Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding a
Signficant Modification to a
Part 70 Operating Permit

for POET Biorefining - North Manchester, LLC in Wabash County

Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068

The Indiana Department of Environmental Management (IDEM) has received an application from POET Biorefining - North Manchester, LLC, located at 868 East 800 North, North Manchester, IN 46962, for a significant modification of its Part 70 Operating Permit issued on August 2, 2012. If approved by IDEM's Office of Air Quality (OAQ), this proposed modification would allow POET Biorefining - North Manchester, LLC to make certain changes at its existing source. POET Biorefining - North Manchester, LLC has applied to do the following:

(1) Construction and operation of fermenter (EU047), which will increase the capacity downstream due to the increase in yield on the available starch contained within the grain received and processed.
(2) Increase production and loadout of denatured ethanol from 83,150,000 to 86,000,000 gallons per year.
(3) Increase beer flow through distillation from 57,000 to 60,000 gallons per hour.
(4) Increase flow rate at the cooling tower from 26,000 to 30,000 gallons per minute.
(5) Increase fugitive emissions from the new kettle style vaporizer used in the distillation process.
(6) Increase in throughput of the DDGS handling (DDGS Dryers – EU025 and EU026, DDGS Fluid Bed Cooler – EU029, DDGS Storage Silo - EU030, DDGS Silo Bypass – EU031, and DDGS Storage Building – EU032) maximum throughput rate from 26 tons per hour to 29 tons per hour.

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. In addition, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g. changes that add or modify synthetic minor emission limits). IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow the applicant to make this change.

A copy of the permit application and IDEM's preliminary findings are available at:

North Manchester Public Library
405 North Market Street
North Manchester, IN 46962

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number SSM 169-37113-00068 and SPM 169-37123-00068 in all correspondence.

Comments should be sent to:

Thomas Olmstead
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension 3-9664
Or dial directly: (317) 233-9664
Fax: (317) 232-6749 attn: Thomas Olmstead
E-mail: tolmstea@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Thomas Olmstead of my staff at the above address.

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

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DRAFT

Mr. Keith Caudill
POET Biorefining - North Manchester, LLC
868 East 800 North
North Manchester, IN 46962

Re: 169-37123-00068
Significant Permit Modification to
Part 70 No.: T169-31191-00068

Dear Mr. Caudill:

POET Biorefining - North Manchester, LLC was issued Part 70 Operating Permit No. T169-31191-00068 on August 2, 2012 for a stationary ethanol production plant located at 868 East 800 North, North Manchester, IN 46962. An application requesting changes to this permit was received on April 22, 2016. Pursuant to the provisions of 326 IAC 2-7-12, a Significant Permit Modification to this permit is hereby approved as described in the attached Technical Support Document.

Please find attached the entire Part 70 Operating Permit as modified, including the following revised attachment(s):

Attachment B: 40 CFR 60, Subpart VVa, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction Commenced After November 7, 2006
Attachment D: 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)
Attachment H: 40 CFR 63, Subpart CCCCCC, National Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

The permit references the below listed attachment(s). Since these attachments have been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of these attachments with this modification:

Attachment A: Fugitive Dust Control Plan
Attachment C: 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements
Attachment E: 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
Attachment F: 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
Attachment G: RESERVED

Previously issued approvals for this source containing these attachments are available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. For additional information about air permits and how the public and interested parties can participate, refer to

the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

If you have any questions on this matter, please contact Thomas Olmstead, of my staff, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251 at 317-233-9664 or 1-800-451-6027, and ask for extension 3-9664.

Sincerely,

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document
cc: File - Wabash County
Wabash County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch

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DRAFT

Part 70 Operating Permit

OFFICE OF AIR QUALITY

POET Biorefining - North Manchester, LLC
868 East 800 North
North Manchester, Indiana 46962

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 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.

Operation Permit No.: T169-31191-00068	
Issued by: Original Signed Jenny Acker, Section Chief Permits Branch, Office of Air Quality	Issuance Date: August 2, 2012 Expiration Date: August 2, 2017

Significant Permit Modification No. 169-33491-00068, issued on December 13, 2013.

Significant Permit Modification No.: 169-37123-00068	
Issued by: Jenny Acker, Section Chief Permits Branch Office of Air Quality	 Issuance Date: Expiration Date: August 2, 2017

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.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 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary ethanol production plant.

Source Address:	868 East 800 North, North Manchester, Indiana 46962
General Source Phone Number:	(260) 774-3532
SIC Code:	2869 (Industrial Organic Chemicals, Not Elsewhere Classified) and 2048 (Prepared Feeds and Feed Ingredients for Animals and Fowls, Except for Dogs and Cats)
County Location:	Wabash
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Minor Nested Source, under PSD Rules, with fossil fuel fired boilers totaling more than two hundred fifty million (250,000,000) British thermal units per hour heat input, as 1 of 28 Source Categories, within a non-listed source

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

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

(a) One (1) grain receiving and handling operation, approved in 2007 for construction, controlled by baghouse CE001, exhausting through stack SV001, and consisting of the following:

(1) Two (2) truck dump pits and one (1) rail dump pit, identified as EU001, approved in 2007 for construction, with a maximum throughput rate of 840 tons of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, approved in 2007 for construction, with a maximum throughput rate of 840 tons per hour.

(3) Four (4) grain bins, identified as EU003, approved in 2007 for construction, with a maximum throughput rate of 840 tons per hour. Three (3) of these grain bins have the capacity to store up to 674,600 bushels each. The fourth bin has a capacity of 53,000 bushels for a total storage capacity of 2,076,800 bushels.

(b) One (1) corn transfer conveyor system, identified as EU004, approved in 2007 for construction, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(c) One (1) surge bin, identified as EU005, approved in 2007 for construction, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(d) Five (5) hammermills, identified as EU006, EU007, EU008, EU009, and EU010, approved in 2007 for construction, each with a maximum throughput rate of 20 tons of corn per hour, controlled by baghouses CE003, CE004, CE005, CE006, and CE007, respectively, and exhausting through stacks SV003, SV004, SV005, SV006, and SV007, respectively.

(e) One (1) fermentation process, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 60,000 gallons per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) Five (5) fermenters, identified as EU012 through EU016, approved in 2007 for construction.

(2) One (1) fermenter, identified as EU047, approved in 2016 for construction.

(3) One (1) yeast propagation tank, identified as EU017, approved in 2007 for construction.

(4) One (1) beer well, identified as EU018, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(f) One (1) regenerative thermal oxidizer (RTO), identified as CE009, approved in 2007 for construction, with a maximum heat input capacity of 30 MMBtu/hr, using natural gas as fuel, with emissions exhausted through stack SV009.

(g) One (1) distillation process, approved in 2007 for construction and approved in 2016 for modification, with a maximum input feed rate of 60,000 gallons of beer per hour and a maximum production rate of 12,000 gallons of ethanol per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through stack SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved in 2007 for construction.

(2) One (1) rectifier column, identified as EU020, approved in 2007 for construction.

(3) One (1) side stripper, identified as EU021, approved in 2007 for construction.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved in 2007 for construction.

(5) One (1) set of four (4) evaporators, identified as EU023, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(h) One (1) set of four (4) centrifuges, identified as EU024, approved in 2007 for construction, controlled by regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through stack SV009. When DDGS is not being produced, emissions from EU024 are exhausted through bypass stack SV017.

(i) Two (2) natural gas fired DDGS dryers, identified as EU025 and EU026, approved in 2007 for construction and approved in 2016 for modification, each with a maximum heat input rate of 60 MMBtu/hr, with a total maximum throughput rate of 78 tons of wetcake per hour, and an output of 29 tons of DDGS produced per hour, controlled by multiclones CE013 and CE014, respectively, with emissions venting to thermal oxidizer CE009, and exhausting to stack SV009.

(j) Two (2) natural gas fired boilers, identified as EU027 and EU028, approved in 2007 for construction, each with a maximum heat input rate of 143 MMBtu/hr each, with emissions exhausting to stacks SV013 and SV014, respectively.

Under 40 CFR, Subpart Db, the two (2) boilers are new steam generating units.

(k) One (1) fluidized DDGS cooler, identified as EU029, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 29 tons/hr of DDGS, controlled by baghouse CE010, exhausting to the DDGS Dryers (EU025 and EU026), and equipped with bypass stack SV010, exhausting to atmosphere.

(l) One (1) DDGS handling and storage operation, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 29 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS storage silo, identified as EU030, approved in 2007 for construction, controlled by baghouse CE011, with emissions exhausted to stack SV011.

(2) One (1) DDGS silo bypass, identified as EU031, approved in 2007 for construction, controlled by baghouse CE012, with emissions exhausted to stack SV012.

(3) One (1) DDGS storage building, identified as EU032, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(m) One (1) DDGS loadout operation, approved in 2007 for construction, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS conveyor, identified as EU033, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(2) One (1) DDGS truck loadout spout, identified as EU034, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(3) One (1) DDGS rail loadout spout, identified as EU035, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(n) One (1) ethanol loading system, identified as EU036, consisting of two (2) racks for trucks and one (1) rack for railcars, approved in 2007 for construction, with a maximum throughput rate of 39,000 gallons per hour when loading trucks, and 144,000 gallons per

hour when loading railcars. This unit is controlled by enclosed flare CE015, which is fueled by natural gas and has a pilot gas flare heat input capacity of 54,000 Btu/hr, and exhausts through stack SV016.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(o) One (1) diesel generator, identified as EU037, approved in 2007 for construction, with a maximum power output rate of 2,640 HP, and exhausting to stack SV015.

Under NSPS, Subpart IIII, this unit is an affected source.
Under NESHAP, Subpart ZZZZ, this unit is an affected source.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

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

(a) Paved roads and parking lots with public access.

(b) Two (2) centrifuges, identified as EU038 and EU039, approved in 2012 for construction, used in series to separate corn oil from the syrup system, exhausted to the thermal oxidizer CE009 and stack SV009. During wetcake production, emissions from EU038 and EU039 are exhausted through a pressure relief vent.

