb.

D.6.3 Storage Tanks [326 IAC 12] [40 CFR 60, Subpart Kb]

Pursuant to 40 CFR 60, Subpart Kb, the Permittee shall install internal floating roofs with tanks T001 through T005 and shall comply with the following requirements in 40 CFR 60.112b (a)(1) for the internal floating roofs:

(a) 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.

(b) 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:

(1) 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.

(2) 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.

(3) 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.

(c) 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.

(d) 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.

(e) 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.

(f) 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.

(g) 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.

(h) 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.

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

D.6.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

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

D.6.5 Testing and Procedures [40 CFR 60, Subpart Kb] [326 IAC 12]

Pursuant to 40 CFR 60.113b, the Permittee shall comply with the following requirement:

(a) 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.

(b) 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 40 CFR 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.

(c) For vessels equipped with a double-seal system as specified in 40 CFR 60.112b(a)(1)(ii)(B):

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

(2) Visually inspect the vessel as specified in 40 CFR 60.113(a)(2).

(d) 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 40 CFR 60.113(a)(2) and (a)(3)(ii) and at intervals no greater than 5 years in the case of vessels specified in 40 CFR 60.113(a)(3)(i).

(e) Notify the IDEM, OAQ in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 40 CFR 60.113(a)(1) and (a)(4) to afford IDEM, OAQ the opportunity to have an observer present. If the inspection required by 40 CFR 60.113 (a)(4) is not planned and the Permittee could not have known about the inspection 30 days in advance or refilling the tank, the Permittee shall notify the IDEM, OAQ at least seven (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 IDEM, OAQ at least seven (7) days prior to the refilling.

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

D.6.6 Record Keeping Requirements

(a) To document compliance with Condition D.6.1, the Permittee shall maintain the following records for tank T004:

(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) Pursuant to 40 CFR 60.116b, the Permittee shall maintain the following records:

(1) The dimension of the storage vessel and an analysis showing the capacity of the storage vessel for the life of the source; and

(2) The VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period, for at least 2 years.

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

SECTION E.1 40 CFR 60, Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

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

E.1.1 Standards: Pumps in Light Liquid Service [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.482-2 (Standards: Pumps in Light Liquid Service), the Permittee shall comply with the following requirements:

(a) Each pump in light liquid service shall:

(1) be monitored monthly to detect leaks by the methods specified in Condition E.1.9, except as provided in this condition; and

(2) be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If there are indications of liquids dripping from the pump seal, a leak is detected.

(c) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition E.1.8. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Condition E.1.1(a), provided the following requirements are met:

(1) Each dual mechanical seal system is:

(A) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(B) Equipment with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of Condition E.1.7; or

(C) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5) The following requirements are met:

(A) Each sensor as described in Condition E.1.1(d)(3) is checked daily or is equipped with an audible alarm;

(B) The Permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in Condition E.1.1(d)(5)(B), a leak is detected. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition E.1.8. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) Any pump that is designated, as described in Condition E.1.10(d)(1) and (d)(2), for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions E.1.1(a), (c), and (d) if the pump:

(1) Has no externally actuated shaft penetrating the pump housing,

(2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in Condition E.1.9(b), and

(3) Is tested for compliance with Condition E.1.1(e)(2) initially upon designation, annually, and at other times requested by the Administrator.

(f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of Condition E.1.7, it is exempt from Conditions E.1.1(a) through (e).

(g) Any pump that is designated, as described in Condition E.1.10(e)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of Conditions E.1.1(a) and (d)(4) through (d)(6) if:

(1) The Permittee demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Condition E.1.1(a); and

(2) The Permittee has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in Condition E.1.1(c) if a leak is detected.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of Conditions E.1.1(a)(2) and (d)(4), and the daily requirements of Condition E.1.1(d)(5), provided that each pump is visually inspected as often as practicable and at least monthly.

E.1.2 Standards: Pressure Relief Devices in Gas/Vapor Service [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.482-4 (Standards: Pressure Relief Devices in Gas/Vapor Service), the Permittee shall comply with the following requirements:

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in Condition E.1.9(b).

(b) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the

pressure release, except as provided in Condition E.1.8. No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in Condition E.1.9(b).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in Condition E.1.7 is exempted from the requirements of Conditions E.1.2(a) and (b).

(d) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of Conditions E.1.2(a) and (b), provided after each pressure release, a new rupture disk is installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Condition E.1.8.

E.1.3 Standards: Sampling Connection Systems [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.482-5 (Standards: Sampling Connection Systems), the Permittee shall comply with the following requirements:

(a) Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in Condition E.1.3(a) shall comply with the following requirements:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of Condition E.1.7; or

(4) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(A) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to, and operated in compliance with the provisions of 40 CFR Part 63, Subpart G, applicable to Group 1 wastewater streams;

(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

(C) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR Part 261.

(c) In situ sampling systems and sampling systems without purges are exempt from the requirements of Conditions E.1.3(a) and (b).

E.1.4 Standards: Open-Ended Valves or Lines [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.482-6 (Standards: Open-Ended Valves or Lines), the Permittee shall comply with the following requirements:

(a) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Condition E.1.4(a) at all other times.

(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of Conditions E.1.4(a), (b) and (c).

(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in Conditions E.1.4(a) through (c) are exempt from the requirements of Conditions E.1.4(a) through (c).

E.1.5 Standards: Valves in Gas/Vapor Service and in Light Liquid Service [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.482-7 (Standards: Valves in Gas/Vapor Service and in Light Liquid Service), the Permittee shall comply with the following requirements:

(a) Each valve shall be monitored monthly to detect leaks by the methods specified in Condition E.1.9(a) and shall comply with Conditions E.1.5(b) through (e), except as provided in Conditions E.1.5(f), (g), and (h).

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Condition E.1.8. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in Condition E.1.10(d)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Condition E.1.5(a) if the valve:

(1) Has no external actuating mechanism in contact with the process fluid,

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in Condition E.1.9(b), and

(3) Is tested for compliance with Condition E.1.5(f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in Condition E.1.10(e)(1), as an unsafe-to-monitor valve is exempt from the requirements of Condition E.1.5(a) if:

(1) The Permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Condition E.1.5(a), and

(2) The Permittee of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in Condition E.1.10(e)(2), as a difficult-to-monitor valve is exempt from the requirements of Condition E.1.5(a) if:

(1) The Permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The process unit within which the valve is located either becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15 or the Permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and

(3) The Permittee follows a written plan that requires monitoring of the valve at least once per calendar year.

E.1.6 Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Connectors [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.482-8 (Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Connectors), the Permittee shall comply with the following requirements:

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the Permittee shall follow either one of the following procedures:

(1) The Permittee shall monitor the equipment within 5 days by the method specified in Condition E.1.9(a) and shall comply with the requirements of Conditions E.1.6(b) through (d).

(2) The Permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition E.1.8. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under Condition E.1.5(e).

E.1.7 Standards: Closed Vent Systems and Control Devices [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.482-10 (Standards: Closed Vent Systems and Control Devices), the Permittee shall comply with the following requirements:

(a) For closed vent systems and control devices used to comply with the provisions of 40 CFR 60, Subpart VV, the Permittee shall comply with the provisions of this Condition.

(b) Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent.

(c) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.

(d) Flares used to comply with this subpart shall comply with the requirements of 40 CFR 60.18.

(e) For control devices used to comply with the provisions of 40 CFR 60, Subpart VV, the Permittee shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

(f) Except as provided in Conditions E.1.7(i) through (k), each closed vent system shall be inspected according to the procedures and schedule specified below:

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the Permittee shall comply with the requirements specified in Conditions E.1.7(f)(1)(A) and (f)(1)(B):

(A) Conduct an initial inspection according to the procedures in Condition E.1.9(a); and

(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed vent system is constructed of ductwork, the Permittee shall:

(A) Conduct an initial inspection according to the procedures in Condition E.1.9(a); and

(B) Conduct annual inspections according to the procedures in Condition E.1.9(a).

(g) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in Condition E.1.7(h).

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

(h) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the Permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(i) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of Condition E.1.7(f)(1)(A) and (f)(2).

(j) Any parts of the closed vent system that are designated, as described in Condition E.1.7(l)(1), as unsafe to inspect are exempt from the inspection requirements of Conditions E.1.7(f)(1)(A) and (f)(2) if they comply with the following requirements:

(1) The Permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with Conditions E.1.7(f)(1)(A) or (f)(2); and

(2) The Permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(k) Any parts of the closed vent system that are designated, as described in Condition E.1.7(l)(2), as difficult to inspect are exempt from the inspection requirements of Conditions E.1.7(f)(1)(A) and (f)(2) if they comply with the requirements specified below:

(1) The Permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The Process unit within which the closed vent system is located becomes an affected facility through 40 CFR 60.14 and 60.15, or the Permittee designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

(3) The Permittee has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

(l) The Permittee shall record the information specified below:

(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each inspection during which a leak is detected, a record of the information specified in Condition E.1.10(b).

(4) For each inspection conducted in accordance with Condition E.1.9(a) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(5) For each visual inspection conducted in accordance with Condition E.1.7(f)(1)(B) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(m) Closed vent systems and control devices used to comply with provisions of 40 CFR 60, Subpart VV shall be operated at all times when emissions may be vented to them.

E.1.8 Standards: Delay of Repair [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.482-9 (Standards: Delay of Repair), the Permittee shall comply with the following requirements:

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves will be allowed if:

(1) The Permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are affected, the purged material is collected and destroyed or recovered in a control device complying with Condition E.1.7.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

Compliance Determination Requirements

E.1.9 Test Methods and Procedures [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.485 (Test Methods and Procedures), the Permittee shall comply with the following requirements:

(a) The Permittee shall determine compliance with the standards in Conditions E.1.1 through E.1.8 as follows:

(1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used:

(A) Zero air (less than 10 ppm of hydrocarbon in air); and

(B) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane.

(b) The Permittee shall determine compliance with the no detectable emission standards in Conditions E.1.1(e), E.1.2, and E.1.5(f) as follows:

(1) The requirements of Condition E.1.10(a) shall apply.

(2) Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(c) The Permittee shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

(1) Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference in 40 CFR 60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

(2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

(3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, Conditions E.1.9(c) (1) and (2) shall be used to resolve the disagreement.

(d) The Permittee shall demonstrate that equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C (1.2 in. H_2O at 68°F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference in 40 CFR 60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H_2O at 68 °F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(e) Samples used in conjunction with Conditions E.1.9(c), (d), and (f) shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(f) The Permittee shall determine compliance with the standards of flares as follows:

(1) Method 22 shall be used to determine visible emissions.

(2) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

(3) The maximum permitted velocity for air assisted flares shall be computed using the following equation:

$$V_{max} = K_1 + K_2 H_T$$

Where:

V_{max} = Maximum permitted velocity, m/sec (ft/sec)
H_T = Net heating value of the gas being combusted, MJ/scm (Btu/scf).
K_1 = 8.706 m/sec (metric units) = 28.56 ft/sec (English units)
K_2 = 0.7084 m^4/(MJ-sec) (metric units) = 0.087 ft^4/(Btu-sec) (English units)

(4) The net heating value (H_T) of the gas being combusted in a flare shall be computed using the following equation:

$$H_T = k \sum_{i=1}^{n} C_i H_i$$

Where:

K = Conversion constant, 1.740×10^7 (g-mole)(MJ)/ (ppm-scm-kcal) (metric units) = 4.674×10^8 [(g-mole)(Btu)/(ppm-scf-kcal)] (English units)
C_i = Concentration of sample component "i," ppm
H_i = net heat of combustion of sample component "i" at 25°C and 760 mm Hg (77°F and 14.7 psi), kcal/g-mole

(5) Method 18 and ASTM D2504-67, 77, or 88 (Reapproved 1993) (incorporated by reference in 40 CFR 60.17) shall be used to determine the concentration of sample component "i."

(6) ASTM D2382-76 or 88 or D4809-95 (incorporated by reference in 40 CFR 60.17) shall be used to determine the net heat of combustion of component "i" if published values are not available or cannot be calculated.

(7) Method 2, 2A, 2C, or 2D, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used.

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

E.1.10 Recordkeeping Requirements [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.486 (Recordkeeping Requirements), the Permittee shall comply with the following requirements:

(a) When each leak is detected as specified in Conditions E.1.1, E.1.5, and E.1.6, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in Condition E.1.5(c) and no leak has been detected during those 2 months.