(c) Storage Tanks:

(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved in 2007 for construction, with a maximum capacity of 250,000 gallons.

(2) One (1) denaturant tank, identified as T002, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 250,000 gallons of natural gasoline.

(3) One (1) 200-proof ethanol tank, identified as T003, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(4) One (1) 200-proof ethanol tank, identified as T004, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(5) One (1) denaturant tank, identified as T005, approved in 2007 for construction, with a maximum capacity of 126,900 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, these units are affected facilities. Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(d) One (1) gasoline dispensing operation for plant vehicles, identified as T009, installed in 2008, with a 265 gallon capacity storage tank and an estimated annual throughput of 2,200 gallons per year.

Under 40 CFR 63, Subpart CCCCCC, this is an affected unit.

(e) Vapor collection-equipped gasoline cargo tanks.

A.4 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities:

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

(b) Forced and induced draft cooling tower system not regulated under a NESHAP. The cooling tower has a maximum throughput of 30,000 gallons per minute.

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

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

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

(f) Other emission units, not regulated by a NESHAP, with PM_{10}, NO_X, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) diesel storage tank, identified as T006, approved in 2007 for construction, with a maximum storage capacity less than 2,000 gallons of diesel fuel.

(2) One (1) thin stillage tank, identified as T007, approved in 2007 for construction, with a maximum storage capacity of 500,000 gallons of thin stillage.

(3) One (1) syrup tank, identified as T008, approved in 2007 for construction, with a maximum storage capacity of 61,000 gallons of syrup.

(4) Five (5) process tanks, identified as EU040 through EU044, approved in 2012 for construction, used for pH adjustment and used to accept corn oil and defatted syrup process streams from the centrifuges, exhausted to the thermal oxidizer CE009 and stack SV009.

(5) Two (2) large oil storage tanks, identified as EU045 and EU046, approved in 2012 for construction, each with a maximum storage capacity of 30,000 gallons, each with a maximum true vapor pressure less than 15.0 kPa, used for storage of corn oil prior to loading into trucks for sale.

(6) One (1) slurry tank, identified as EU011, approved in 2007 for construction.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

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 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]

(a) This permit, T169-31191-00068, 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, including any permit shield provided in 326 IAC 2-7-15, 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 2-7-7][IC 13-17-12]

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 2-7-5(5)]

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 2-7-5(6)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(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. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

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

B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

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

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(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 2-7-5(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

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

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

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

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.11 Emergency Provisions [326 IAC 2-7-16]

(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.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

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

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

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

The notice fulfills the requirement of 326 IAC 2-7-5(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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 2-7-4(c)(8) 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 2-7 and any other applicable rules.

(g) 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.

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced 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 Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T169-31191-00068 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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 2-7-9(a)(3)]

(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 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(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 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(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 2-7-4. 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(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

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

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue

MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

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

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

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

(4) The Permittee notifies the:

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Emission Trades [326 IAC 2-7-20(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 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(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 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.

(e) 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 2-7-10.5]

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

B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

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 Part 70 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 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 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 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 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-7-5(7)][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) Except as provided in 326 IAC 2-7-19(e), 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 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to

whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(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 Opacity [326 IAC 5-1]

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

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

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

C.3 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.4 Incineration [326 IAC 4-2][326 IAC 9-1-2]

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

C.5 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). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 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 attached plan as in Attachment A. The provisions of 326 IAC 6-5 are not federally enforceable.

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

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

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

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

C.11 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:
Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of

permit issuance to begin such monitoring. If, due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.12 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

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

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

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]

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

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

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

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

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

no later than ninety (90) days after the date of issuance of this permit.

The ERP does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

C.14 Risk Management Plan [326 IAC 2-7-5(11)][40 CFR 68]

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

C.15 Response to Excursions or Exceedances [326 IAC 2-7-5][326 IAC 2-7-6]

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

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

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

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(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. Support information includes the following, where applicable:

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

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

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that 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. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

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

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

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 applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) grain receiving and handling operation, approved in 2007 for construction, controlled by baghouse CE001, exhausting through stack SV001, and consisting of the following:

(1) Two (2) truck dump pits and one (1) rail dump pit, identified as EU001, approved in 2007 for construction, with a maximum throughput rate of 840 tons of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, approved in 2007 for construction, with a maximum throughput rate of 840 tons per hour.

(3) Four (4) grain bins, identified as EU003, approved in 2007 for construction, with a maximum throughput rate of 840 tons per hour. Three (3) of these grain bins have the capacity to store up to 674,600 bushels each. The fourth bin has a capacity of 53,000 bushels for a total storage capacity of 2,076,800 bushels.

(b) One (1) corn transfer conveyor system, identified as EU004, approved in 2007 for construction, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(c) One (1) surge bin, identified as EU005, approved in 2007 for construction, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(d) Five (5) hammermills, identified as EU006, EU007, EU008, EU009, and EU010, approved in 2007 for construction, each with a maximum throughput rate of 20 tons of corn per hour, controlled by baghouses CE003, CE004, CE005, CE006, and CE007, respectively, and exhausting through stacks SV003, SV004, SV005, SV006, and SV007, respectively.

(l) One (1) DDGS handling and storage operation, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 29 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS storage silo, identified as EU030, approved in 2007 for construction, controlled by baghouse CE011, with emissions exhausted to stack SV011.

(2) One (1) DDGS silo bypass, identified as EU031, approved in 2007 for construction, controlled by baghouse CE012, with emissions exhausted to stack SV012.

(3) One (1) DDGS storage building, identified as EU032, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(m) One (1) DDGS loadout operation, approved in 2007 for construction, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS conveyor, identified as EU033, approved in 2007 for

construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(2) One (1) DDGS truck loadout spout, identified as EU034, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(3) One (1) DDGS rail loadout spout, identified as EU035, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM, PM_{10}, and $PM_{2.5}$, emissions shall not exceed the following:

Unit ID	Unit Description	Baghouse ID	PM Emission Limit (lbs/hr)	PM_{10} Emission Limit (lbs/hr)	$PM_{2.5}$ Emission Limit (lbs/hr)
EU001, EU002, EU003	Grain Receiving, Conveyors, and Storage Bins	CE001	5.47 (combined)	5.76 (combined)	5.87 (combined)
EU004, EU005	Corn Scalper, Surge Bin	CE002	0.40 (combined)	0.42 (combined)	--
EU006	Hammermill #1	CE003	1.65	1.74	1.77
EU007	Hammermill #2	CE004	1.65	1.74	1.77
EU008	Hammermill #3	CE005	1.65	1.74	1.77
EU009	Hammermill #4	CE006	1.65	1.74	1.77
EU010	Hammermill #5	CE007	1.65	1.74	1.77
EU030	DDGS Silo Loading	CE011	0.56	0.59	--
EU031	DDGS Silo Bypass	CE012	0.60	0.63	--
EU032, EU033, EU035	DDGS conveying, storage, and loadout	CE016	1.37 (combined)	1.44 (combined)	1.44 (combined)

Compliance with these limits, the limits in Conditions D.2.1(a)(1), D.2.1(a)(2), D.2.1(a)(3), D.2.1(b)(1), D.2.1(b)(2), and D.2.1(b)(3), and the unrestricted PM, PM_{10}, and $PM_{2.5}$ emissions from all other emission units shall limit the PM, PM_{10}, and $PM_{2.5}$ emissions from the entire source to less than two hundred fifty (250) tons per year, each. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to the grain receiving and DDGS handling operations.

D.1.2 Particulate Emission Limitations [326 IAC 6-3-2]

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

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
EU001, EU002, EU003	Grain Receiving, Conveyors, and Storage Bins	840	75.4
EU004, EU005	Corn Scalper, Surge Bin	140	54.7
EU006	Hammermill #1	20	30.5
EU007	Hammermill #2	20	30.5
EU008	Hammermill #3	20	30.5

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
EU009	Hammermill #4	20	30.5
EU010	Hammermill #5	20	30.5
EU030	DDGS Silo Loading	29	39.1
EU031	DDGS Silo Bypass	29	39.1
EU032	DDGS Storage Building	29	39.1
EU033	DDGS Conveyor	220	59.5
EU034	DDGS Truck Loadout Spout	220	59.5
EU035	DDGS Rail Loadout Spout	220	59.5

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

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

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

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

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

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

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.1.4 Particulate Control

In order to ensure compliance with Conditions D.1.1 and D.1.2, each of the following emission units shall be controlled by the associated baghouse, as listed in the table below, when these units are in operation:

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

Unit ID	Unit Description	Baghouse ID
EU032, EU033, EU035	DDGS conveying, storage, and loadout	CE016

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.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM_{10}, and $PM_{2.5}$ testing for:

(a) one (1) of the following baghouses: CE001 through CE007 and CE016, and

(b) one (1) of the following baghouses: CE011 and CE012,

utilizing methods as approved by the Commissioner. These tests shall be repeated on a different baghouse at least once every five (5) years from the date of the last valid compliance demonstration. Testing on a baghouse shall not be repeated until each baghouse in the respective groups has been tested. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM_{10} and $PM_{2.5}$ includes filterable and condensible particulate matter.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.1.6 Visible Emissions Notations

(a) Visible emission notations of the baghouse stack exhausts (stacks SV001 through SV007, SV011, SV012, and SV018) 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 a reasonable response.–Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.7 Broken or Failed Bag Detection - Single Compartment Baghouses

(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 Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.1.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.6, the Permittee shall maintain a daily record of 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) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the record keeping requirements of this requirement.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) One (1) fermentation process, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 60,000 gallons per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) Five (5) fermenters, identified as EU012 through EU016, approved in 2007 for construction.

(2) One (1) fermenter, identified as EU047, approved in 2016 for construction.

(3) One (1) yeast propagation tank, identified as EU017, approved in 2007 for construction.

(4) One (1) beer well, identified as EU018, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(f) One (1) regenerative thermal oxidizer (RTO), identified as CE009, approved in 2007 for construction, with a maximum heat input capacity of 30 MMBtu/hr, using natural gas as fuel, with emissions exhausted through stack SV009.

(g) One (1) distillation process, approved in 2007 for construction and approved in 2016 for modification, with a maximum input feed rate of 60,000 gallons of beer per hour and a maximum production rate of 12,000 gallons of ethanol per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through stack SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved in 2007 for construction.

(2) One (1) rectifier column, identified as EU020, approved in 2007 for construction.

(3) One (1) side stripper, identified as EU021, approved in 2007 for construction.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved in 2007 for construction.

(5) One (1) set of four (4) evaporators, identified as EU023, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(h) One (1) set of four (4) centrifuges, identified as EU024, approved in 2007 for construction, controlled by regenerative thermal oxidizer (RTO) CE009, with emissions

exhausted through stack SV009. When DDGS is not being produced, emissions from EU024 are exhausted through bypass stack SV017.

(i) Two (2) natural gas fired DDGS dryers, identified as EU025 and EU026, approved in 2007 for construction and approved in 2016 for modification, each with a maximum heat input rate of 60 MMBtu/hr, with a total maximum throughput rate of 78 tons of wetcake per hour, and an output of 29 tons of DDGS produced per hour, controlled by multiclones CE013 and CE014, respectively, with emissions venting to thermal oxidizer CE009, and exhausting to stack SV009.

(k) One (1) fluidized DDGS cooler, identified as EU029, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 29 tons/hr of DDGS, controlled by baghouse CE010, exhausting to the DDGS Dryers (EU025 and EU026), and equipped with bypass stack SV010, exhausting to atmosphere.

Insignificant Activities:

(b) Two (2) centrifuges, identified as EU038 and EU039, approved in 2012 for construction, used in series to separate corn oil from the syrup system, exhausted to the thermal oxidizer CE009 and stack SV009. During wetcake production, emissions from EU038 and EU039 are exhausted through a pressure relief vent.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 PSD and HAP Minor Limits [326 IAC 2-2][326 IAC 2-4.1][40 CFR 63]

The Permittee shall comply with the following emission limits for the RTO system (CE009) and Scrubber (CE008), and the DDGS Cooler (EU029):

(a) Unless operating under Alternative operating Scenario No. 1 (AOS1) or No. 2 (AOS2), the scrubber (CE008) and RTO (CE009) shall control emissions from the fermentation and distillation processes. Additionally, the RTO shall control emissions from the DDGS dryers (EU025 and EU026), and, when DDGS is being produced, the set of four centrifuges. The emissions from the RTO (CE009) stack exhaust (SV009) shall be limited as follows:

(1) PM emissions shall not exceed 26.64 lbs/hr.

(2) PM_{10} emissions shall not exceed 29.70 lbs/hr.

(3) $PM_{2.5}$ emissions shall not exceed 28.40 lbs/hr.

(4) VOC emissions shall not exceed 39.49 lbs/hr.

(5) Acetaldehyde emissions shall not exceed 1.23 lbs/hr.

(6) Methanol emissions shall not exceed 1.75 lbs/hr.

(7) Acrolein emissions shall not exceed 0.21 lbs/hr.

(8) Total HAP emissions shall not exceed 3.73 lbs/hr.

(b) Alternative Operating Scenario No. 1 (AOS1)

When the Scrubber (CE008) is not operating, the RTO (CE009) shall control emissions from the fermentation and distillation processes, the DDGS dryers (EU025 and EU026), and, when DDGS is being produced, the set of four centrifuges. The emissions from the RTO (CE009) stack exhaust (SV009) shall be limited as follows:

(1) PM emissions shall not exceed 26.64 lbs/hr.

(2) PM_{10} emissions shall not exceed 29.70 lbs/hr.

(3) $PM_{2.5}$ emissions shall not exceed 28.40 lbs/hr.

(4) VOC emissions shall not exceed 39.49 lbs/hr.

(5) Acetaldehyde emissions shall not exceed 1.23 lbs/hr.

(6) Methanol emissions shall not exceed 1.75 lbs/hr.

(7) Acrolein emissions shall not exceed 0.21 lbs/hr.

(8) Total HAP emissions shall not exceed 3.73 lbs/hr.

(c) Alternative Operating Scenario No.2 (AOS2)

When the RTO (CE009) is not operating, the Permittee shall comply with the following:

(1) The Scrubber shall continue to control the VOC emissions for the fermentation and distillation processes, during the periods when the RTO is down. The RTO downtime shall not exceed more than five hundred (500) hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) VOC emissions from the scrubber (CE008) shall not exceed 84.21 pounds per hour.

(3) Acetaldehyde emissions from the scrubber (CE008) shall not exceed 5.60 lbs/hr.

(4) Total HAP emissions from the scrubber (CE008) shall not exceed 5.72 lbs/hr.

(d) The Permittee shall comply with the following emission limits for the DDGS cooler (EU029):

(1) VOC emissions from the DDGS cooler (EU029) bypass stack exhaust SV010, shall not exceed 5.685 lbs/hr.

(2) Acetaldehyde emissions from the DDGS cooler (EU029) bypass stack exhaust SV01, shall not exceed 1.61 lbs/hr.

(3) Total HAP emissions from the DDGS cooler (EU029) bypass stack exhaust SV01, shall not exceed 2.22 lbs/hr.

(4) The DDGS Cooler (EU029) shall not vent to atmosphere more than two hundred (200) hours per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit PM, PM_{10}, $PM_{2.5}$, and VOC from all other emission units at the source, shall limit the source-wide potential to emit of PM,

PM_{10}, $PM_{2.5}$, and VOC to less than two hundred fifty (250) tons per year, each, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable.

Compliance with these limits, combined with the potential to emit HAP from all other emission units at the source, shall limit HAP emissions from the entire source to less than ten (10) tons per year of any single HAP, and less than twenty-five (25) tons per year of total HAP. Therefore, the requirements of 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants) are rendered not applicable to the fermentation and distillation processes and the DDGS dryers (EU025 and EU026), and this source is an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

D.2.2 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) Fermentation and Distillation Process

(1) The VOC emissions from the fermentation and distillation process shall be controlled by either the scrubber CE008 or the regenerative thermal oxidizer CE009 or a combination of both the scrubber CE008 and RTO system CE009.

(2) The overall efficiency for the scrubber CE008 and regenerative thermal oxidizer CE009 (including the capture efficiency and destruction efficiency) of not less than 98%, or resulting in a volatile organic compound concentration of not more than 10 ppmv.

(3) The overall efficiency for the scrubber CE008 (including the capture efficiency and destruction efficiency) of not less than 98%, or resulting in a volatile organic compound concentration of not more than 20 ppmv.

(4) The overall efficiency for the regenerative thermal oxidizer CE009 (including the capture efficiency and destruction efficiency) of not less than 98%, or resulting in a volatile organic compound concentration of not more than 10 ppmv.

(b) DDGS dryers

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

(2) The overall efficiency for the regenerative thermal oxidizer CE009 (including the capture efficiency and destruction efficiency) of not less than 98%, or resulting in a volatile organic compound concentration of not more than10 ppmv.

D.2.3 Particulate Emission Limitations [326 IAC 6-3-2]

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

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
EU025	DDGS Dryer	78.0	48.8
EU026	DDGS Dryer	78.0	48.8
EU029	DDGS Cooler	29.0	39.1

The pounds per hour limitations were calculated using 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.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.2.5 VOC and HAP Control [326 IAC 8-5-6]

(a) Unless operating under AOS1 or AOS2:
In order to assure compliance with Condition D.2.1(a),

(i) the regenerative thermal oxidizer (RTO) CE009 shall be in operation and control emissions from the DDGS dryers (EU025 and EU026) at all times that the dryers are in operation, and, when DDGS is being produced, the set of four centrifuges.

(ii) the regenerative thermal oxidizer (RTO) CE009 and the scrubber CE008 shall be in operation and control emissions from the fermentation and distillation processes at all times that these units are in operation.

(b) When operating under AOS1:
In order to assure compliance with D.2.1(b), when the scrubber CE008 is down, emissions from the fermentation and distillation processes, the DDGS dryers (EU025 and EU026), and, when DDGS is being produced, the set of four centrifuges shall be controlled by the RTO CE009 at all times that these processes are in operation.

(c) When operating under AOS2:
In order to assure compliance with D.2.1(c), when the regenerative thermal oxidizer (RTO) CE009 is down, emissions from the fermentation and distillation processes shall be controlled by the scrubber CE008 at all times that these processes are in operation.

(d) In order to assure compliance with Condition D.2.1(d), the regenerative thermal oxidizer (RTO) CE009 shall be in operation and control emissions from the DDGS Cooler (EU029) at all times that the cooler is in operation, except for the two hundred (200) hours per twelve (12) consecutive month period when the DDGS Cooler (EU029) vents to the atmosphere.

(e) In order to assure compliance with Condition D.2.2 the regenerative thermal oxidizer (RTO) CE009 and/or the scrubber CE008 shall be in operation and control emissions from the fermentation and distillation processes, and the DDGS dryers at all times these processes are in operation.

D.2.6 Particulate Control

In order to assure compliance with Condition D.2.3, Baghouse CE010 shall be in operation and control emissions from the DDGS cooler (EU029) at all times that this unit is in operation.

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.2.7 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.2.1(a), D.2.2, and D.2.3, when both the RTO (CE009) and scrubber (CE008) control emissions from the fermentation and distillation processes, DDGS dryers, and four (4) centrifuges (EU024), the Permittee shall perform PM, PM10, PM2.5, VOC (including emission rate, destruction efficiency, and capture efficiency), and Acetaldehyde testing for the RTO system stack (SV009), utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM10 and PM2.5 includes filterable and condensable PM. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. Note: During the test, the DDGS cooler shall be venting to the DDGS dryers.