(3) The identification on equipment except on a valve, may be removed after it has been repaired.

(b) When each leak is detected as specified in Conditions E.1.1, E.1.5, and E.1.6, the following information shall be recorded in a log in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

(4) "Above 10,000" if the maximum instrument reading measured by the methods specified in Condition E.1.9(a) after each repair attempt is equal to or greater than 10,000 ppm.

(5) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(6) The signature of the employee whose decision it was that repair could not be affected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

(c) The following information pertaining to the design requirements for closed vent systems and control devices described in Condition E.1.7 shall be recorded and kept in a readily accessible location:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) A description of the parameter or parameters monitored, as required in Condition E.1.7(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(4) Periods when the closed vent systems and control devices required in Conditions E.1.1, E.1.2, and E.1.3 are not operated as designed, including periods when a flare pilot light does not have a flame.

(5) Dates of startups and shutdowns of the closed vent systems and control devices required in Conditions E.1.1, E.1.2, and E.1.3.

(d) The following information pertaining to all equipment subject to the requirements in Conditions E.1.1 through E.1.8and 40 CFR 60.482-1 shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment subject to the requirements of 40 CFR 60, Subpart VV.

(2) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of Conditions E.1.1(e) and E.1.5(f) and the designation of equipment as subject to the requirements of Conditions E.1.1(e) or E.1.5(f) shall be signed by the Permittee.

(3) A list of equipment identification numbers for pressure relief devices required to comply with Condition E.1.2.

(4) The following information:

(A) The dates of each compliance test as required in Conditions E.1.1(e), E.1.2, and E.1.5(f);

(B) The background level measured during each compliance test;

(C) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(e) The following information pertaining to all valves subject to the requirements of Conditions E.1.5(g) and (h) and to all pumps subject to the requirements of Conditions E.1.1(g) shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.

(2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

(f) The following information shall be recorded for valves complying with Condition E.1.1:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(g) The following information shall be recorded in a log that is kept in a readily accessible location:

(1) Design criterion required in Conditions E.1.1(d)(5) and explanation of the design criterion; and

(2) Any changes to this criterion and the reasons for the changes.

(h) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

(i) The provisions of 40 CFR 60.7 (b) and (d) do not apply to affected facilities subject to this subpart.

E.1.11 Reporting Requirements [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.487 (Reporting Requirements), the Permittee shall comply with the following requirements:

(a) The Permittee shall submit semiannual reports to the Administrator.

(b) All semiannual reports to IDEM, OAQ shall include the following information, summarized from the information required in Condition E.1.10.

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(A) Number of valves for which leaks were detected as described in Condition E.1.5(b),

(B) Number of valves for which leaks were not repaired as required in Condition E.1.5(d),

(C) Number of pumps for which leaks were detected as described in Conditions E.1.1(b) and E.1.1(d)(6),

(D) Number of pumps for which leaks were not repaired as required in Conditions E.1.1(c) and E.1.1(d)(6),

(E) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(c) Revisions to items reported in the initial semiannual report if changes have occurred since the initial report or subsequent revisions to the initial report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: ASA Linden, LLC
Source Address: 203 West County Road 1100 North, Linden, Indiana 47955
Mailing Address: 5010 Riverside Drive, Suite 350, Irving, Texas 75039
FESOP No.: 107-21453-00061

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

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify) _____

☐ Report (specify) _____

☐ Notification (specify) _____

☐ Affidavit (specify) _____

☐ Other (specify) _____

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

Signature:

Printed Name:

Title/Position:

Date:

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name:	ASA Linden, LLC
Source Address:	203 West County Road 1100 North, Linden, Indiana 47955
Mailing Address:	5010 Riverside Drive, Suite 350, Irving, Texas 75039
FESOP No.:	107-21453-00061

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 DATA SECTION

FESOP Quarterly Report

Source Name: ASA Linden, LLC
Source Address: 203 West County Road 1100 North, Linden, Indiana 47955
Mailing Address: 5010 Riverside Drive, Suite 350, Irving, Texas 75039
FESOP No.: 107-21453-00061
Facility: The baghouse CE008 which controls a portion of the exhaust from the DDGS cooling drum (EU046)
Parameter: DDGS Production Rate
Limit: Less than 370,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

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

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: ASA Linden, LLC
Source Address: 203 West County Road 1100 North, Linden, Indiana 47955
Mailing Address: 5010 Riverside Drive, Suite 350, Irving, Texas 75039
FESOP No.: 107-21453-00061
Facility: Ethanol Loading Rack EU047
Parameter: Denatured Ethanol Loadout
Limit: Less than 123.9 MMgal per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

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

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: ASA Linden, LLC
Source Address: 203 West County Road 1100 North, Linden, Indiana 47955
Mailing Address: 5010 Riverside Drive, Suite 350, Irving, Texas 75039
FESOP No.: 107-21453-00061
Facility: Diesel Fire Pump EU048
Parameter: Operating Hours
Limit: Less than 250 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

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

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: ASA Linden, LLC
Source Address: 203 West County Road 1100 North, Linden, Indiana 47955
Mailing Address: 5010 Riverside Drive, Suite 350, Irving, Texas 75039
FESOP No.: 107-21453-00061

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ 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
For a Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name:	ASA Linden, LLC
Source Location:	203 West, County Road 1100 North, Linden, Indiana 47955
County:	Montgomery
SIC Code:	2869
Operation Permit No.:	F107-21453-00061
Operation Permit Issuance Date:	February 8, 2006
Significant Permit Revision No.:	107-24506-00061
Permit Reviewer:	ERG/JR

On June 20, 2007, the Office of Air Quality (OAQ) had a notice published in the Journal Review of Crawfordsville, Indiana stating that ASA Linden, LLC had applied for a Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP). The notice also stated that OAQ proposed to issue a permit for this revision and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments on the draft permit were submitted by the source. Changes made as a result of these comments are shown throughout this addendum. New language is in **bold** while deleted language is in ~~strikeout~~. The Table of Contents has been updated as necessary.

Comment 1:

The source address (ie., street address) referenced throughout the permit should be updated to the following current information: 203 West County Road 1100 North. The mailing address referenced throughout the permit should be updated to the following current information: 5010 Riverside Drive, Suite 350, Irving, Texas 75039. The general source phone number should be (214) 740-6800.

Response to Comment 1:

The source address, mailing address, and general source phone number for this facility have been changed throughout the permit as follows:

ASA Linden, LLC
~~173~~**203** West County Road 1100 North
Linden, Indiana 47955

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

The Permittee owns and operates a stationary ethanol production plant.

Source Address:	~~173~~ **203** West County Road 1100 North, Linden, Indiana 47955
Mailing Address:	~~4311 Oak Lawn Avenue, Suite 650, Dallas, Texas 75219~~ **5010 Riverside Drive, Suite 350, Irving, Texas 75039**

General Source Phone: ~~(214) 520-2820~~ **(214) 740-6800**
...

Comment 2:

The source has requested to revise the language in Condition A.2 to reflect that Cargill AgHorizons (Plant ID #107-00009) and ASA Linden, LLC (Plant ID #107-00061) no longer have the same source address; however they still continue to be located on adjacent properties and have a supporting relationship. Therefore, the two facilities should be considered a single source.

Response to Comment 2:

The following changes have been made to the permit as a result of this comment:

A.2 Source Definition [326 IAC 2-8-1] [326 IAC 2-7-1(22)]

The following two (2) companies ~~will be located at the same location (173 West County Road 1100 North, Linden, Indiana 47955)~~ **are located on adjacent properties and have a supporting relationship**:

(a) Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), an existing grain elevator (SIC 5153), which started operation in 1972.

(b) ASA Linden, LLC (Plant ID #107-00061), a new ethanol production plant (SIC 2869). All the grain received at the ethanol plant will be from Cargill AgHorizons - Linden Grain Elevator.

Since these two (2) plants are located ~~at the same property and~~ **on adjacent properties and** have a supporting relationship, IDEM, OAQ has determined that these two (2) plants are considered one (1) single source for purposes of determining the potential to emit regulated air pollutants and applicable requirements under the Clean Air Act (as amended by the 1990 Clean Air Act Amendments), Title 40 of the Code of Federal Regulations (CFR), and Title 326 of the Indiana Administrative Code (IAC). Separate FESOPs will be issued to Plant #107-00009 and #107-00061 solely for administrative purposes.

Comment 3:

The source requests that Conditions B.11(a) and C.12 be revised to reflect that the source is currently under construction and has not yet begun operation.

Response to Comment 3:

IDEM, OAQ acknowledges that the ethanol production plant has not yet begun operating. Therefore, the following conditions were revised to reflect that the source is currently under construction and has not yet begun operation. The following changes have been made to the permit as a result of this comment:

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

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) ~~within ninety (90) days after issuance of this permit~~ **immediately upon startup of plant operations**, for the source as described in 326 IAC 1-6-3. At a minimum, the PMPs shall include:

...

C.12 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented ~~within ninety (90) days of permit issuance~~ **immediately upon startup of plant 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 ~~within ninety (90) days~~ **upon startup of plant operations**, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

...

Comment 4:

The source requests that the language referring to the DDGS cooling drum (EU046) by-passing the TO/HRSG system be removed because the TO/HRSG system is necessary to control the majority portion of the cooling drum exhaust.

Response to Comment 4:

IDEM, OAQ agrees that a portion of the exhaust from the DDGS cooling drum baghouse CE008 exhausts to each of the two (2) TO/HRSG systems CE003 and CE006 to provide combustion air and that the TO/HRSG system is necessary to control a large portion of the cooling drum exhaust. Therefore, the following change has been made to the permit as a result of this comment:

D.3.14 VOC and HAP Control

In order to comply with Conditions D.3.5 and D.3.6, the TO/HRSG systems (CE003 and CE006) shall be in operation and control emissions from the following units as follows:

...

(c) the DDGS cooling drum (EU046) at all times that EU046 is in operation~~, except when the exhaust from EU046 is by-passing the TO/HRSG systems~~.

Comment 5:

The source requests that IDEM, OAQ clarify Condition D.3.16(b) as to whether or not a standard operating procedure (SOP) is required and, if so, the source requests that the timeline for development of the SOP be within ninety (90) days after facility startup.

Response to Comment 5:

Pursuant to 326 IAC 3-5-4(a), any facility required to perform continuous monitoring under 326 IAC 12, shall submit, within ninety (90) days after the monitor installation, a complete, written continuous monitoring SOP. No changes have been made to the permit as a result of this comment.

Upon further review, IDEM has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table of Contents has been updated as necessary.

1. Effective July 2, 2007, U.S. EPA has revised the definition of a ‘‘major stationary source’’ under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a ‘‘major source’’ under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term ‘‘chemical process plants’’ within the statutory definition of ‘‘major emitting facility’’ in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulosic biomass as a

feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NSR, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol plant, or the ethanol plant has a “nested” source category. ASA Linden, LLC does not have a "nested" source category; therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NSR, or Title V programs.

The calculations have been revised such that the potential to emit does not reflect fugitive emissions from grain and DDGS handling, paved and unpaved roads, and equipment leaks (see Appendix A - TSD Addendum). In addition, since the Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009) is considered to be part of the ASA Linden, LLC source, the PM and PM10 fugitive emissions from the grain receiving and loadout, tanks, conveyors, grain storage piles, and paved roads located at the Cargill AgHorizons facility (plant #107-00009) are not included in the total PTE emissions of ASA Linden, LLC. The permit condition limiting the amount of total grain received by corn conveyor EU001 has been removed. The conditions requiring the Permittee to use periodic sweeping to control PM and PM10 emissions from the paved roads and to remove ice from the roadways only by mechanical means are also no longer necessary and have also been removed from the permit.

Condition D.1.5(c) (limiting the amount of DDGS produced) was originally written to limit fugitive emissions from DDGS handling; however, this permit condition has been moved from Section D.1 to Section D.3 because VOC emissions from the DDGS Cooling Drum Baghouse (CE008) are based on 370,000 tons of DDGS produced per twelve (12) consecutive month period with compliance determined at the end of each month.

The following table summarizes the total potential to emit, reflecting all limits, of the entire source after control and upon startup of the ethanol production plant. The source remains a minor source under PSD rules and section 112 of the clean air act. The potential to emit of the criteria pollutants from the entire source is still limited to less than the Title V major source thresholds. Therefore, the requirements of 326 IAC 2-7 are not applicable to this source.

Process/Emission Unit	Potential to Emit After Issuance (tons/year)						
	PM	PM-10	SO_2	NO_x	VOC	CO	HAPs
Grain Handling Operations (Corn Unloading Conveyor and Hammermills)	10.9	10.9	-	-	-	-	-
Fermentation Process	0.88	0.88	-	-	44.7	-	5.50
Distillation, DDGS Dryers, TO/HRSG Systems, and DDGS Cooling Drum	32.6	32.6	81.6	92.7	37.2	91.6	9.93
DDGS Cooling Drum (Baghouse)	2.82	2.82	-	-	3.39	-	Negligible
DDGS Handling and Loadout Operations	1.71	1.71	-	-	-	-	-
Ethanol Loading Rack	-	-	-	1.04	1.61	2.43	0.09
Cooling Tower (Insignificant)	10.9	10.9	-	-	-	-	-
Emergency Fire Pump (Insignificant)	0.08	0.08	0.07	1.12	0.09	0.24	Negligible
Storage Tanks (Insignificant)	-	-	-	-	2.8	-	Negligible
Biomethanator Flare (Insignificant)	-	-	-	0.19	0.15	1.04	-
Other Insignificant Activities	1.00	1.00	-	-	1.00	-	-
Total PTE of Plant #107-00061	60.9	60.9	81.7	95.1	90.9	95.3	Less than 8.33 for a single HAP and 15.5 for total HAPs
Total PTE of Plant #107-00009*	16.6	7.69	0.02	4.00	0.22	3.36	0.08
Total PTE of the Entire Source	77.5	68.6	81.7	99.1	91.1	98.7	Less than 8.33 for a single HAP and 15.6 for total HAPs
Title V Major Threshold Level	NA	100	100	100	100	100	10 for a single HAP and 25 for total HAPs
PSD Major Threshold Level	250	250	250	250	250	250	NA

Note: "-" pollutant not emitted by the facility.
*The PM and PM10 fugitive emissions from the grain receiving and loadout, tanks, conveyors, grain storage piles, and paved roads are not included in the total PTE emissions of plant #107-00009. For more details, refer to FESOP SPR No. 107-23999-00009 for the Cargill AgHorizons grain elevator.

The following changes have been made to the permit:

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

The Permittee owns and operates a stationary ethanol production plant.

...

Source Status: Federally Enforceable State Operating Permit (FESOP)
Minor Source, under PSD Rules
Minor Source, Section 112 of the Clean Air Act
Not 1 of 28 Source Categories

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.

…

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than ~~one hundred (100)~~ **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;

…

D.1.5 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 Description	Baghouse ID	PM Emission Limit (lbs/hr)	PM10 Emission Limit (lbs/hr)
Corn Conveyor EU001	CE001	1.29	1.29
Hammermills EU002 through EU005	CE002	1.20	1.20
DDGS Handling and Loadout Operations	CE005	0.39	0.39

~~(b) The total grain received by corn conveyor EU001 shall not exceed 1,260,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(c) The total DDGS produced shall not exceed 370,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(d) Permittee shall use periodic sweeping to control PM and PM10 emissions from the paved roads. The sweeping shall be applied in a manner and at a frequency sufficient to ensure compliance with 326 IAC 2-2 and 326 IAC 2-8.~~

~~(e) The Permittee shall not use anti-skid materials, rock salt, or other chemical deicers to remove ice and snow from source hauling roads or parking areas. The Permittee shall remove ice from the roadways only by mechanical means (e.g., plow, blower, etc.).~~

Combined with the ~~PM/~~PM10 emissions from other emission units and the ~~PM/~~PM10 emissions from Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), the ~~PM/~~PM10 emissions from the entire source are limited to less than 100 tons/yr. **Combined with the PM emissions from other emission units, and the PM emissions from Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), the PM emissions from the entire source are limited to less than 250 tons/yr.** Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (PSD) are not applicable.

D.1.13 Record Keeping Requirements

~~(a) To document compliance with Condition D.1.5(b), the Permittee shall maintain monthly records of the amount of corn received by corn conveyor EU001.~~

~~(b) To document compliance with Condition D.1.5(c), the Permittee shall maintain monthly records of the amount of DDGS produced.~~

(~~c~~**a**) To document compliance with Condition D.1.10, the Permittee shall maintain records of daily visible emission notations of the baghouse stack exhausts. 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).

(~~d~~**b**) To document compliance with Condition D.1.11, the Permittee shall maintain daily records of pressure drop for baghouses during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

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

~~D.1.14 Reporting Requirements~~

~~A quarterly summary of the information to document compliance with Conditions D.1.5(b) and D.1.5(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).~~

D.3.5 FESOP Limits [326 IAC 2-2] [326 IAC 2-8-4] [326 IAC 2-4.1]

(a) Pursuant to 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following emission limits for the baghouse CE008 which controls a portion of the exhaust from the DDGS cooling drum (EU046) and exhausts through Stack EP007:

(1) PM/PM10 emissions shall not exceed 0.64 lbs/hr.

(2) VOC emissions shall not exceed 0.0183 lbs/ton DDGS.

(3) The total DDGS produced shall not exceed 370,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

...

D.3.20 Record Keeping Requirements

(a) To document compliance with Condition D.3.5(a)(3), the Permittee shall maintain monthly records of the amount of DDGS produced.

(~~a~~**b**) To document compliance with Condition D.3.17, the Permittee shall maintain records of daily visible emission notations of the stack EP003. 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.3.18, the Permittee shall maintain continuous temperature records for the thermal oxidizers 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.3.19, the Permittee shall maintain daily records of the duct pressure or fan amperage for the thermal oxidizers. The Permittee shall include in its daily record when a pressure or fan amperage reading is not taken and the reason for the lack of a pressure or fan amperage reading (e.g. the process did not operate that day).

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

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

~~FESOP Quarterly Report~~

~~Source Name:~~ ~~ASA Linden, LLC~~
~~Source Address:~~ ~~173 West County Road 1100 North, Linden, Indiana 47955~~
~~Mailing Address:~~ ~~4311 Oak Lawn Avenue, Suite 650, Dallas, Texas 75219~~
~~FESOP No.:~~ ~~107-21453-00061~~
~~Facility:~~ ~~Corn Conveyor EU001~~
~~Parameter:~~ ~~The amount of corn received~~
~~Limit:~~ ~~Less than 1,260,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~YEAR: _____~~

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

~~☐ No deviation occurred in this quarter.~~
~~☐ Deviation/s occurred in this quarter.~~
~~Deviation has been reported on: _____~~

~~Submitted by: _____~~

~~Title / Position: _____~~

~~Signature: _____~~

~~Date: _____~~

~~Phone: _____~~

~~Attach a signed certification to complete this report.~~

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

FESOP Quarterly Report

Source Name: ASA Linden, LLC
Source Address: 173 West County Road 1100 North, Linden, Indiana 47955
Mailing Address: 4311 Oak Lawn Avenue, Suite 650, Dallas, Texas 75219
FESOP No.: 107-21453-00061
Facility: ~~DDGS Handling and Loadout Operations~~ **The baghouse CE008 which controls a portion of the exhaust from the DDGS cooling drum (EU046)**
Parameter: DDGS Production Rate
Limit: Less than 370,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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.

2. On February 20, 2007, IDEM, OAQ adopted a new rule (326 IAC 8-5-6) for fuel grade ethanol production at dry mills. Since the facility is modifying the fuel grade ethanol production plant after April 1, 2007 and has a combined potential VOC emissions from the fermentation process, distillation process, DDGS dryers, and ethanol loadout operation greater than 25 tons per year; the fermentation process, distillation process, DDGS dryers, and ethanol loadout operation at this source are subject to the requirements in 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills). Because the fermentation process, distillation process, DDGS dryers, and ethanol loadout operations are subject to the requirements in 326 IAC 8-5-6, these operations are not subject to the requirements of 326 IAC 8-1-6 (BACT).

D.2.6 VOC Emissions [326 IAC ~~8-1-6~~ **8-5-6**]

Pursuant to ~~326 IAC 8-1-6 (BACT)~~ **326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)**, the Permittee shall ~~control the VOC emissions from the fermentation process with a Best Available Control Technology (BACT), which has been determined to be~~ **comply with** the following:

...

~~(c) The VOC emissions from wet scrubber CE004 shall not exceed 10.2 lbs/hr.~~

D.2.11 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] **[326 IAC 8-5-6]**

...

D.2.12 Parametric Monitoring **[326 IAC 8-5-6]**

...

D.2.13 Record Keeping Requirements **[326 IAC 8-5-6]**

...

D.3.6 VOC Emissions [326 IAC ~~8-1-6~~ **8-5-6**]

Pursuant to ~~326 IAC 8-1-6 (BACT)~~ **326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)**, the Permittee shall ~~control the VOC emissions from the distillation process and the DDGS dryers (EU039, EU040, EU042, and EU043), with a Best Available Control Technology (BACT), which has been determined to be~~ **comply with** the following:

...

~~(e) The VOC emissions from the stack EP003 for the TO/HRSG systems (CE003 and CE006) shall not exceed 8.5 lbs/hr.~~

D.3.15 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] [326 IAC 2-2] [40 CFR 60, Subpart Db] **[326 IAC 8-5-6]**

...

D.3.18 Thermal Oxidizer Temperature **[326 IAC 8-5-6]**

...

D.3.19 Parametric Monitoring **[326 IAC 8-5-6]**

...

D.3.20 Record Keeping Requirements **[326 IAC 8-5-6]**

...

D.4.6 VOC Emissions [326 IAC ~~8-1-6~~ **8-5-6**]

~~The potential VOC emissions from the ethanol loading rack (EU-47) are greater than 25 tons/yr.~~
Pursuant to ~~326 IAC 8-1-6 (BACT)~~ **326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)**, the Permittee shall ~~collect and control the VOC emissions from the ethanol loading rack~~

~~with a Best Available Control Technology (BACT). The BACT for this unit has been determined to be the~~ **comply with the** following:

...

~~(c) The VOC emissions from the flare CE009 shall not exceed 1.25 lbs/hr.~~

D.4.11 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]**

...

D.4.12 Flare Pilot Flame **[326 IAC 8-5-6]**

...

D.4.13 Record Keeping Requirements **[326 IAC 8-5-6]**

...

Appendix A: Emission Calculations
PM and PM10 Emissions
From the Grain Handling Operations

Company Name: **ASA Linden, LLC**
Address: **203 West County Road 1100 North, Linden, IN 47955**
Operation Permit No.: **F107-21453-00061**
Significant Permit Revision No.: **107-24506-00061**
Reviewer: **ERG/JR**
Date: **July 17, 2007**

1. Potential to Emit PM/PM10

Unit ID	Process Description	Control Device	Baghouse ID	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	PTE of PM/PM10 After Control (lbs/hr)*	PTE of PM/PM10 After Control (tons/yr)*	Control Efficiency (%)	PTE of PM/PM10 Before Control (lbs/hr)*	PTE of PM/PM10 Before Control (tons/yr)*
EU001	Grain Conveyor (Corn Unloading)	Baghouse	CE001	0.005	30,000	1.29	5.63	99%	128.6	563
EU002 EU003 EU004 EU005	Hammermilling	Baghouse	CE002	0.005	28,000	1.20	5.26	99%	120.0	526
TOTAL						2.49	10.9		248.6	1088.7

*Assume all PM emissions equal PM10 emissions.

Methodology
PTE of PM/PM10 After Control (lbs/hr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1 lb/7000 gr
PTE of PM/PM10 After Control (tons/yr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1 lb/7000 gr x 8760 hr/yr x 1 ton/2000 lbs
PTE of PM/PM10 Before Control = PTE of PM/PM10 After Control / (1-Control Efficiency)

Appendix A: Emission Calculations
VOC, PM, PM10, and HAP Emissions
From the Fermentation Process

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

1. Process Description:

Max. Throughput Rate: 118 MM gal/yr of ethanol
Control Equipment: Wet Scrubber CE004

2. Potential to Emit (PTE) of VOC and HAP:

Pollutant	*Emission Rate after Control	Units	PTE after Control (tons/yr)
VOC	10.2	lb/hr	**44.7**
PM	14.9	lb/MMgal	**0.88**
PM10	14.9	lb/MMgal	**0.88**
HAP			
Acetaldehyde	1.179	lb/hr	5.16
Acrolein	0.0143	lb/hr	0.06
Formaldehyde	0.031	lb/hr	0.14
Methanol	0.031	lb/hr	0.14
Total HAPs	**1.26**		**5.50**

* This is provided by the source based on multiple ethanol facilities' stack test results and scaled linearly based on production capacity.
The Permittee will perform stack testing to demonstrate compliance with the above emission rates.
** The control efficiency information is based on the information from other similar plants.