(b) In order to demonstrate compliance with Conditions D.2.1(b), D.2.2, and D.2.3, the Permittee shall perform PM, PM10, PM2.5, VOC (including emission rate, destruction efficiency, and capture efficiency), and Acetaldehyde testing for the RTO system (CE009) with the fermentation and distillation processes, DDGS dryers, and four (4) centrifuges (EU024) all exhausting to the RTO without the scrubber (CE008) operating, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM10 and PM2.5 includes filterable and condensable PM. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. Note: During the test, the DDGS cooler shall be venting to the DDGS dryers.

(c) In order to demonstrate compliance with Condition D.2.1(c), the Permittee shall perform VOC (including emission rate, destruction efficiency, and capture efficiency) and Acetaldehyde testing for the scrubber (CE008), utilizing methods approved by the Commissioner. These tests shall be performed without the RTO operating and shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(d) In order to demonstrate compliance with Condition D.2.1(d), the Permittee shall perform VOC, and Acetaldehyde testing for the DDGS cooler (EU029) baghouse bypass stack (SV010), utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC

3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.2.8 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust from the RTO system stack (SV009) and the DDGS Cooler baghouse stack exhaust (stack SV010) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response.–Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.2.9 Regenerative Thermal Oxidizer Temperature [326 IAC 8-5-6]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the RTO system (CE009) for measuring operating temperature. For the purpose of this condition, continuous means no less than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average.

(b) When not operating under AOS1 or AOS2:
The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.2.1 and D.2.2.

When operating under AOS1:
The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.2.1 and D.2.2.

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

(d) If the 3-hour average temperature falls below the above mentioned 3-hour average temperature, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.2.10 Parametric Monitoring [326 IAC 8-5-6]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the RTO system (CE009) for measuring the duct pressure or fan amperage. For the purpose

of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average.

(b) When not operating under AOS1 or AOS2:
The Permittee shall determine the appropriate 3-hour average duct pressure or fan amperage from the latest valid stack test that demonstrates compliance with limits in Conditions D.2.1 and D.2.2.

When operating under AOS1:
The Permittee shall determine the appropriate 3-hour average duct pressure or fan amperage from the latest valid stack test that demonstrates compliance with limits in Conditions D.2.1 and D.2.2.

(c) On and after the date the stack test results are available, the 3-hour average duct pressure or fan amperage shall be maintained within the 3-hour average normal range as established in latest compliant stack test.

(d) When, for any one reading, the 3-hour average duct pressure or fan amperage is outside the above mention 3-hour average ranges, the Permittee shall take a reasonable response. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.2.11 Scrubber Pressure Drop and Water Flow Rate [326 IAC 8-5-6]

(a) The Permittee shall monitor and record the water flow rate of the scrubber (CE008) at least once per day when the associated processes are in operation.

(b) When not operating under AOS1 or AOS2:
The Permittee shall determine the minimum water flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.2.1 and D.2.2.

When operating under AOS2:
The Permittee shall determine the minimum water flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.2.1 and D.2.2.

(c) On and after the date the stack test results are available, the Permittee shall maintain a water flow rate at or above the minimum rate as observed during the latest compliant stack test.

(d) When for any one reading, the water flow rate is below the above mentioned minimum, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

(e) The Permittee shall monitor and record the pressure drop across the scrubber (CE008) at least once per day when the associated processes are in operation. When for any one reading, the pressure drop across the scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 1.0 and 12.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.2.12 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

(a) For a scrubber controlling emissions from a process operated continuously, a failed unit and the associated process will be shut down immediately until the failed unit has have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a scrubber 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).

D.2.13 Broken or Failed Bag Detection - Single Compartment Baghouses

(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 Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.2.14 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.1(c)(1), the Permittee shall maintain monthly records of the number of hours the scrubber (CE008) is vented to the atmosphere.

(b) To document the compliance status with Condition D.2.8, the Permittee shall maintain a daily record of visible emission notations of the RTO system stack (SV009) and the DDGS Cooler baghouse stack exhaust (stack SV010). 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 the compliance status with Condition D.2.9, the Permittee shall maintain continuous temperature records for the thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack

test.

(d) To document the compliance status with Condition D.2.10, the Permittee shall maintain continuous duct pressure or fan amperage records for the RTO system (CE009) and the 3-hour average duct pressure or fan amperage used to demonstrate compliance during the most recent compliant stack test.

(e) To document the compliance status with Conditions D.2.1(d)(4), the Permittee shall maintain monthly records of the number of hours the fluidized DDGS cooler (EU029) exhausts to the atmosphere.

(f) To document the compliance status with Condition D.2.11, the Permittee shall maintain a daily record of pressure drop and water flow rate for scrubber CE008. The Permittee shall include in its daily record whether the system is operating under AOS2. The Permittee shall include in its daily record when the readings are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

(g) Documentation of the dates, including the time, the system is operating under AOS1 or AOS2.

(h) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.2.15 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.2.1(c)(1) and D.2.1(d)(4), shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(j) Two (2) natural gas fired boilers, identified as EU027 and EU028, approved in 2007 for construction, each with a maximum heat input rate of 143 MMBtu/hr each, with emissions exhausting to stacks SV013 and SV014, respectively.

Under 40 CFR, Subpart Db, the two (2) boilers are new steam generating units.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:

(a) CO emissions from the boilers shall not exceed 20 pounds per MMCF.

(b) NOx emissions from each boiler shall not exceed 30 pounds per MMCF.

Compliance with these limits, and the unrestricted heat input capacity of the boilers, shall limit the CO and NO_X emissions from the boilers to less than one hundred (100) tons per year, each. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to the boilers.

D.3.2 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the boilers shall not exceed 0.25 pounds per million Btu heat input (lb/MMBtu).

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.3.4 Continuous Emissions Monitoring [326 IAC 3-5]

(a) Pursuant to 326 IAC 3-5, and in order to ensure compliance with the requirements of 40 CFR 60, Subpart Db as specified in Section E.2, continuous emission monitoring systems (CEMS) for Boilers EU027 and EU028 shall be installed, calibrated, maintained, operated, and certified for measuring NO_X and O_2 or CO_2 which meet all applicable performance specifications of 326 IAC 3-5-2.

(b) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

(c) 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.

(d) 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 and 40 CFR Part 60.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.3.5 Record Keeping Requirements

(a) In order to document the compliance status with Condition D.3.1, the Permittee shall maintain records of all NO_X and O_2 or CO_2 continuous emissions monitoring data, pursuant to 326 IAC 3-5-6. Records shall be complete and sufficient to establish compliance with the requirements of 326 IAC 3-5-6.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the recordkeeping requirements of this requirement.

D.3.6 Reporting Requirements

(a) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

(1) date of downtime;

(2) time of commencement;

(3) duration of each downtime;

(4) reasons for each downtime; and

(5) nature of system repairs and adjustments.

(b) Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

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

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 VOC Emissions [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6, the Permittee shall collect and control the VOC emissions from the ethanol loading rack (EU036), using the following:

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

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

D.4.2 HAP Minor Limits [326 IAC 2-4.1][40 CFR 63]

(a) The total combined denatured ethanol and E-85 loadout from loading rack EU036 shall not exceed 86,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The E-85 loadout from the ethanol loading rack EU036 shall not exceed 10,060,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

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

(e) The railcars and trucks shall not use vapor balance services during ethanol loading.

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

(g) Hexane emissions from the ethanol loading rack (EU036), exhausting to stack SV016 shall not exceed 0.79 lbs/hr.

(h) Total HAP emissions from the ethanol loading rack (EU036), exhausting to stack SV016 shall not exceed 1.00 lbs/hr.

Compliance with these limits, the limits in Condition D.2.1, and the unrestricted HAP PTE from all other emission units shall limit the HAP emissions from the entire source to less than 10 tons per year of any single HAP, and less than twenty-five (25) tons per year of total HAPs. Therefore, the requirements of 326 IAC 2-4.1 (MACT) are not applicable to the ethanol loading rack, and the entire source is rendered an area source of HAP emissions under 40 CFR 63.

D.4.3 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:

VOC emissions from the ethanol loading system (EU036) shall not exceed 4.17 lbs/hr.

Compliance with this limit, the limits in Conditions D.2.1(a)(4), D.2.1(b)(4), D.2.1(c)(2), D.4.2(a), and D.4.2(b), and the unrestricted VOC emissions from all other emission units shall limit the VOC emissions from the entire source to less than two hundred fifty (250) tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to the ethanol loading rack (EU036).

D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.4.5 VOC Control

In order to ensure compliance with Condition D.4.1, enclosed flare CE015 shall be in operation and control emissions from the ethanol loading rack (EU036) at all times when this unit is in operation.

D.4.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.4.1, D.4.2, and D.4.3, the Permittee shall perform VOC and hexane (including emission rate, destruction efficiency, and capture efficiency) testing for enclosed flare CE015 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 the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.4.7 Flare Pilot Flame [326 IAC 8-5-6]

In order to ensure compliance with Conditions D.4.1 and D.4.2, the Permittee shall monitor the presence of a flare pilot flame for flare CE015 using a thermocouple or any other equivalent device to detect the presence of a flame when ethanol loading rack EU036 is in operation.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.4.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.2(a), the Permittee shall maintain monthly records of the total combined denatured ethanol and E-85 loaded out from loading rack EU036.

(b) To document the compliance status with Condition D.4.2(b), the Permittee shall maintain monthly records of the total amount of E-85 loaded out from the loading rack EU036.

(c) To document the compliance status with Condition D.4.7, the Permittee shall maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when loading rack EU036 is in operation.

(d) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the recordkeeping requirements of this requirement.

D.4.9 Reporting Requirements

Quarterly summaries of the information to document the compliance status with Conditions D.4.2(a) and D.4.2(b) shall be submitted not later than thirty (30) days following the end of the calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION E.1 **NSPS**

Emissions Unit Description:

(e) One (1) fermentation process, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 60,000 gallons per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) Five (5) fermenters, identified as EU012 through EU016, approved in 2007 for construction.