Methodology

PTE after Control (tons/yr) = Emission Rate after Control (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs
PTE before Control (tons/yr) = PTE after Control (tons/yr) / (1- Control Efficiency)

Appendix A: Emission Calculations
Criteria Pollutants
From Four (4) 45 MMBtu/hr DDGS Dryers and Two (2) 143 MMBtu/hr TO/HRSG Systems

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

Heat Input Capacity
MMBtu/hr

466 (6 units combined)

	Pollutant					
	PM*	PM10*	SO_2*	NOx*	VOC*	CO*
Emission Factor	7.45	7.45	18.63	21.17	8.50	20.91
	(lbs/hr)	(lbs/hr)	(lbs/hr)	(lbs/hr)	(lbs/hr)	(lbs/hr)
Potential to Emit in tons/yr	**32.6**	**32.6**	**81.6**	**92.7**	**37.2**	**91.6**

*Emission rates were estimated by the source based on the stack testing results from similar sources. These emission rates are the proposed emission limits in this permit and will be verified by stack testing.

Methodology

PTE (tons/yr) = Emission Factor (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs

Appendix A: Emission Calculations
Process HAP Emissions
From Four (4) 45 MMBtu/hr DDGS Dryers and Cooling Drum

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

	Pollutant				
	Acetaldehyde	Acrolein	Formaldehyde	Methanol	Total
Emission Rate after Control (lbs/hr) *	0.72	0.04	0.32	0.30	1.39
PTE after Control in tons/yr	**3.17**	**0.18**	**1.41**	**1.33**	**6.08**

*HAP emission rates were estimated by the source based on the stack testing results from a similar engineered site (Glacial Lakes Energy, MN).
The Permittee will perform stack tests to verify the HAP emissions from these units.

Methodology

PTE after Control (tons/yr) = Emission Rate after Control (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs

Appendix A: Emission Calculations
Combustion HAP Emissions
From NG Combustion in Four (4) 45 MMBtu/hr DDGS Dryers and Two (2) 143 MMBtu/hr TO/HRSG Systems

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

Heat Input Capacity MMBtu/hr		Potential Throughput MMCF/yr
466	(6 units combined)	4082.2

	Pollutant					
	Hexane	Formaldehyde	Toluene	Benzene	Nickel	Total HAPs
Emission Factor in lbs/MMCF	1.8E+00	7.5E-02	3.4E-03	2.1E-03	2.1E-03	
Potential to Emit in tons/yr	**3.67**	**0.15**	**6.94E-03**	**4.29E-03**	**4.29E-03**	**3.84**

Emission factors are from AP-42, Chapter 1.4, Table 1.4-3 (AP-42, 03/98).
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Methodology

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1 ton/2000 lbs

Appendix A: Emission Calculations
DDGS Cooling Drum TO Bypass

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

The cooling drum moves the DDGS from the dryers to the DDGS storage. A portion of the exhaust is controlled by the TO/HRSG system; the remainder of the exhaust is controlled by baghouse CE008.

1. Potential to Emit VOCs

Annual DDGS Production Limit: 370,000 ton/yr
VOC Emission Factor: 0.0183 lb/ton of DDGS (provided by the source based on equipment manufacturer)

Limited PTE of VOC (ton/yr) = 370,000 ton/yr x 0.0183 lb/ton x 1 ton/2000 lb = **3.39 ton/yr**

2. Potential to Emit PM/PM10 After Controls

Unit Description	Control Device	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	PTE of PM/PM10 After Control (lbs/hr)*	PTE of PM/PM10 After Control (tons/yr)*
DDGS Cooling Drum TO/HRSG Bypass (EP007)	Baghouse CE008	0.005	15,000	0.64	2.82

*Assume all PM emissions equal PM10 emissions.

Methodology
PTE of PM/PM10 After Control (lbs/hr) = [Grain Loading (gr/dscf)] * [Max. Air Flow Rate (scfm)] * [60 mins/hr] * [1 lb/7000 gr]
PTE of PM/PM10 After Control (tons/yr) = PTE of PM/PM10 After Control (lbs/hr) * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emission Calculations
PM and PM10 Emissions
From the DDGS Handling and Loadout Operations

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

1. Potential to Emit PM/PM10

Unit ID	Process Description	Control Device	Baghouse ID	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	PTE of PM/PM10 After Control (lbs/hr)*	PTE of PM/PM10 After Control (tons/yr)*	Control Efficiency (%)	PTE of PM/PM10 Before Control (lbs/hr)*	PTE of PM/PM10 Before Control (tons/yr)*
EU035 EU036 EU037	DDGS Handling and Loadout	Baghouse	CE005	0.005	9,100	0.39	1.71	99%	39.0	171

*Assume all PM emissions equal PM10 emissions.

Methodology
PTE of PM/PM10 After Control (lbs/hr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1 lb/7000 gr
PTE of PM/PM10 After Control (tons/yr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1 lb/7000 gr x 8760 hr/yr x 1 ton/2000 lbs
PTE of PM/PM10 Before Control = PTE of PM/PM10 After Control / (1-Control Efficiency)

Appendix A: Emission Calculations
VOC and HAP Emissions from Ethanol Loading Rack (EU047)

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

1. Emission Factors: AP-42

Ethanol will be shipped by trucks or railcars. Railcars will be dedicated fleets, but the trucks may be used to carry gasoline prior to filling with ethanol. Railcars and trucks will be filled by submerged loading process. Both truck and railcar loading will be controlled by flare CE009 which has a control efficiency of 98% for VOC and HAPs.

According to AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids (01/95), the VOC emission factors for the truck and rail loading rack can be estimated from the following equation:

$$L = 12.46 \times (SPM)/T$$

where:

L = loading loss (lbs/kgal)
S = a saturation factor (see AP-42, Table 5.2-1)
P = true vapor pressure of the liquid loaded (psia)
M = molecular weight of vapors
T = temperature of the bulk liquid loaded (degree R)

Previous Stored Liquid	*S	P (psia)	M (lbs/mole lbs)	T (degree R)	L (lbs/kgal)
Gasoline (normal)	0.6	6.2	62	514	5.59
Gasoline (clean cargo)	0.5	6.2	62	514	4.66
Denatured Ethanol (normal)	0.6	0.60	49.98	510	0.44
Denatured Ethanol (clean cargo)	0.5	0.60	49.98	510	0.37

Therefore, the emission factor for loading denatured ethanol to the trucks which stored gasoline previously
= L (gasoline, normal) - L (gasoline, clean cargo) + L (denatured ethanol, clean cargo) = 1.30 (lbs/kgal)

2. Potential to Emit VOC Before Control:

The worst case scenario is assuming that all the trucks are used to ship gasoline before filling with denatured ethanol and all the denatured ethanol is shipped by trucks.

Annual Production Limit: 123,900 kgal/yr

PTE of VOC before Control (tons/yr) = 124,000 kgal/yr x 1.30 lbs/gal x 1 ton/2000 lbs = **80.4 tons/yr**

3. Potential to Emit VOC after Control:

Annual Production Limit: 123,900 kgal/yr
Flare Control Efficiency: 98%

Limited PTE of VOC by Trucks (tons/yr) = 1.30 lbs/kgal x 123,900 kgal/yr x (1-98%) x 1 ton/2000 lbs = **1.61 tons/yr**

4. Potential to Emit HAPs:

HAP emissions are mainly from the unloading process for trucks, which may have been used to ship gasoline previously.

HAP	HAP Fraction*	PTE of HAP before Control (tons/yr)	Limited PTE of HAP after Control (tons/yr)
Benzene	2.50E-03	0.20	4.02E-03
Carbon Disulfide	2.00E-05	1.61E-03	3.22E-05
Cumene	1.00E-04	0.01	1.61E-04
Ethyl benzene	5.00E-05	4.02E-03	8.04E-05
n-Hexane	5.00E-02	4.02	8.04E-02
Toluene	5.00E-03	0.40	8.04E-03
Xylene	5.00E-04	0.04	8.04E-04
Total	**0.06**	4.68	0.09

* This is the HAP fraction for gasoline vapors.

Methodology

PTE of HAP before Control (tons/yr) = PTE of VOC before Control (tons/yr) x HAP %
Limited PTE of HAP after Control (tons/yr) = Limited PTE of VOC by Trucks (tons/yr) x HAP %

Appendix A: Emission Calculations
Combustion Emissions
From Flare CE009 for Ethanol Loading Rack (EU047)

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

Heat Input Capacity MMBtu/hr	Max. Load-out Rate kgal/hr	Annual Production Limit kgal/yr
6.4	48.0	123,900

	Pollutant					
	*PM	*PM10	*SO_2	**NO_x	***VOC	**CO
Emission Factor	NA	NA	NA	0.0168 (lbs/kgal)	-	0.0392 (lbs/kgal)
Unlimited Potential to Emit in tons/yr	**NA**	**NA**	**NA**	**3.53**	**80.4**	**8.24**
Limited Potential to Emit in tons/yr	**NA**	**NA**	**NA**	**1.04**	**1.61**	**2.43**

*PM, PM10, and SO_2 emission factors are negligible due to the smokeless design and minimal H_2S levels.
**Emission factors for NO_x and CO are provided by the source based on the test results for a similar source.
*** VOC emission calculations can be found in page 9 of this appendix.

Methodology

PTE of PM/PM10 and SO_2 (tons/yr) = Max. Heat Input (MMBtu/hr) x 1 MMCF/1,000 MMBtu x Emission Factor (lbs/MMCF) x 8760 hr/yr x 1 ton/2000 lbs
Unlimited PTE of NOx and CO (tons/yr) = Max. Load-out Rate (kgal/hr) x Emission Factor (lbs/kgal) x 8760 hr/yr x 1 ton/2000 lbs
Limited PTE of NOx and CO (tons/yr) = Annual Production Limit (kgal/yr) x Emission Factor (lbs/kgal) x 1 ton/2000 lbs
Limited PTE of PM/PM10 and SO_2 (tons/yr) = Unlimited PTE (tons/yr) x Annual Production Limit (kgal/yr) / (Max. Load-out Rate kgal/hr x 8760 hr/yr)

Appendix A: Emission Calculations
PM/PM10 Emissions
From the the Cooling Tower (Insignificant Activity)

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

1. Process Description:

Type of Cooling Tower:	Induced Draft	
Circulation Flow Rate:	55,000	gal/min
Total Drift:	0.005%	of the circulating flow
Total Dissolved Solids:	1,800	ppm
Density:	8.345	lbs/gal

Note: The information above was provided by the cooling tower manufacturer for the same units located at a similar source.

2. Potential to Emit PM/PM10:

Assume all the dissolved solids become PM10 emissions and assume PM emissions are equal to PM10 emissions.

PTE of PM/PM10 (lbs/hr) = 55,000 gal/min x 60 min/hr x 0.005% x 8.345 lbs/gal x 1,800 ppm x 1/1,000,000 ppm = **2.48 lbs/hr**

PTE of PM/PM10 (tons/yr) = 2.48 lbs/hr x 8760 hr/yr x 1 ton/2000 lbs = **10.9 tons/yr**

Appendix A: Emission Calculations
Internal Combustion Engines
From the Diesel Fire Pump EU048 (Insignificant)

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

Power Output Horse Power (HP)	Operation Limit hr/yr
290	250

	Pollutant					
	PM*	PM10*	SO_2	NO_x	**VOC	CO
Emission Factor in lb/HP-hr	2.20E-03	2.20E-03	2.05E-03	3.10E-02	2.47E-03	6.68E-03
Potential to Emit in tons/yr	**0.08**	**0.08**	**0.07**	**1.12**	**0.09**	**0.24**

*Assume PM10 emissions are equal to PM emissions.
** Assume TOC (total organic compounds) emissions are equal to VOC emissions.
Emission factors are from AP-42, Chapter 3.3, Table 3.3-1, SCC #2-02-001-02 and 2-03-001-01 (AP-42 Supplement B, 10/96).

Methodology

PTE (tons/yr) = Power Output (HP) x Emission Factor (lb/HP-hr) x Operation Limit (hr/yr) x 1 ton/2000 lbs

Appendix A: Emission Calculations
Combustion Emissions
From Biomethanator Flare CE007

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

Max. Heat Input MMBtu/hr	Limited Hours of operation (hr/yr)
6.4	876

	Pollutant						
	PM[b]	PM10[b]	SO_2[b]	NOx[a]	CO[a]	VOC[a]	HAP[b]
Emission Factor in lb/MMBtu	-	-	-	0.068	0.37	0.052	-
Unlimited PTE (tons/yr)	Negligible	Negligible	Negligible	**1.91**	**10.4**	**1.46**	Negligible
Limited PTE (tons/yr)	Negligible	Negligible	Negligible	**0.19**	**1.04**	**0.15**	Negligible

[a] Emission factors are from AP-42, Tables 13.5-1 and 13.5-2 (AP-42, 01/95).

[b] The Permitttee stated that PM/PM10 emissions from this flare are negligibe due to the smokeless design. The PTE of SO_2 and HAP are negligible due to negligible sulfur and HAP presence in the gas stream.

Methodology

Unlimited PTE (tons/yr) = Max. Heat Input (MMBtu/hr) x Emission Factor (lbs/MMBtu) x 8760 hrs/yr x 1 ton/2000 lbs
Limited PTE (tons/yr) = Max. Heat Input (MMBtu/hr) x Emission Factor (lbs/MMBtu) x Limited Hours of operation (hrs/yr) x 1 ton/2000 lbs

Appendix A: Emission Calculations
Fugitive Dust Emissions (6-5 Applicability)

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

1. Paved Roads Fugitve Emissions
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight of Vehicle and Load (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)
DDGS Hopper Truck (empty truck entering plant)	5	4.2	21	17	357	2682	0.508	10.7
Ethanol Tanker Truck (empty truck entering plant)	5	4.2	21	17	357	2682	0.508	10.7
Denaturant Tanker Truck (empty truck entering plant)	2	1	2	17	34	2682	0.508	1.0
DDGS Hopper Truck (loaded truck leaving plant)	5	4.2	21	42	882	2682	0.508	10.7
Ethanol Tanker Truck (loaded truck leaving plant)	5	4.2	21	44	924	2682	0.508	10.7
Denaturant Tanker Truck (loaded truck leaving plant)	2	1	2	44	88	2682	0.508	1.0
Total			88		2642			44.7

Average Vehicle Weight Per Trip = 30.0 tons/trip
Average Miles Per Trip = 0.51 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL/2)^0.65 * (W/3)^1.5 - C] (Equation 1 from AP-42 13.2.1)

	PM	PM10	
where k =	0.082	0.016	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	30.0	30.0	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL (non-winter)=	0.6	0.6	g/m^2 = Ubitiguous Silt Loading Values of typical paved roads (see AP-42 Table 13.2.1-3)
sL (winter months) =	2.4	2.4	

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)]
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 120 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	non-winter			winter		
	PM	PM10		PM	PM10	
Unmitigated Emission Factor, Ef =	1.19	0.23	lb/mile	2.922167766	0.569800784	lb/mile
Mitigated Emission Factor, Eext =	1.09	0.21	lb/mile	2.681989594	0.522967843	lb/mile

PM Emission Factor (Average Annual) = ((PM Mitigated Emission Factor (non-Winter) x 9) + (PM Mitigated Emission Factor (Winter) x 3))/12
PM Emission Factor (Average Annual) = **1.49** lbs/mile
PM10 Emission Factor (Average Annual) = ((PM10 Mitigated Emission Factor (non-Winter) x 9) + (PM10 Mitigated Emission Factor (Winter) x 3))/12
PM10 Emission Factor (Average Annual) = **0.29** lbs/mile

Type	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)
DDGS Hopper Truck (empty truck entering plant)	2.90	0.56
Ethanol Tanker Truck (empty truck entering plant)	2.90	0.56
Denaturant Tanker Truck (empty truck entering plant)	0.28	0.05
DDGS Hopper Truck (loaded truck leaving plant)	2.90	0.56
Ethanol Tanker Truck (loaded truck leaving plant)	2.90	0.56
Denaturant Tanker Truck (loaded truck leaving plant)	0.28	0.05
Totals	**12.13**	**2.36**

Methodology
PTE of PM/PM10 (tons/yr) = Maximum one-way miles (miles/day) x PM/PM10 Emission Factors (Average Annual) x 365 day/yr x 1 ton/2000 lbs

2. Potential to Emit PM/PM10 - DDGS Handling Fugitive Emissions:

Unit Description	Annual Throughput Limit (tons/yr)	Uncontrolled PM Emission Factor (lbs/ton)*	Uncontrolled PM10 Emission Factor (lbs/ton)*	**Uncontrolled PTE of PM (tons/yr)**	**Uncontrolled PTE of PM10 (tons/yr)**	Baghouse ID	Capture Efficiency (%)	Fugitive PM (tons/yr)	Fugitive PM10 (tons/yr)	Fugitive PM (lbs/hr)	Fugitive PM10 (lbs/hr)
DDGS Loadout - Truck	370,000	0.0033	0.0008	**0.61**	**0.15**	CE005	80%	0.12	0.03	0.03	0.01

*Emission factors are from AP-42, Chapter 9.9.1 - Grain Elevators, Table 9.9.1-2 (04/03) for Feed Shipping (SCC 3-02-008-03)

Methodology
Uncontrolled PTE of PM/PM10 (tons/yr) = Annual Throuhgput Limit (tons/yr) x Uncontrolled Emission Factor (lbs/ton) x 1 ton/2000 lbs
Fugitive PM/PM10 (tons/yr) = Uncontrolled PM/PM10 (tons/yr) x (1-Capture Efficiency%)
Fugitive PM/PM10 (lbs/hr) = Fugitive PM/PM10 (tons/yr) x (2000 lbs/ton) / (8760 hr/yr)

Appendix A: Emission Calculations
PTE Summary

Company Name: ASA Linden, LLC
Address: 203 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: July 17, 2007

Limited Potential To Emit after Control

Emission Units	PM	PM10	SO_2	*NO_x	VOC	CO	Total HAPs
Grain Handling Operations (Corn Unloading Converyor and Hammermills)	10.9	10.9	-	-	-	-	-
Fermentation Process	0.88	0.88	-	-	44.7	-	5.50
Distllation, DDGS Dryers, TO/HRSG Systems, and DDGS Cooling Drum	32.6	32.6	81.6	92.7	37.2	91.6	9.93
DDGS Cooling Drum (Baghouse)	2.82	2.82	-	-	3.39	-	Negligible
DDGS Handling and Loadout Operations	1.71	1.71	-	-	-	-	-
Ethanol Loading Rack	-	-	-	1.04	1.6	2.43	0.09
Wet Cake Storage*	-	-	-	-	See Note	-	See Note
Cooling Tower	10.9	10.9	-	-	-	-	-
Emergency Fire Pump	0.08	0.08	0.07	1.12	0.09	0.24	Negligible
Storage Tanks**	-	-	-	-	2.80	-	Negligible
Biomethanator Flare	-	-	-	0.19	0.15	1.04	Negligible
Other Insignificant Activities	1.00	1.00	-	-	1.00	-	-
Total PTE	**60.9**	**60.9**	**81.7**	**95.1**	**90.9**	**95.3**	**15.5**

Note:
* This plant is capable to produce both DDGS and MDGS. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.
** Emissions from the storage tanks were calculated by the Permittee using EPA TANKS software (version 4.09d) and have been verified.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision (SPR) to a Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name:	ASA Linden, LLC
Source Location:	173 West, County Road 1100 North, Linden, Indiana 47955
County:	Montgomery
SIC Code:	2869
Operation Permit No.:	F107-21453-00061
Operation Permit Issuance Date:	February 8, 2006
Significant Permit Revision No.:	107-24506-00061
Permit Reviewer:	ERG/JR

The Office of Air Quality (OAQ) has reviewed an application from ASA Linden, LLC, related to a modification to an existing ethanol production plant.

Source Definition

The following two (2) companies are located at the same location (173 West County Road 1100 North, Linden, Indiana 47955):

(a) Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), an existing grain elevator (SIC 5153), which started operation in 1972.

(b) ASA Linden, LLC (Plant ID #107-00061), an ethanol production plant (SIC 2869). All the grain received at the ethanol plant will be from Cargill AgHorizons - Linden Grain Elevator.

Since these two (2) plants are located on the same property and have a supporting relationship, IDEM, OAQ determined that these two (2) plants are considered one (1) single source. Separate FESOP Nos. F107-21971-00009 and F107-21453-00061 were issued to each plant solely for administrative purposes. This FESOP SPR No. 107-24504-00061 covers changes to the source at the ASA Linden ethanol plant. A separate FESOP SPR No. 107-23999-00009 is currently under review to cover changes at the Cargill AgHorizons grain elevator.

Existing Approvals

The following approvals have been issued for this source:

(a) ASA Linden, LLC: FESOP No. F107-21453-00061, issued February 8, 2006;
(b) Cargill AgHorizons: FESOP No. F107-21971-00061, issued March 1, 2006;
(c) ASA Linden, LLC: SPR No. 107-22874-00061, issued October 6, 2006;
(d) Cargill AgHorizons: SPR No. 107-22880-00061, issued October 6, 2006; and
(e) Cargill AgHorizons SPR No. 107-23999-00061, issued May 21, 2007.

County Attainment Status

The source is located Montgomery County.

Pollutant	Status
PM	Attainment
PM10	Attainment
PM2.5	Attainment
SO_2	Attainment
NO_2	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Montgomery County has been classified as unclassifiable or attainment for PM 2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM 2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM 2.5 emissions.

(b) Volatile organic compounds (VOC) and Nitrogen Oxides 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 the ozone standards. Montgomery 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.

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

(d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

(e) Fugitive Emissions
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Potential To Emit (tons/year)
PM	96.75
PM10	73.79
SO_2	81.7
VOC	94.46
CO	97.62
NO_x	98.89

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specificed in 326 IAC 2-2-1(gg)(1).

(b) These emissions are based upon the calculations provided in F107-21453-00061, SPR107-22874-00061, and SPR107-23999-00009.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

HAPs	Potential to Emit (tons/yr)
Acetaldehyde	8.33
Acrolein	0.24
Formaldehyde	1.69
Methanol	1.47
Hexane	3.34
n-Hexane	4.02
Benzene	0.20
Other HAPs	Negligible
Total	less than 25

The existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAPs emissions 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 a revision application, submitted by ASA Linden, LLC, on March 23, 2007, relating to the following changes to FESOP No. 107-21453-00061.

(a) Delete the restriction of 438 hours per year of thermal oxidizer bypass for the DDGS cooling drum (EU046), and add PM/PM10 and VOC emission limits on the cooling drum exhaust stream (EP007).

(b) Revise the heat inputs of each of the DDGS dryers to 45 MMBtu/hr.

(c) Add PM/PM10 emission limits to the scrubber controlling the fermentation process.

(d) Add the fugitive PM/PM10 emissions associated with the DDGS flat storage.

(e) Revise the truck traffic emissions to reflect a realignment of the facility's roads and add a condition to address paved roads such that the Permittee will not use anti-skid materials, rock salt, or other chemical deicers to remove ice and snow from source hauling roads or parking areas.

(f) Revise storage tank VOC emissions to reflect the VOC emissions as reported in the original application (dated Jun 2005) and update the descriptive information of Tank T006 (tank will contain a corrosion inhibitor instead of a fuel additive).

(g) Revise equipment leak VOC emissions to reflect updated equipment vendor information.

(h) Revise the cooling tower PM/PM10 emissions to reflect a lower cooling water TDS content.

(i) Add an hourly operating limit of 876 hours for the biomethanator flare.

(j) Delete the VOC emission estimates for the DDGS Storage, Conveyor, and Loadout because no VOC emissions are expected from these operations.

Enforcement Issues

There are no pending enforcement actions.