(2) One (1) fermenter, identified as EU047, approved in 2016 for construction.

(3) One (1) yeast propagation tank, identified as EU017, approved in 2007 for construction.

(4) One (1) beer well, identified as EU018, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(g) One (1) distillation process, approved in 2007 for construction and approved in 2016 for modification, with a maximum input feed rate of 60,000 gallons of beer per hour and a maximum production rate of 12,000 gallons of ethanol per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through stack SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved in 2007 for construction.

(2) One (1) rectifier column, identified as EU020, approved in 2007 for construction.

(3) One (1) side stripper, identified as EU021, approved in 2007 for construction.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved in 2007 for construction.

(5) One (1) set of four (4) evaporators, identified as EU023, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

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

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

Insignificant Activities:

(c) Storage Tanks:

(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved in 2007 for construction, with a maximum capacity of 250,000 gallons.

(2) One (1) denaturant tank, identified as T002, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 250,000 gallons of natural gasoline.

(3) One (1) 200-proof ethanol tank, identified as T003, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(4) One (1) 200-proof ethanol tank, identified as T004, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(5) One (1) denaturant tank, identified as T005, approved in 2007 for construction, with a maximum capacity of 126,900 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, these units are affected facilities. Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

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

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

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

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart VVa.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

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

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart VVa (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.480a(a), (b), (c), (d), and (f)
(2) 40 CFR 60.481a
(3) 40 CFR 60.482-1a
(4) 40 CFR 60.482-2a
(5) 40 CFR 60.482-3a
(6) 40 CFR 60.482-4a
(7) 40 CFR 60.482-5a
(8) 40 CFR 60.482-6a
(9) 40 CFR 60.482-7a
(10) 40 CFR 60.482-8a
(11) 40 CFR 60.482-9a
(12) 40 CFR 60.482-10a
(13) 40 CFR 60.482-11a
(14) 40 CFR 60.483-1a
(15) 40 CFR 60.483-2a
(16) 40 CFR 60.484a
(17) 40 CFR 60.485a
(18) 40 CFR 60.486a
(19) 40 CFR 60.487a
(20) 40 CFR 60.488a
(21) 40 CFR 60.489a

SECTION E.2 NSPS

Emissions Unit Description:

(j) Two (2) natural gas fired boilers, identified as EU027 and EU028, approved in 2007 for construction, each with a maximum heat input rate of 143 MMBtu/hr each, with emissions exhausting to stacks SV013 and SV014, respectively.

Under 40 CFR, Subpart Db, the two (2) boilers are new steam generating units.

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

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

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

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

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

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

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Db (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.40b(a), (g), and (j)
(2) 40 CFR 60.41b
(3) 40 CFR 60.44b(a), (h), (i), (l)(2), and (l)(3)
(4) 40 CFR 60.46b(a), (c), (e), (e)(1), (e)(4), and (g)
(5) 40 CFR 60.48b(b), (b)(1), (c), (d), (e)(2)(i), (f), and (g)
(6) 40 CFR 60.49(a)(1), (a)(3), (b). (c), (d), (g), (h), (h)(2)(ii), (h)(4), (i), (o), (v), and (w)

SECTION E.3 NSPS

Emissions Unit Description:

Insignificant Activities:

(c) Storage Tanks:

(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved in 2007 for construction, with a maximum capacity of 250,000 gallons.

(2) One (1) denaturant tank, identified as T002, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 250,000 gallons of natural gasoline.

(3) One (1) 200-proof ethanol tank, identified as T003, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(4) One (1) 200-proof ethanol tank, identified as T004, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(5) One (1) denaturant tank, identified as T005, approved in 2007 for construction, with a maximum capacity of 126,900 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, these units are affected facilities. Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

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

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

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

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart Kb.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

E.3.2 Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 NSPS [326 IAC 12][40 CFR Part 60, Subpart Kb]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Kb (included as Attachment D to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.110b(a) and (e)
(2) 40 CFR 60.111b
(3) 40 CFR 60.112b(a)(1)
(4) 40 CFR 60.113b(a)
(5) 40 CFR 60.115b(a)
(6) 40 CFR 60.116b(a), (b), (c), (d), and (e)
(7) 40 CFR 60.117b

SECTION E.4 NSPS

Emissions Unit Description:

(o) One (1) diesel generator, identified as EU037, approved in 2007 for construction, with a maximum power output rate of 2,640 HP, and exhausting to stack SV015.

Under NSPS, Subpart IIII, this unit is an affected source.
Under NESHAP, Subpart ZZZZ, this unit is an affected source.

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

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

E.4.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart IIII.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

E.4.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12][40 CFR Part 60, Subpart IIII]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart IIII (included as Attachment E to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.4200 (a)(2)(i) and (c)
(2) 40 CFR 60.4205 (b)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207(a), (b), and (c)
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211 (a), (c), and (e)
(8) 40 CFR 60.4212
(9) 40 CFR 60.4214 (b) and (c)
(10) 40 CFR 60.4218
(11) 40 CFR 60.4219
(12) Table 1 to 40 CFR 60, Subpart IIII
(13) Table 8 to 40 CFR 60, Subpart IIII

SECTION E.5 NESHAP

Emissions Unit Description:

(o) One (1) diesel generator, identified as EU037, approved in 2007 for construction, with a maximum power output rate of 2,640 HP, and exhausting to stack SV015.

Under NSPS, Subpart IIII, this unit is an affected source.
Under NESHAP, Subpart ZZZZ, this unit is an affected source.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.5.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

E.5.2 National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ][326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment F to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585, (a), (c), and (d)
(3) 40 CFR 63.6590, (a), (a)(2)(iii), and (c)(1)
(4) 40 CFR 63.6595(a)(6), (b)
(5) 40 CFR 63.6665
(6) 40 CFR 636.6670
(7) 40 CFR 63.6675

SECTION E.6 NESHAP

Emissions Unit Description:

Insignificant Activities:

(d) One (1) gasoline dispensing operation for plant vehicles, identified as T009, installed in 2008, with a 265 gallon capacity storage tank and an estimated annual throughput of 2,200 gallons per year.

Under 40 CFR 63, Subpart CCCCCC, this is an affected unit.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.6.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart CCCCCC.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

E.6.2 National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities NESHAP [40 CFR Part 63, Subpart CCCCCC]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart CCCCCC (included as Attachment H to the operating permit), for the emission unit(s) listed above:

(1) 40 CFR 63.11110
(2) 40 CFR 63.11111 (a), (b), (e), (f), (h), (i), (j), and (k)
(3) 40 CFR 63.11112(a) and (b)
(4) 40 CFR 63.11113(a)(1)
(5) 40 CFR 63.11115
(6) 40 CFR 63.11116
(7) 40 CFR 63.11125(d)
(8) 40 CFR 63.11126(b)
(9) 40 CFR 63.11130
(10) 40 CFR 63.11131
(11) 40 CFR 63.11132
(12) Table 3 to 40 CFR 63 Subpart CCCCCC

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: POET Biorefining - North Manchester, LLC
Source Address: 868 East 800 North, North Manchester, Indiana 46962
Part 70 Permit No.: T169-31191-00068

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:
Phone:
Date:

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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: POET Biorefining - North Manchester, LLC
Source Address: 868 East 800 North, North Manchester, Indiana 46962
Part 70 Permit No.: T169-31191-00068

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**) daytime 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
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: _____

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

Part 70 Quarterly Report

Source Name: POET Biorefining - North Manchester, LLC
Source Address: 868 East 800 North, North Manchester, Indiana 46962
Part 70 Permit No.: T169-31191-00068
Facility: Scrubber (CE008)
Parameter: Hours Vented To Atmosphere
Limit: The scrubber (CE008) shall not vent to the atmosphere more than 500 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Hours Vented To Atmosphere for This Month (hours)	Hours Vented To Atmosphere for Previous 11 Months (hours)	Hours Vented To Atmosphere for 12-Month Period (hours)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: POET Biorefining - North Manchester, LLC
Source Address: 868 East 800 North, North Manchester, Indiana 46962
Part 70 Permit No.: T169-31191-00068
Facility: DDGS Cooler (EU029)
Parameter: Hours Vented To Atmosphere
Limit: The DDGS Cooler (EU029) shall not vent to atmosphere more than two hundred (200) hours per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Hours Vented To Atmosphere for This Month (hours)	Hours Vented To Atmosphere for Previous 11 Months (hours)	Hours Vented To Atmosphere for 12-Month Period (hours)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: POET Biorefining - North Manchester, LLC
Source Address: 868 East 800 North, North Manchester, Indiana 46962
Part 70 Permit No.: T169-31191-00068
Facility: Ethanol Loading Rack EU036
Parameter: Denatured Ethanol Loadout
Limit: Less than 86.00 MMgal per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Denatured Ethanol Loadout for This Month (gallons)	Denatured Ethanol Loadout for Previous 11 Months (gallons)	Denatured Ethanol Loadout for 12-Month Period (gallons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: POET Biorefining - North Manchester, LLC
Source Address: 868 East 800 North, North Manchester, Indiana 46962
Part 70 Permit No.: T169-31191-00068
Facility: Ethanol Loading Rack EU036
Parameter: E-85 Loadout
Limit: Less than 10.06 MMgal per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ **YEAR:** _____

Month	E-85 Loadout for This Month (gallons)	E-85 Loadout for Previous 11 Months (gallons)	E-85 Loadout for 12-Month Period (gallons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: POET Biorefining - North Manchester, LLC
Source Address: 868 East 800 North, North Manchester, Indiana 46962
Part 70 Permit No.: T169-31191-00068

Months: _____ **to** _____ **Year:** _____

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, 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: _____

Attachment B

Part 70 Operating Permit No: 169-31191-00068

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart VVa—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

SOURCE: 72 FR 64883, Nov. 16, 2007, unless otherwise noted.

§ 60.480a Applicability and designation of affected facility.