Recommendation

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

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

An application for the purposes of this review was received on March 8, 2007.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 10).

Permit Level Determination - FESOP Revision

Pursuant to 326 IAC 2-7-1(29), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-8.11.1. This table reflects the PTE of the revision before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	less than 25
PM10	less than 25
SO_2	less than 25
VOC	less than 25
CO	less than 100
NO_x	less than 25
HAPs	less than 10

This revision is being performed as a Significant Permit Revision, because this modification requires adjustments to the emission cap limitations, pursuant to 326 IAC 2-8-11.1(g)(2).

Permit Level Determination - FESOP

The table below summarizes the potential to emit of the entire source, 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. Values shown as strikethrough represent the potential to emit before the revision and values shown in bold represent the potential to emit after the revision.

Process/Emission Unit	Potential to Emit After Issuance (tons/year)						
	PM	PM-10	SO_2	NO_x	VOC	CO	HAPs
Grain Handling Operations (Corn Unloading Conveyor and Hammermills)	10.89	10.89	-	-	-	-	-
Fermentation Process and Distillation Process	**0.88**	**0.88**	-	-	44.68	-	5.50
Distillation, DDGS Dryers, TO/HRSG Systems, and DDGS Cooling Drum	32.64	32.64	81.60	92.72	37.23	91.59	~~9.58~~ **9.92**
DDGS Cooling Drum	~~0.47~~ **2.82**	~~0.47~~ **2.82**	-	-	~~1.31~~ **3.39**	-	Negligible
DDGS Handling and Loadout Operations	1.71	1.71	-	-	~~1.05~~ **0.0**	-	0.08
DDGS Loadout **and Storage** (Fugitive)	~~0.12~~ **0.15**	~~0.03~~ **0.04**	-	-	-	-	-
Ethanol Loading Rack	Negligible	Negligible	Negligible	1.04	1.61	2.43	0.09
Paved Roads (Fugitive)	~~4.15~~ **4.44**	~~0.81~~ **0.87**	-	-	-	-	-
Cooling Tower (Insignificant)	~~15.08~~ **10.9**	~~15.08~~ **10.9**	-	-	-	-	-
Emergency Fire Pump (Insignificant)	0.08	0.08	0.07	1.12	0.09	0.24	Negligible
Storage Tanks (Insignificant)	-	-	-	-	~~1.16~~ **2.8**	-	Negligible
Equipment Leaks (Fugitive)	-	-	-	-	~~7.11~~ **9.78**	-	~~0.42~~ **0.58**
Biomethanator Flare (Insignificant)	-	-	-	**0.19**	**0.15**	**1.04**	-
Total PTE of Plant #107-00061	~~65.13~~ **64.5**	~~61.70~~ **60.8**	81.7	~~94.89~~ **95.1**	~~94.24~~ **99.7**	~~94.26~~ **95.3**	Less than 8.33 for a single HAP and ~~15.67~~ **16.2** for total HAPs
Total PTE of Plant #107-00009*	34.5	12.9	0.02	4.00	0.22	3.36	Negligible
Total PTE of the Entire Source	~~96.75~~ **99.0**	~~73.79~~ **73.7**	81.7	~~98.89~~ **99.1**	~~94.46~~ **99.9**	~~97.62~~ **98.7**	Less than 8.33 for a single HAP and ~~15.67~~ **16.2** for total HAPs
Title V Major Threshold Level	NA	100	100	100	100	100	10 for a single HAP and 25 for total HAPs
PSD Major Threshold Level**	100	100	100	100	100	100	NA

Note: "-" pollutant not emitted by the facility.
*For details, refer to FESOP SPR No. 107-23999-00009 for the Cargill AgHorizons grain elevator.
**ASA Linden, LLC belongs to the chemical plant source category defined in 326 IAC 2-2-1(y)(1)

This revision to an existing minor stationary source is not major, because the emissions increase is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. After this revision, this source is still a minor source pursuant to the Part 70 Permit program.

Federal Rule Applicability

There are no new federal rules included for this revision. The source shall continue to comply with the applicable federal rule requirements and permit conditions as contained in FESOP Nos. F107-21971-00009 and F107-21453-00061.

State Rule Applicability - Entire Source

The following state rules are applicable to the source due to the proposed revision:

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

The source was approved for construction of an ethanol plant in 2006. The source has accepted FESOP limits on the HAP emissions from the entire source, such that the emissions from the source are limited to less than 10 tons/yr for a single HAP and less than 25 tons/yr for any combination of HAPs (see the discussion of 326 IAC 2-8-4 below). Therefore, the requirements of 326 IAC 2-4.1 are not applicable.

326 IAC 2-8-4 (FESOP) and 326 IAC 2-2 (PSD)

The potential to emit PM, PM10, VOC, CO, and NOx before control of the entire source is greater than 100 tons/yr. In addition, the potential to emit HAP before control from this source is greater than 10 tons/yr for a single HAP and greater than 25 tons/yr for total HAPs. The potential to emit PM and all criteria pollutants from all the existing permitted units is limited to less than 100 tons per year. This modification to an existing minor PSD stationary source will not change the PSD minor status because the emissions from the entire source will continue to be less than the PSD major source threshold levels (see Potential to Emit After Issuance for the entire source in the table above).

The Permittee has proposed to limit PM, PM10, and VOC emissions from the cooling drum baghouse. Also, PM/PM10 emission limits have been added to the permit for the fermentation scrubber and an hourly operating limit of 876 hours has been added for the biomethanator flare. Pursuant to 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee has agreed to comply with the following additional limitations for the DDGS cooling drum (EU046), fermentation scrubber (CE004), and other requirements for the biomethanator flare (CE007):

(a) The Permittee shall comply with the following emission limits for the DDGS Cooling Drum (EU046), which is controlled by baghouse CE008 and exhausts through Stack EP007:

(1) PM/PM10 emissions shall not exceed 0.64 lbs/hr.

(2) VOC emissions shall not exceed 0.0183 lbs/ton DDGS.

(b) PM/PM10 emissions shall not exceed 0.20 lbs/hr from the fermentation scrubber (CE004).

(c) The operating hours for the biomethanator flare (CE007) shall not exceed 876 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the PM, PM10, VOC, NOx, CO, and HAP emissions from other emission units and the PM, PM10, VOC, NOx, CO, and HAP emissions from Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), the emissions from the entire source are limited to less than 100 tons/yr for PM10, VOC, NOx, and CO, less than 10 tons/yr for a single HAP, and less than 25 tons/yr for total HAPs (see the "Potential to Emit after Issuance" for the entire source in the table above). Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (PSD) are not applicable.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This source is subject to 326 IAC 6-5, since it is a new source of fugitive particulate matter emissions, requiring a permit as set forth in 326 IAC 2, and which has not received all the necessary preconstruction approvals before December 13, 1985. Pursuant to 326 IAC 6-5, a fugitive dust control plan must be submitted, reviewed and approved. A fugitive dust control plan for this source was submitted on April 20, 2006, and is included in Condition C.7 of the permit. Fugitive particulate matter emissions from paved roads and parking lots shall be controlled by cleaning and vacuum sweeping on an as needed basis.

Testing Requirements

The source shall continue to comply with the applicable testing requirements and permit conditions as contained in FESOP Nos. F107-21971-00009 and F107-21453-00061. However, in order to demonstrate compliance with the additional FESOP and PSD minor limits of this revision, the Permittee shall perform the following tests within 60 days after achieving the maximum capacity but not later than 180 days after initial startup of the ethanol production plant:

(a) The Permittee shall perform PM and PM10 testing for scrubber CE004 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 condensible 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) The Permittee shall perform PM, PM10, and VOC testing for the DDGS cooling drum stack (EP007) 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 Requirements

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 Nos. F107-21971-00009 and F107-21453-00061.

Proposed Changes

The following changes have been made to the permit. Language with a line through it has been deleted, and bold language has been added. The Table of Contents has been updated as necessary.

1. The source requested that the heat inputs of each of the DDGS dryers be revised to 45 MMBtu/hr. Additionally, the source requested that the restriction of 438 hours per year of thermal oxidizer bypass for the DDGS cooling drum (EU046) be deleted from the permit and that PM/PM10 and VOC emission limits be added to the cooling drum baghouse exhaust stream (EP007). In order to show compliance with the PM/PM10 and VOC emission limits, IDEM, OAQ has added PM/PM10 and VOC testing requirements to the cooling drum baghouse exhaust stream (EP007).

A.3 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:

...

(f) Two (2) natural gas fired DDGS dryers, identified as EU039 and EU040, approved for construction in 2005, with a nominal combined heat input rate of ~~68.5~~ **90.0** MMBtu/hr and

each with a maximum throughput rate of 25 tons/hr of DDGS, controlled by the multicyclones C60 and C61 and the TO/HRSG system CE003, exhausted to stack EP003.

(g) Two (2) natural gas fired DDGS dryers, identified as EU042 and EU043, approved for construction in 2005, with a nominal combined heat input rate of ~~68.5~~ **90.0** MMBtu/hr and each with a maximum throughput rate of 25 tons/hr of DDGS, controlled by multicyclones C70 and C71 and the TO/HRSG system CE006, with emissions exhausted to stack EP003.

(h) One (1) DDGS cooling drum, identified as EU046, approved for construction in 2005, with a maximum throughput rate of 100 tons/hr of DDGS**, controlled by a baghouse, identified as CE008, and exhausting through stack EP007, and** the TO/HRSG systems CE003 and CE006, ~~and~~ exhausting to stack EP003. ~~For up to 438 hours per year, the exhaust from EU046 will by-pass the TO/HRSG systems and will be controlled by baghouse CE008, exhausting to stack EP007.~~ **Note: A portion of the exhaust from the baghouse CE008 exhausts to each of two (2) TO/HRSG systems CE003 and CE006 to provide combustion air.**

SECTION D.3 FACILITY OPERATION CONDITIONS – TO/HRSG Systems, Distillation, DDGS Drying, and DDGS Cooling

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

...

(f) Two (2) natural gas fired DDGS dryers, identified as EU039 and EU040, approved for construction in 2005, with a nominal combined heat input rate of ~~68.5~~ **90.0** MMBtu/hr and each with a maximum throughput rate of 25 tons/hr of DDGS, controlled by the multicyclones C60 and C61 and the TO/HRSG system CE003, exhausted to stack EP003.

(g) Two (2) natural gas fired DDGS dryers, identified as EU042 and EU043, approved for construction in 2005, with a nominal combined heat input rate of ~~68.5~~ **90.0** MMBtu/hr and each with a maximum throughput rate of 25 tons/hr of DDGS, controlled by multicyclones C70 and C71 and the TO/HRSG system CE006, with emissions exhausted to stack EP003.

(h) One (1) DDGS cooling drum, identified as EU046, approved for construction in 2005, with a maximum throughput rate of 100 tons/hr of DDGS**, controlled by a baghouse, identified as CE008, and exhausting through stack EP007, and** the TO/HRSG systems CE003 and CE006, ~~and~~ exhausting to stack EP003. ~~For up to 438 hours per year, the exhaust from EU046 will by-pass the TO/HRSG systems and will be controlled by baghouse CE008, exhausting to stack EP007.~~ **Note: A portion of the exhaust from the baghouse CE008 exhausts to each of two (2) TO/HRSG systems CE003 and CE006 to provide combustion air.**

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

D.3.5 FESOP Limits [326 IAC 2-2] [326 IAC 2-8-4] [326 IAC 2-4.1]

(a) Pursuant to 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following emission limits for the baghouse CE008 which controls a portion of the exhaust from the DDGS cooling drum (EU046) and exhausts through Stack EP007:

(1) PM/PM10 emissions shall not exceed 0.64 lbs/hr.

(2) VOC emissions shall not exceed 0.0183 lbs/ton DDGS.

(b) The TO/HRSG systems (CE003 and CE006) are used to control the emissions from the distillation process, the DDGS dryers (EU039, EU040, EU042, and EU043), and **a**

portion of the DDGS cooling drum **exhaust** (EU046). Pursuant to 326 IAC 2-8-4 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, emissions from the TO/HRSG systems stack EP003 shall not exceed the following.

(~~a~~**1**) PM emissions shall not exceed 7.45 lbs/hr.

(~~b~~**2**) PM10 emissions shall not exceed 7.45 lbs/hr.

(~~c~~**3**) VOC emissions shall not exceed 8.50 lbs/hr.

(~~d~~**4**) CO emissions shall not exceed 20.91 lbs/hr.

(~~e~~**5**) SO_2 emissions shall not exceed 18.63 lbs/hr.

(~~f~~**6**) NOx emissions shall not exceed 21.17 lbs/hr.

(~~g~~**7**) Acetaldehyde emissions shall not exceed 0.72 lbs/hr.

(~~h~~**8**) Total HAP emissions shall not exceed 2.19 lbs/hr.

~~The TO/HRSG systems (CE003 and CE006) are used to control the emissions from the distillation process, the DDGS dryers (EU039, EU040, EU042, and EU043), and the DDGS cooling drum (EU046). Pursuant to 326 IAC 2-8-4 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, emissions from the TO/HRSG systems stack EP003 shall not exceed the following.~~

~~(a) PM emissions shall not exceed 7.45 lbs/hr.~~

~~(b) PM10 emissions shall not exceed 7.45 lbs/hr.~~

~~(c) VOC emissions shall not exceed 8.50 lbs/hr.~~

~~(d) CO emissions shall not exceed 20.91 lbs/hr.~~

~~(e) SO_2 emissions shall not exceed 18.63 lbs/hr.~~

~~(f) NOx emissions shall not exceed 21.17 lbs/hr.~~

~~(g) Acetaldehyde emissions shall not exceed 0.72 lbs/hr.~~

~~(h) Total HAP emissions shall not exceed 2.19 lbs/hr.~~

...

D.3.15 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] [326 IAC 2-2] [40 CFR 60, Subpart Db]

(a) In order to demonstrate compliance with Conditions D.3.5**(b)**, D.3.6, D.3.11, and D.3.12, the Permittee shall perform PM, PM10, VOC (including emission rate and overall control efficiency), NOx, SO_2, CO, and Acetaldehyde testing for the TO/HRSG systems stack (EP003) within 60 days after achieving maximum capacity, but not later than 180 days after initial startup, utilizing methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10. 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.

...

(c) In order to demonstrate compliance with Conditions D.3.5(a) and D.3.12, the Permittee shall perform PM, PM10, and VOC testing for the DDGS cooling drum stack (EP007) 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.

2. The source requested that the descriptive information of Tank T006 be revised (tank will contain a corrosion inhibitor instead of a fuel additive). Additionally, the storage tank VOC emissions were revised to reflect the VOC emissions as reported in the original application (dated June 2005).

A.4 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):

...

(k) 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) tons per year of any combination of HAPs:

...

(5) One (1) ~~fuel additive~~ **corrosion inhibitor** storage tank, identified as T006, approved for construction in 2005, with a maximum capacity of 2,300 gallons.

3. A condition was added to the permit prohibiting the Permittee from using anti-skid materials, rock salt, or other chemical deicers to remove ice and snow from haul roads or parking areas. This limit helps ensure compliance with 326 IAC 2-2 and 326 IAC 2-8-4.

D.1.5 PM and PM10 Emissions [326 IAC 2-2] [326 IAC 2-8-4]

...

(e) The Permittee shall not use anti-skid materials, rock salt, or other chemical deicers to remove ice and snow from source hauling roads or parking areas. The Permittee shall remove ice from the roadways only by mechanical means (e.g., plow, blower, etc.).

4. The source requested that PM/PM10 emission limits be added to the scrubber controlling the fermentation process. In order to show compliance with the PM/PM10 emission limits, IDEM, OAQ has added PM/PM10 testing requirements to the fermentation scrubber.

D.2.5 VOC and HAP Emissions [326 IAC 2-2] [326 IAC 2-8-4] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4 (FESOP), emissions from wet scrubber CE004, which is used to control the emissions from the fermentation process, shall comply with the following:

(1) VOC emissions shall not exceed 10.2 lbs/hr.

(2) Acetaldehyde emissions shall not exceed 1.18 lbs/hr.

(3) Total HAP emissions shall not exceed 1.26 lbs/hr.

(4) PM/PM10 emissions shall not exceed 0.20 lbs/hr.

Combined with the **PM/PM10,** VOC**,** and HAP emissions from other emissions units and the VOC and HAP emissions from Cargill AgHorizons – Linden Grain Elevator (Plant ID #107-00009), the **PM/PM10 and** VOC emissions from the entire source are 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 2-4.1 (MACT) are not applicable.

D.2.11 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

In order to verify compliance with Conditions D.2.5 and D.2.6, the Permittee shall perform **PM/PM10,** VOC (including emission rate, and overall control efficiency)**,** and Acetaldehyde testing for scrubber CE004 within 60 days after achieving the maximum capacity, but not later than 180 days after initial startup, utilizing methods as approved by the Commissioner. **PM10 includes filterable and condensible 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.

5. The source requested that an hourly operating limit of 876 hours be added to the permit for the biomethanator flare. Recordkeeping was also added as part of this requirement. In addition, the permit was revised such that the biomethanator gas shall be combusted in either the TO/HRSG systems or the biomethanator flare during all times of biomethanator operation.

D.5.1 FESOP Limits [326 IAC 2-2] [326 IAC 2-8-4] [326 IAC 2-4.1]

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

...

(d) ~~The biomethanator flare (CE007) shall operate when the biomethanator gas is not being combusted by one of the thermal oxidizers (CE003 and CE006).~~ **The operating hours for the biomethanator flare (CE007) shall not exceed 876 hours per twelve (12) consecutive month period with compliance determined at the end of each month. The biomethanator gas shall be combusted in either the TO/HRSG systems or the biomethanator flare during all times of biomethanator operation.**

...

D.5.2 Record Keeping Requirements

(a) To document compliance with Condition D.5.1(a), the Permittee shall maintain monthly records of the operating hours for the diesel fire pump (EU048).

(b) To document compliance with Condition D.5.1(d), the Permittee shall maintain monthly records of the operating hours for the biomethanator flare (CE007).

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

Upon further review, IDEM, OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted):

1. In order to reduce the number of administrative amendments and notice-only changes, IDEM, OAQ has decided to remove the identification of the Responsible Official in Condition A.1. The following change has been made to the permit:

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

The Permittee owns and operates a stationary ethanol production plant.

~~Authorized individual:~~	~~Senior Manager Director~~
Source Address:	173 West County Road 1100 North, Linden, Indiana 47955
Mailing Address:	4311 Oak Lawn Avenue, Suite 650, Dallas, Texas 75219

General Source Phone:	(214) 520-2820
SIC Code:	2869
Source Location Status:	Montgomery Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

2. In order to clarify recordkeeping requirements specific to parametric monitoring, Conditions D.1.13(c) and (h), D.2.13(a), and D.3.20(a) and (c) were revised.

D.1.13 Record Keeping Requirements

...

(c) To document compliance with Condition D.1.10, the Permittee shall maintain records of daily visible emission notations of the baghouse stack exhausts. **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).**

(d) To document compliance with Condition D.1.11, the Permittee shall maintain daily records of pressure drop for baghouses during normal operation. **The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).**

D.2.13 Record Keeping Requirements

(a) To document compliance with Condition D.2.12, the Permittee shall maintain daily records of pressure drop and flow rate for scrubber CE004 during normal operation. **The Permittee shall include in its daily record when a pressure drop or flow rate reading is not taken and the reason for the lack of a pressure drop or flow rate reading (e.g. the process did not operate that day).**

...

D.3.20 Record Keeping Requirements

(a) To document compliance with Condition D.3.17, the Permittee shall maintain records of daily visible emission notations of the stack EP003. **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.3.19, the Permittee shall maintain daily records of the duct pressure or fan amperage for the thermal oxidizers. **The Permittee shall include in its daily record when a pressure or fan amperage reading is not taken and the reason for the lack of a pressure or fan amperage reading (e.g. the process did not operate that day).**

...

3. The specific mail codes (MC) for each of the IDEM branches have been added to the permit to improve mail delivery, as follows:

Permits Branch: **MC 61-53 IGCN 1003**
Compliance Branch: **MC 61-53 IGCN 1003**
Air Compliance Section: **MC 61-53 IGCN 1003**
Compliance Data Section: **MC 61-53 IGCN 1003**
Asbestos Section: **MC 61-52 IGCN 1003**

Technical Support and Modeling: **MC 61-50 IGCN 1003**

4. Permit Condition C.13 has been removed because its basis is from the Part 70 Permit Program (326 IAC 2-7-5(3)(A)(iii). The Part 70 Permit Program does not apply to this source.

~~C.13 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.~~

5. IDEM, OAQ has removed the hyphen between the words "one hundred" in Conditions C.2 and C.18. In addition the word "and" has been removed in Condition C.18(b).

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

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

(a) Pursuant to 326 IAC 2-8:

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

...

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

...

(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 ~~and~~ twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision 017-24506-00061. The staff recommends to the Commissioner that this FESOP Significant Permit Revision be approved.

Appendix A: Emission Calculations
VOC, PM, PM10, and HAP Emissions
From the Fermentation Process

Company Name: ASA Linden, LLC
Address: 173 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: April 16, 2007

1. Process Description:

Max. Throughput Rate: 118 MM gal/yr of ethanol
Control Equipment: Wet Scrubber CE004

2. Potential to Emit (PTE) of VOC and HAP:

Pollutant	*Emission Rate after Control	Units	PTE after Control (tons/yr)
VOC	10.2	lb/hr	**44.7**
PM	14.9	lb/MMgal	**0.88**
PM10	14.9	lb/MMgal	**0.88**
HAP			
Acetaldehyde	1.179	lb/hr	5.16
Acrolein	0.0143	lb/hr	0.06
Formaldehyde	0.031	lb/hr	0.14
Methanol	0.031	lb/hr	0.14
Total HAPs	**1.26**		**5.50**

* This is provided by the source based on multiple ethanol facilities' stack test results and scaled linearly based on production capacity.
The Permittee will perform stack testing to demonstrate compliance with the above emission rates.
** The control efficiency information is based on the information from other similar plants.

Methodology

PTE after Control (tons/yr) = Emission Rate after Control (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs
PTE before Control (tons/yr) = PTE after Control (tons/yr) / (1- Control Efficiency)

Appendix A: Emission Calculations
Criteria Pollutants
From Four (4) 45 MMBtu/hr DDGS Dryers and Two (2) 143 MMBtu/hr TO/HRSG Systems

Company Name: ASA Linden, LLC
Address: 173 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: April 16, 2007

Heat Input Capacity
MMBtu/hr

466 (6 units combined)

	Pollutant					
	PM*	PM10*	SO_2*	NOx*	VOC*	CO*
Emission Factor	9.0 (lbs/hr)	9.0 (lbs/hr)	15.3 (lbs/hr)	21.2 (lbs/hr)	8.50 (lbs/hr)	21.3 (lbs/hr)
Potential to Emit in tons/yr	**39.4**	**39.4**	**67.0**	**92.9**	**37.2**	**93.3**

*Emission rates were estimated by the source based on the stack testing results from similar sources. These emission rates are the proposed emission limits in this permit and will be verified by stack testing.

Methodology

PTE (tons/yr) = Emission Factor (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs

Appendix A: Emission Calculations
Process HAP Emissions
From Four (4) 45 MMBtu/hr DDGS Dryers and Cooling Drum

Company Name: ASA Linden, LLC
Address: 173 West County Road 1100 North, Linden, IN 47955
FESOP: 107-21453-00061
Reviewer: ERG/YC
Date: November 10, 2005

	Pollutant				
	Acetaldehyde	Acrolein	Formaldehyde	Methanol	Total
Emission Rate after Control (lbs/hr) *	0.72	0.04	0.32	0.30	1.39
PTE after Control in tons/yr	**3.17**	**0.18**	**1.41**	**1.33**	**6.08**

*HAP emission rates were estimated by the source based on the stack testing results from a similar engineered site (Glacial Lakes Energy, MN).
The Permittee will perform stack tests to verify the HAP emissions from these units.