(a)(1) The provisions of this subpart apply to affected facilities in the synthetic organic chemicals manufacturing industry.

(2) The group of all equipment (defined in § 60.481a) within a process unit is an affected facility.

(b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after November 7, 2006, shall be subject to the requirements of this subpart.

(c) Addition or replacement of equipment for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

(d)(1) If an owner or operator applies for one or more of the exemptions in this paragraph, then the owner or operator shall maintain records as required in § 60.486a(i).

(2) Any affected facility that has the design capacity to produce less than 1,000 Mg/yr (1,102 ton/yr) of a chemical listed in § 60.489 is exempt from §§ 60.482-1a through 60.482-11a.

(3) If an affected facility produces heavy liquid chemicals only from heavy liquid feed or raw materials, then it is exempt from §§ 60.482-1a through 60.482-11a.

(4) Any affected facility that produces beverage alcohol is exempt from §§ 60.482-1a through 60.482-11a.

(5) Any affected facility that has no equipment in volatile organic compounds (VOC) service is exempt from §§ 60.482-1a through 60.482-11a.

(e) *Alternative means of compliance* —(1) *Option to comply with part 65.* (i) Owners or operators may choose to comply with the provisions of 40 CFR part 65, subpart F, to satisfy the requirements of §§ 60.482-1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 65, subpart F, the requirements of §§ 60.485a(d), (e), and (f), and 60.486a(i) and (j) still apply. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(ii) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart F must also comply with §§ 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(1)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 65, subpart F, except that provisions

required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart F, must comply with 40 CFR part 65, subpart A.

(2) *Part 63, subpart H.* (i) Owners or operators may choose to comply with the provisions of 40 CFR part 63, subpart H, to satisfy the requirements of §§ 60.482-1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 63, subpart H, the requirements of § 60.485a(d), (e), and (f), and § 60.486a(i) and (j) still apply.

(ii) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 63, subpart H must also comply with §§ 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 63, subpart H, except that provisions required to be met prior to implementing 40 CFR part 63 still apply. Owners and operators who choose to comply with 40 CFR part 63, subpart H, must comply with 40 CFR part 63, subpart A.

(f) *Stay of standards.* (1) Owners or operators that start a new, reconstructed, or modified affected source prior to November 16, 2007 are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the FEDERAL REGISTER .

(i) The definition of “capital expenditure” in § 60.481a of this subpart. While the definition of “capital expenditure” is stayed, owners or operators should use the definition found in § 60.481 of subpart VV of this part.

(ii) [Reserved]

(2) Owners or operators are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the FEDERAL REGISTER .

(i) The definition of “process unit” in § 60.481a of this subpart. While the definition of “process unit” is stayed, owners or operators should use the following definition:

Process unit means components assembled to produce, as intermediate or final products, one or more of the chemicals listed in § 60.489 of this part. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

(ii) The method of allocation of shared storage vessels in § 60.482-1a(g) of this subpart.

(iii) The standards for connectors in gas/vapor service and in light liquid service in § 60.482-11a of this subpart.

[72 FR 64883, Nov. 16, 2007, as amended at 73 FR 31375, June 2, 2008]

§ 60.481a Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA) or in subpart A of part 60, and the following terms shall have the specific meanings given them.

Capital expenditure means, in addition to the definition in 40 CFR 60.2, an expenditure for a physical or operational change to an existing facility that:

(a) Exceeds P, the product of the facility's replacement cost, R, and an adjusted annual asset guideline repair allowance, A, as reflected by the following equation: $P = R \times A$, where:

(1) The adjusted annual asset guideline repair allowance, A, is the product of the percent of the replacement cost, Y, and the applicable basic annual asset guideline repair allowance, B, divided by 100 as reflected by the following equation:

$A = Y \times (B \div 100)$;

(2) The percent Y is determined from the following equation: Y = 1.0 − 0.575 log X, where X is 2006 minus the year of construction; and

(3) The applicable basic annual asset guideline repair allowance, B, is selected from the following table consistent with the applicable subpart:

Table for Determining Applicable Value for B

Subpart applicable to facility	Value of B to be used in equation
VVa	12.5
GGGa	7.0

Closed-loop system means an enclosed system that returns process fluid to the process.

Closed-purge system means a system or combination of systems and portable containers to capture purged liquids. Containers for purged liquids must be covered or closed when not being filled or emptied.

Closed vent system means a system that is not open to the atmosphere and that is composed of hard-piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device or back to a process.

Connector means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of process equipment or that close an opening in a pipe that could be connected to another pipe. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation.

Control device means an enclosed combustion device, vapor recovery system, or flare.

Distance piece means an open or enclosed casing through which the piston rod travels, separating the compressor cylinder from the crankcase.

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Duct work means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

Equipment means each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by this subpart.

First attempt at repair means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in-process combustion equipment, such as furnaces and gas turbines, either singly or in combination.

Hard-piping means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards such as ASME B31.3, Process Piping (available from the American Society of Mechanical Engineers, P.O. Box 2300, Fairfield, NJ 07007-2300).

In gas/vapor service means that the piece of equipment contains process fluid that is in the gaseous state at operating conditions.

In heavy liquid service means that the piece of equipment is not in gas/vapor service or in light liquid service.

In light liquid service means that the piece of equipment contains a liquid that meets the conditions specified in § 60.485a(e).

In-situ sampling systems means nonextractive samplers or in-line samplers.

In vacuum service means that equipment is operating at an internal pressure which is at least 5 kilopascals (kPa) (0.7 psia) below ambient pressure.

In VOC service means that the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight. (The provisions of § 60.485a(d) specify how to determine that a piece of equipment is not in VOC service.)

Initial calibration value means the concentration measured during the initial calibration at the beginning of each day required in § 60.485a(b)(1), or the most recent calibration if the instrument is recalibrated during the day (i.e., the calibration is adjusted) after a calibration drift assessment.

Liquids dripping means any visible leakage from the seal including spraying, misting, clouding, and ice formation.

Open-ended valve or line means any valve, except safety relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

Pressure release means the emission of materials resulting from system pressure being greater than set pressure of the pressure relief device.

Process improvement means routine changes made for safety and occupational health requirements, for energy savings, for better utility, for ease of maintenance and operation, for correction of design deficiencies, for bottleneck removal, for changing product requirements, or for environmental control.

Process unit means the components assembled and connected by pipes or ducts to process raw materials and to produce, as intermediate or final products, one or more of the chemicals listed in § 60.489. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product. For the purpose of this subpart, process unit includes any feed, intermediate and final product storage vessels (except as specified in § 60.482-1a(g)), product transfer racks, and connected ducts and piping. A process unit includes all equipment as defined in this subpart.

Process unit shutdown means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be accomplished. The following are not considered process unit shutdowns:

(1) An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours.

(2) An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown.

(3) The use of spare equipment and technically feasible bypassing of equipment without stopping production.

Quarter means a 3-month period; the first quarter concludes on the last day of the last full month during the 180 days following initial startup.

Repaired means that equipment is adjusted, or otherwise altered, in order to eliminate a leak as defined in the applicable sections of this subpart and, except for leaks identified in accordance with §§ 60.482-2a(b)(2)(ii) and (d)(6)(ii) and (d)(6)(iii), 60.482-3a(f), and 60.482-10a(f)(1)(ii), is re-monitored as specified in § 60.485a(b) to verify that emissions from the equipment are below the applicable leak definition.

Replacement cost means the capital needed to purchase all the depreciable components in a facility.

Sampling connection system means an assembly of equipment within a process unit used during periods of representative operation to take samples of the process fluid. Equipment used to take nonroutine grab samples is not considered a sampling connection system.

Sensor means a device that measures a physical quantity or the change in a physical quantity such as temperature, pressure, flow rate, pH, or liquid level.

Storage vessel means a tank or other vessel that is used to store organic liquids that are used in the process as raw material feedstocks, produced as intermediates or final products, or generated as wastes. Storage vessel does not include vessels permanently attached to motor vehicles, such as trucks, railcars, barges or ships.

Synthetic organic chemicals manufacturing industry means the industry that produces, as intermediates or final products, one or more of the chemicals listed in § 60.489.

Transfer rack means the collection of loading arms and loading hoses, at a single loading rack, that are used to fill tank trucks and/or railcars with organic liquids.

Volatile organic compounds or VOC means, for the purposes of this subpart, any reactive organic compounds as defined in § 60.2 Definitions.

EFFECTIVE DATE NOTE: At 73 FR 31376, June 2, 2008, in § 60.481a, the definitions of “capital expenditure” and “process unit” were stayed until further notice.

§ 60.482-1a Standards: General.

(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§ 60.482-1a through 60.482-10a or § 60.480a(e) for all equipment within 180 days of initial startup.

(b) Compliance with §§ 60.482-1a to 60.482-10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in § 60.485a.

(c)(1) An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of §§ 60.482-2a, 60.482-3a, 60.482-5a, 60.482-6a, 60.482-7a, 60.482-8a, and 60.482-10a as provided in § 60.484a.

(2) If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§ 60.482-2a, 60.482-3a, 60.482-5a, 60.482-6a, 60.482-7a, 60.482-8a, or 60.482-10a, an owner or operator shall comply with the requirements of that determination.

(d) Equipment that is in vacuum service is excluded from the requirements of §§ 60.482-2a through 60.482-10a if it is identified as required in § 60.486a(e)(5).

(e) Equipment that an owner or operator designates as being in VOC service less than 300 hr/yr is excluded from the requirements of §§ 60.482-2a through 60.482-11a if it is identified as required in § 60.486a(e)(6) and it meets any of the conditions specified in paragraphs (e)(1) through (3) of this section.

(1) The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process.

(2) The equipment is in VOC service only during process malfunctions or other emergencies.

(3) The equipment is backup equipment that is in VOC service only when the primary equipment is out of service.

(f)(1) If a dedicated batch process unit operates less than 365 days during a year, an owner or operator may monitor to detect leaks from pumps, valves, and open-ended valves or lines at the frequency specified in the following table instead of monitoring as specified in §§ 60.482-2a, 60.482-7a, and 60.483.2a:

Operating time (percent of hours during year)	Equivalent monitoring frequency time in use		
	Monthly	Quarterly	Semiannually
0 to <25	Quarterly	Annually	Annually.
25 to <50	Quarterly	Semiannually	Annually.
50 to <75	Bimonthly	Three quarters	Semiannually.
75 to 100	Monthly	Quarterly	Semiannually.

(2) Pumps and valves that are shared among two or more batch process units that are subject to this subpart may be monitored at the frequencies specified in paragraph (f)(1) of this section, provided the operating time of all such process units is considered.

(3) The monitoring frequencies specified in paragraph (f)(1) of this section are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. An owner or operator may monitor at any time during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. Reasonable intervals are defined in paragraphs (f)(3)(i) through (iv) of this section.

(i) When monitoring is conducted quarterly, monitoring events must be separated by at least 30 calendar days.

(ii) When monitoring is conducted semiannually (*i.e.* , once every 2 quarters), monitoring events must be separated by at least 60 calendar days.

(iii) When monitoring is conducted in 3 quarters per year, monitoring events must be separated by at least 90 calendar days.

(iv) When monitoring is conducted annually, monitoring events must be separated by at least 120 calendar days.

(g) If the storage vessel is shared with multiple process units, the process unit with the greatest annual amount of stored materials (predominant use) is the process unit the storage vessel is assigned to. If the storage vessel is shared equally among process units, and one of the process units has equipment subject to this subpart, the storage vessel is assigned to that process unit. If the storage vessel is shared equally among process units, none of which have equipment subject to this subpart of this part, the storage vessel is assigned to any process unit subject to subpart VV of this part. If the predominant use of the storage vessel varies from year to year, then the owner or operator must estimate the predominant use initially and reassess every 3 years. The owner or operator must keep records of the information and supporting calculations that show how predominant use is determined. All equipment on the storage vessel must be monitored when in VOC service.

EFFECTIVE DATE NOTE: At 73 FR 31376, June 2, 2008, in § 60.482-1a, paragraph (g) was stayed until further notice.

§ 60.482-2a Standards: Pumps in light liquid service.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in § 60.485a(b), except as provided in § 60.482-1a(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first

time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in § 60.482-1a(c) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in § 60.482-1a(f).

(b)(1) The instrument reading that defines a leak is specified in paragraphs (b)(1)(i) and (ii) of this section.

(i) 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers;

(ii) 2,000 ppm or greater for all other pumps.

(2) If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph (b)(2)(i) or (ii) of this section. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable.

(i) Monitor the pump within 5 days as specified in § 60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable. The leak shall be repaired using the procedures in paragraph (c) of this section.

(ii) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in paragraph (c) of this section or by eliminating the visual indications of liquids dripping.

(c)(1) 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 § 60.482-9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs (c)(2)(i) and (ii) of this section, where practicable.

(i) Tightening the packing gland nuts;

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (6) of this section are met.

(1) Each dual mechanical seal system is:

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

(ii) Equipped 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 § 60.482-10a; or

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

(ii) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (d)(4)(ii)(A) or (B) of this section prior to the next required inspection.

(A) Monitor the pump within 5 days as specified in § 60.485a(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected.

(B) Designate the visual indications of liquids dripping as a leak.

(5)(i) Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm.

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

(iii) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in paragraph (d)(5)(ii) of this section, a leak is detected.

(6)(i) When a leak is detected pursuant to paragraph (d)(4)(ii)(A) of this section, it shall be repaired as specified in paragraph (c) of this section.

(ii) A leak detected pursuant to paragraph (d)(5)(iii) of this section shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor.

(iii) A designated leak pursuant to paragraph (d)(4)(ii)(B) of this section shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping.

(e) Any pump that is designated, as described in § 60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section 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 § 60.485a(c); and

(3) Is tested for compliance with paragraph (e)(2) of this section 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 § 60.482-10a, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in § 60.486a(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if:

(1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and

(2) The owner or operator of the pump 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 paragraph (c) of this section 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 paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

§ 60.482-3a Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in § 60.482-1a(c) and paragraphs (h), (i), and (j) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system 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 § 60.482-10a; or

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

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) of this section shall be checked daily or shall be equipped with an audible alarm.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g)(1) 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 § 60.482-9a.

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

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of § 60.482-10a, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in § 60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor:

(1) 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 § 60.485a(c); and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

(j) Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of § 60.14 or § 60.15 is exempt from paragraphs (a) through (e) and (h) of this section, provided the owner or operator

demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section.

§ 60.482-4a Standards: Pressure relief devices in gas/vapor service.

(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 § 60.485a(c).

(b)(1) 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 § 60.482-9a.

(2) 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 § 60.485a(c).

(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 § 60.482-10a is exempted from the requirements of paragraphs (a) and (b) of this section.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a new rupture disk shall be 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 § 60.482-9a.

§ 60.482-5a Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in § 60.482-1a(c) and paragraph (c) of this section.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section.

(1) Gases displaced during filling of the sample container are not required to be collected or captured.

(2) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.

(3) Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured.

(4) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in either paragraph (b)(4)(i), (ii), (iii), or (iv) of this section.

(i) Return the purged process fluid directly to the process line.

(ii) Collect and recycle the purged process fluid to a process.

(iii) Capture and transport all the purged process fluid to a control device that complies with the requirements of § 60.482-10a.

(iv) 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;

(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;

(D) A waste management unit subject to and operated in compliance with the treatment requirements of 40 CFR 61.348(a), provided all waste management units that collect, store, or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of 40 CFR 61.343 through 40 CFR 61.347; or

(E) A device used to burn off-specification used oil for energy recovery in accordance with 40 CFR part 279, subpart G, provided the purged process fluid is 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 paragraphs (a) and (b) of this section.

§ 60.482-6a Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in § 60.482-1a(c) and paragraphs (d) and (e) of this section.

(2) 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 paragraph (a) of this section 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 paragraphs (a), (b), and (c) of this section.

(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 paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

§ 60.482-7a Standards: Valves in gas/vapor service and in light liquid service.

(a)(1) Each valve shall be monitored monthly to detect leaks by the methods specified in § 60.485a(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, § 60.482-1a(c) and (f), and §§ 60.483-1a and 60.483-2a.

(2) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in paragraphs (f), (g), and (h) of this section, § 60.482-1a(c), and §§ 60.483-1a and 60.483-2a.

(i) Monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.

(ii) If the existing valves in the process unit are monitored in accordance with § 60.483-1a or § 60.483-2a, count the new valve as leaking when calculating the percentage of valves leaking as described in § 60.483-2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.

(b) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(c)(1)(i) 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.

(ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d)(1) 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 § 60.482-9a.

(2) 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 § 60.486a(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) of this section 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 § 60.485a(c), and

(3) Is tested for compliance with paragraph (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 § 60.486a(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section, and

(2) The owner or operator 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 § 60.486a(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator of the valve 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:

(i) Becomes an affected facility through § 60.14 or § 60.15 and was constructed on or before January 5, 1981; or

(ii) Has less than 3.0 percent of its total number of valves designated as difficult-to-monitor by the owner or operator.

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

§ 60.482-8a Standards: Pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service.

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

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in § 60.485a(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

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

(c)(1) 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 § 60.482-9a.

(2) 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 §§ 60.482-2a(c)(2) and 60.482-7a(e).

§ 60.482-9a Standards: Delay of repair.

(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. Monitoring to verify repair must occur within 15 days after startup of the process unit.

(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 and connectors will be allowed if:

(1) The owner or operator 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 effected, the purged material is collected and destroyed or recovered in a control device complying with § 60.482-10a.

(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.

(f) When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.

§ 60.482-10a Standards: Closed vent systems and control devices.

(a) Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.

(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 (ppmv), 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 ppmv, 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 § 60.18.

(e) Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

(f) Except as provided in paragraphs (i) through (k) of this section, each closed vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (2) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (f)(1)(i) and (ii) of this section:

(i) Conduct an initial inspection according to the procedures in § 60.485a(b); and

(ii) 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 owner or operator shall:

(i) Conduct an initial inspection according to the procedures in § 60.485a(b); and

(ii) Conduct annual inspections according to the procedures in § 60.485a(b).

(g) Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.

(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 owner or operator 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 paragraphs (f)(1)(i) and (f)(2) of this section.

(j) Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (j)(1) and (2) of this section:

(1) The owner or operator 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 paragraphs (f)(1)(i) or (f)(2) of this section; and

(2) The owner or operator 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 paragraph (l)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (k)(1) through (3) of this section:

(1) The owner or operator 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 §§ 60.14 or 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

(3) The owner or operator 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 owner or operator shall record the information specified in paragraphs (l)(1) through (5) of this section.

(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 § 60.486a(c).

(4) For each inspection conducted in accordance with § 60.485a(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.

(5) For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section 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 this subpart shall be operated at all times when emissions may be vented to them.

§ 60.482-11a Standards: Connectors in gas/vapor service and in light liquid service.

(a) The owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup. If all connectors in the process unit have been monitored for leaks prior to the compliance date, no initial monitoring is required provided either no process changes have been made since the monitoring or the owner or operator can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the owner or operator is required to monitor only those connectors involved in the process change.

(b) Except as allowed in § 60.482-1a(c), § 60.482-10a, or as specified in paragraph (e) of this section, the owner or operator shall monitor all connectors in gas and vapor and light liquid service as specified in paragraphs (a) and (b)(3) of this section.

(1) The connectors shall be monitored to detect leaks by the method specified in § 60.485a(b) and, as applicable, § 60.485a(c).

(2) If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected.

(3) The owner or operator shall perform monitoring, subsequent to the initial monitoring required in paragraph (a) of this section, as specified in paragraphs (b)(3)(i) through (iii) of this section, and shall comply with the requirements of paragraphs (b)(3)(iv) and (v) of this section. The required period in which monitoring must be conducted shall be determined from paragraphs (b)(3)(i) through (iii) of this section using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in paragraph (c) of this section.