Methodology

PTE after Control (tons/yr) = Emission Rate after Control (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs

Appendix A: Emission Calculations
Combustion HAP Emissions
From NG Combustion in Four (4) 45 MMBtu/hr DDGS Dryers and Two (2) 143 MMBtu/hr TO/HRSG Systems

Company Name: ASA Linden, LLC
Address: 173 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: April 16, 2007

Heat Input Capacity MMBtu/hr		Potential Throughput MMCF/yr
466	(6 units combined)	4082.2

	Pollutant					
	Hexane	Formaldehyde	Toluene	Benzene	Nickel	Total HAPs
Emission Factor in lbs/MMCF	1.8E+00	7.5E-02	3.4E-03	2.1E-03	2.1E-03	
Potential to Emit in tons/yr	**3.67**	**0.15**	**6.94E-03**	**4.29E-03**	**4.29E-03**	**3.84**

Emission factors are from AP-42, Chapter 1.4, Table 1.4-3 (AP-42, 03/98).
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Methodology

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1 ton/2000 lbs

Appendix A: Emission Calculations
DDGS Cooling Drum TO Bypass

Company Name: ASA Linden, LLC
Address: 173 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: April 16, 2007

The cooling drum moves the DDGS from the dryers to the DDGS storage. A portion of the exhaust is controlled by the TO/HRSG system; the remainder of the exhaust is controlled by baghouse CE008.

1. Potential to Emit VOCs

Annual DDGS Production Limit: 370,000 ton/yr
VOC Emission Factor: 0.0183 lb/ton of DDGS (provided by the source based on equipment manufacturer)

Limited PTE of VOC (ton/yr) = 370,000 ton/yr x 0.0183 lb/ton x 1 ton/2000 lb = **3.39 ton/yr**

2. Potential to Emit PM/PM10 After Controls

Unit Description	Control Device	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	PTE of PM/PM10 After Control (lbs/hr)*	PTE of PM/PM10 After Control (tons/yr)*
DDGS Cooling Drum TO/HRSG Bypass (EP007)	Baghouse CE008	0.005	15,000	0.64	2.82

*Assume all PM emissions equal PM10 emissions.

Methodology
PTE of PM/PM10 After Control (lbs/hr) = [Grain Loading (gr/dscf)] * [Max. Air Flow Rate (scfm)] * [60 mins/hr] * [1 lb/7000 gr]
PTE of PM/PM10 After Control (tons/yr) = PTE of PM/PM10 After Control (lbs/hr) * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emission Calculations
PM and PM10 Emissions
From the DDGS Handling and Loadout Operations

Company Name: ASA Linden, LLC
Address: 173 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: April 16, 2007

1. Potential to Emit PM/PM10

Unit ID	Process Description	Control Device	Baghouse ID	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	PTE of PM/PM10 After Control (lbs/hr)*	PTE of PM/PM10 After Control (tons/yr)*	Control Efficiency (%)	PTE of PM/PM10 Before Control (lbs/hr)*	PTE of PM/PM10 Before Control (tons/yr)*
EU035 EU036 EU037	DDGS Handling and Loadout	Baghouse	CE005	0.005	9,100	0.39	1.71	99%	39.0	171

*Assume all PM emissions equal PM10 emissions.

Methodology
PTE of PM/PM10 After Control (lbs/hr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1 lb/7000 gr
PTE of PM/PM10 After Control (tons/yr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1 lb/7000 gr x 8760 hr/yr x 1 ton/2000 lbs
PTE of PM/PM10 Before Control = PTE of PM/PM10 After Control / (1-Control Efficiency)

2. Potential to Emit PM/PM10 - Fugitive Emissions:

Unit ID	Unit Description	Annual Throughput Limit (tons/yr)	Uncontrolled PM Emission Factor (lbs/ton)*	Uncontrolled PM10 Emission Factor (lbs/ton)*	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10 (tons/yr)	Baghouse ID	Capture Efficiency (%)	Fugitive PM (tons/yr)	Fugitive PM10 (tons/yr)	Fugitive PM (lbs/hr)	Fugitive PM10 (lbs/hr)
NA	DDGS Loadout - Truck	370,000	0.0033	0.0008	0.61	0.15	CE005	80%	0.12	0.03	0.03	0.01
NA	DDGS Flat Storage	370,000	0.0033	0.0008	0.61	0.15	NA	95%	0.03	0.01	0.01	0.00

*Emission factors are from AP-42, Chapter 9.9.1 - Grain Elevators, Table 9.9.1-2 (04/03) for Feed Shipping (SCC 3-02-008-03)

Methodology
Uncontrolled PTE of PM/PM10 (tons/yr) = Annual Throuhgput Limit (tons/yr) x Uncontrolled Emission Factor (lbs/ton) x 1 ton/2000 lbs
Fugitive PM/PM10 (tons/yr) = Uncontrolled PM/PM10 (tons/yr) x (1-Capture Efficiency%)
Fugitive PM/PM10 (lbs/hr) = Fugitive PM/PM10 (tons/yr) x (2000 lbs/ton) / (8760 hr/yr)

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved and Paved Roads

Company Name: ASA Linden, LLC
Address: 173 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: April 16, 2007

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight of Vehicle and Load (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)
DDGS Hopper Truck (empty truck entering plant)	5	4.2	21	17	357	2682	0.508	10.7
Ethanol Tanker Truck (empty truck entering plant)	5	4.2	21	17	357	2682	0.508	10.7
Denaturant Tanker Truck (empty truck entering plant)	2	1	2	17	34	2682	0.508	1.0
DDGS Hopper Truck (loaded truck leaving plant)	5	4.2	21	42	882	2682	0.508	10.7
Ethanol Tanker Truck (loaded truck leaving plant)	5	4.2	21	44	924	2682	0.508	10.7
Denaturant Tanker Truck (loaded truck leaving plant)	2	1	2	44	88	2682	0.508	1.0
Total			**88**		**2642**			**44.7**

Average Vehicle Weight Per Trip = 30.0 tons/trip
Average Miles Per Trip = 0.51 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL/2)^0.65 * (W/3)^1.5 - C] (Equation 1 from AP-42 13.2.1)

	PM	PM10	
where k =	0.082	0.016	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	30.0	30.0	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	g/m^2 = Ubitiguous Silt Loading Values of typical paved roads (see AP-42 Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)]
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 120 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	
Unmitigated Emission Factor, Ef =	1.19	0.23	lb/mile
Mitigated Emission Factor, Eext =	1.09	0.21	lb/mile

Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Road Sweeping Control Efficiency	PTE of PM after Control (tons/yr)	PTE of PM10 after Control (tons/yr)	PTE of PM after Control (lbs/hr)	PTE of PM10 after Control (lbs/hr)
DDGS Hopper Truck (empty truck entering plant)	2.31	0.45	2.120	0.413	50%	1.060	0.206	0.242	0.047
Ethanol Tanker Truck (empty truck entering plant)	2.31	0.45	2.120	0.413	50%	1.060	0.206	0.242	0.047
Denaturant Tanker Truck (empty truck entering plant)	0.22	0.04	0.202	0.039	50%	0.101	0.020	0.023	0.004
DDGS Hopper Truck (loaded truck leaving plant)	2.31	0.45	2.120	0.413	50%	1.060	0.206	0.242	0.047
Ethanol Tanker Truck (loaded truck leaving plant)	2.31	0.45	2.120	0.413	50%	1.060	0.206	0.242	0.047
Denaturant Tanker Truck (loaded truck leaving plant)	0.22	0.04	0.202	0.039	50%	0.101	0.020	0.023	0.004
Totals	**9.68**	**1.89**	**8.88**	**1.73**		**4.44**	**0.87**	**1.01**	**0.20**

Note: As limited by the permit, the Permittee eill not use anti-skid materials, rock salt, or other chemical deicers, to remove ice and snow from source hauling roads or parking areasand will remove ice from the roadways only with a plow. Therefore, the silt loading factor used in these calculations has not been adjusted for winter months.

Appendix A: Emission Calculations
PM/PM10 Emissions
From the the Cooling Tower (Insignificant Activity)

Company Name: **ASA Linden, LLC**
Address: **173 West County Road 1100 North, Linden, IN 47955**
Operation Permit No.: **F107-21453-00061**
Significant Permit Revision No.: **107-24506-00061**
Reviewer: **ERG/JR**
Date: **April 16, 2007**

1. Process Description:

Type of Cooling Tower:	Induced Draft	
Circulation Flow Rate:	55,000	gal/min
Total Drift:	0.005%	of the circulating flow
Total Dissolved Solids:	1,800	ppm
Density:	8.345	lbs/gal

Note: The information above was provided by the cooling tower manufacturer for the same units located at a similar source.

2. Potential to Emit PM/PM10:

Assume all the dissolved solids become PM10 emissions and assume PM emissions are equal to PM10 emissions.

PTE of PM/PM10 (lbs/hr) = 55,000 gal/min x 60 min/hr x 0.005% x 8.345 lbs/gal x 1,800 ppm x 1/1,000,000 ppm = **2.48 lbs/hr**

PTE of PM/PM10 (tons/yr) = 2.48 lbs/hr x 8760 hr/yr x 1 ton/2000 lbs = **10.9 tons/yr**

Appendix A: Emission Calculations
VOC and HAP Emissions
From Equipment Leaks

Company Name: ASA Linden, LLC
Address: 173 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: April 16, 2007

1. Fugitive VOC Emissions:

Equipment Component Source	Product	Component Count*	Emission Factor** (lbs/comp-hr)	Subpart VV Control Effectiveness*** (%)	Fugitive VOC Emissions (tons/yr)
Valves	Gas/Vapor	100	0.01319	87%	0.75
Valves	Light Liquid	600	0.00891	84%	3.75
Pumps	Gas/Vapor	50	0.04398	69%	2.99
Flanges	All	1000	0.00404	87%	2.30
Total		**1750**			**9.78**

* Component count estimated based on equipment vendor information.

** Emission factors are from Protocol for Equipment leak Emission Estimates, EPA-453/R-95-017.

*** Control Effectiveness is from Protocol for Equipment leak Emission Estimates, EPA-453/R-95-017, Table 5-2.

Methodology

Fugitive VOC Emissions (tons/yr) = Component Count x Emission Factor (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs x (1-Control Effectiveness) x TOC Weight %

2. Fugitive HAP Emissions:

HAP	HAP Fraction*	Fugitive HAP Emissions (tons/yr)
Acetaldehyde	2.00E-04	1.96E-03
Methanol	2.00E-04	1.96E-03
Benzene	2.50E-03	2.45E-02
Carbon Disulfide	2.00E-05	1.96E-04
Cumene	1.00E-03	9.78E-03
Ethylbenzene	5.00E-05	4.89E-04
n-Hexane	5.00E-02	4.89E-01
Toluene	5.00E-03	4.89E-02
Xylenes	5.00E-04	4.89E-03
Total		**0.58**

* This is the HAP fraction for gasoline vapors or from test results.

Methodology

Fugitive HAP Emissions (tons/yr) = Fugitive VOC Emissions (tons/yr) x HAP Fraction

Appendix A: Emission Calculations
Combustion Emissions
From Biomethanator Flare CE007

Company Name: ASA Linden, LLC
Address: 173 West County Road 1100 North, Linden, IN 47955
Operation Permit No.: F107-21453-00061
Significant Permit Revision No.: 107-24506-00061
Reviewer: ERG/JR
Date: April 16, 2007

Max. Heat Input MMBtu/hr	Limited Hours of operation (hr/yr)
6.4	876

Pollutant	PM[b]	PM10[b]	SO_2[b]	NOx[a]	CO[a]	VOC[a]	HAP[b]
Emission Factor in lb/MMBtu	-	-	-	0.068	0.37	0.052	-
Unlimited PTE (tons/yr)	Negligible	Negligible	Negligible	**1.91**	**10.4**	**1.46**	Negligible
Limited PTE (tons/yr)	Negligible	Negligible	Negligible	**0.19**	**1.04**	**0.15**	Negligible

[a] Emission factors are from AP-42, Tables 13.5-1 and 13.5-2 (AP-42, 01/95).

[b] The Permitttee stated that PM/PM10 emissions from this flare are negligibe due to the smokeless design. The PTE of SO_2 and HAP are negligible due to negligible sulfur and HAP presence in the gas stream.

Methodology

Unlimited PTE (tons/yr) = Max. Heat Input (MMBtu/hr) x Emission Factor (lbs/MMBtu) x 8760 hrs/yr x 1 ton/2000 lbs
Limited PTE (tons/yr) = Max. Heat Input (MMBtu/hr) x Emission Factor (lbs/MMBtu) x Limited Hours of operation (hrs/yr) x 1 ton/2000 lbs