(i) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (1 year).

(ii) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4-year monitoring period.

(iii) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as provided in paragraph (b)(3)(iii)(A) of this section and either paragraph (b)(3)(iii)(B) or (b)(3)(iii)(C) of this section, as appropriate.

(A) An owner or operator shall monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period.

(B) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is greater than or equal to 0.35 percent of the monitored connectors, the owner or operator shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started pursuant to paragraph (b)(3) of this section, based on the percent of leaking connectors within the total monitored connectors.

(C) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is less than 0.35 percent of the monitored connectors, the owner or operator shall monitor all connectors that have not yet been monitored within 8 years of the start of the monitoring period.

(iv) If, during the monitoring conducted pursuant to paragraphs (b)(3)(i) through (iii) of this section, a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking.

(v) The owner or operator shall keep a record of the start date and end date of each monitoring period under this section for each process unit.

(c) For use in determining the monitoring frequency, as specified in paragraphs (a) and (b)(3) of this section, the percent leaking connectors as used in paragraphs (a) and (b)(3) of this section shall be calculated by using the following equation:

$\%C_L = C_L / C_t * 100$

Where:

$\%C_L$ = Percent of leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b)(3)(i) through (iii) of this section.

C_L = Number of connectors measured at 500 ppm or greater, by the method specified in § 60.485a(b).

C_t = Total number of monitored connectors in the process unit or affected facility.

(d) When a leak is detected pursuant to paragraphs (a) and (b) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 60.482-9a. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected.

(e) Any connector that is designated, as described in § 60.486a(f)(1), as an unsafe-to-monitor connector is exempt from the requirements of paragraphs (a) and (b) of this section if:

(1) The owner or operator of the connector demonstrates that the connector is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (a) and (b) of this section; and

(2) The owner or operator of the connector has a written plan that requires monitoring of the connector 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 paragraph (d) of this section if a leak is detected.

(f) *Inaccessible, ceramic, or ceramic-lined connectors* . (1) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of paragraphs (a) and (b) of this section, from the leak repair requirements of paragraph (d) of this section, and from the recordkeeping and reporting requirements of §§ 63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in paragraphs (f)(1)(i) through (vi) of this section, as applicable:

(i) Buried;

(ii) Insulated in a manner that prevents access to the connector by a monitor probe;

(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;

(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 7.6 meters (25 feet) above the ground;

(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold; or

(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(2) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.

(g) Except for instrumentation systems and inaccessible, ceramic, or ceramic-lined connectors meeting the provisions of paragraph (f) of this section, identify the connectors subject to the requirements of this subpart. Connectors need

not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated.

EFFECTIVE DATE NOTE: At 73 FR 31376, June 2, 2008, § 60.482-11a was stayed until further notice.

§ 60.483-1a Alternative standards for valves—allowable percentage of valves leaking.

(a) An owner or operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

(b) The following requirements shall be met if an owner or operator wishes to comply with an allowable percentage of valves leaking:

(1) An owner or operator must notify the Administrator that the owner or operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in § 60.487a(d).

(2) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Administrator.

(3) If a valve leak is detected, it shall be repaired in accordance with § 60.482-7a(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in § 60.485a(b).

(2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.

(d) Owners and operators who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent, determined as described in § 60.485a(h).

§ 60.483-2a Alternative standards for valves—skip period leak detection and repair.

(a)(1) An owner or operator may elect to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3) of this section.

(2) An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in § 60.487(d)a.

(b)(1) An owner or operator shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in § 60.482-7a.

(2) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(3) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(4) If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in § 60.482-7a but can again elect to use this section.

(5) The percent of valves leaking shall be determined as described in § 60.485a(h).

(6) An owner or operator must keep a record of the percent of valves found leaking during each leak detection period.

(7) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in this section must be monitored in accordance with § 60.482-7a(a)(2)(i) or (ii) before the provisions of this section can be applied to that valve.

§ 60.484a Equivalence of means of emission limitation.

(a) Each owner or operator subject to the provisions of this subpart may apply to the Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart.

(b) Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation.

(2) The Administrator will compare test data for demonstrating equivalence of the means of emission limitation to test data for the equipment, design, and operational requirements.

(3) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

(c) Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation.

(2) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.

(3) For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated.

(4) Each owner or operator applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.

(5) The Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.

(6) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice.

(d) An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.

(e)(1) After a request for determination of equivalence is received, the Administrator will publish a notice in the FEDERAL REGISTER and provide the opportunity for public hearing if the Administrator judges that the request may be approved.

(2) After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the FEDERAL REGISTER .

(3) Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)(1) of the CAA.

(f)(1) Manufacturers of equipment used to control equipment leaks of VOC may apply to the Administrator for determination of equivalence for any equivalent means of emission limitation that achieves a reduction in emissions of VOC achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will make an equivalence determination according to the provisions of paragraphs (b), (c), (d), and (e) of this section.

§ 60.485a Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the standards in §§ 60.482-1a through 60.482-11a, 60.483a, and 60.484a 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 of appendix A-7 of this part. The following calibration gases shall be used:

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

(ii) A mixture of methane or n-hexane and air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

(2) A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in § 60.486a(e)(7). Calculate the average algebraic difference between the three meter readings and the most recent calibration value. Divide this algebraic difference by the initial calibration value and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

(c) The owner or operator shall determine compliance with the no-detectable-emission standards in §§ 60.482-2a(e), 60.482-3a(i), 60.482-4a, 60.482-7a(f), and 60.482-10a(e) as follows:

(1) The requirements of paragraph (b) shall apply.

(2) Method 21 of appendix A-7 of this part 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.

(d) The owner or operator 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—see § 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, paragraphs (d)(1) and (2) of this section shall be used to resolve the disagreement.

(e) The owner or operator shall demonstrate that a piece of equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the organic components is greater than 0.3 kPa at 20 °C (1.2 in. H_2 O at 68 °F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H_2 O at 68 °F) is equal to or greater than 20 percent by weight.

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

(f) Samples used in conjunction with paragraphs (d), (e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(g) The owner or operator shall determine compliance with the standards of flares as follows:

(1) Method 22 of appendix A-7 of this part 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 (HT) 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^{-6} [(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 of appendix A-6 of this part or ASTM D6420-99 (2004) (where the target compound(s) are those listed in Section 1.1 of ASTM D6420-99, and the target concentration is between 150 parts per billion by volume and 100 ppmv) and ASTM D2504-67, 77, or 88 (Reapproved 1993) (incorporated by reference-see § 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-see § 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 of appendix A-7 of this part, 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.

(h) The owner or operator shall determine compliance with § 60.483-1a or § 60.483-2a as follows:

(1) The percent of valves leaking shall be determined using the following equation:

$\%V_L = (V_L / V_T) * 100$

Where:

$\%V_L$ = Percent leaking valves.

V_L = Number of valves found leaking.

V_T = The sum of the total number of valves monitored.

(2) The total number of valves monitored shall include difficult-to-monitor and unsafe-to-monitor valves only during the monitoring period in which those valves are monitored.

(3) The number of valves leaking shall include valves for which repair has been delayed.

(4) Any new valve that is not monitored within 30 days of being placed in service shall be included in the number of valves leaking and the total number of valves monitored for the monitoring period in which the valve is placed in service.

(5) If the process unit has been subdivided in accordance with § 60.482-7a(c)(1)(ii), the sum of valves found leaking during a monitoring period includes all subgroups.

(6) The total number of valves monitored does not include a valve monitored to verify repair.

§ 60.486a Recordkeeping requirements.

(a)(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(3) The owner or operator shall record the information specified in paragraphs (a)(3)(i) through (v) of this section for each monitoring event required by §§ 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a.

(i) Monitoring instrument identification.

(ii) Operator identification.

(iii) Equipment identification.

(iv) Date of monitoring.

(v) Instrument reading.

(b) When each leak is detected as specified in §§ 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, 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 § 60.482-7a(c) and no leak has been detected during those 2 months.

(3) The identification on a connector may be removed after it has been monitored as specified in § 60.482-11a(b)(3)(iv) and no leak has been detected during that monitoring.

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

(c) When each leak is detected as specified in §§ 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.

(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) Maximum instrument reading measured by Method 21 of appendix A-7 of this part at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.

(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 owner or operator (or designate) whose decision it was that repair could not be effected 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.

(d) The following information pertaining to the design requirements for closed vent systems and control devices described in § 60.482-10a 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 § 60.482-10a(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 §§ 60.482-2a, 60.482-3a, 60.482-4a, and 60.482-5a 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 §§ 60.482-2a, 60.482-3a, 60.482-4a, and 60.482-5a.

(e) The following information pertaining to all equipment subject to the requirements in §§ 60.482-1a to 60.482-11a 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 this subpart.

(2)(i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§ 60.482-2a(e), 60.482-3a(i), and 60.482-7a(f).

(ii) The designation of equipment as subject to the requirements of § 60.482-2a(e), § 60.482-3a(i), or § 60.482-7a(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.

(3) A list of equipment identification numbers for pressure relief devices required to comply with § 60.482-4a.

(4)(i) The dates of each compliance test as required in §§ 60.482-2a(e), 60.482-3a(i), 60.482-4a, and 60.482-7a(f).

(ii) The background level measured during each compliance test.

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

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

(6) A list of identification numbers for equipment that the owner or operator designates as operating in VOC service less than 300 hr/yr in accordance with § 60.482-1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.

(7) The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.

(8) Records of the information specified in paragraphs (e)(8)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of appendix A-7 of this part and § 60.485a(b).

(i) Date of calibration and initials of operator performing the calibration.

(ii) Calibration gas cylinder identification, certification date, and certified concentration.

(iii) Instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of appendix A-7 of this part.

(v) Results of each calibration drift assessment required by § 60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value).

(vi) If an owner or operator makes their own calibration gas, a description of the procedure used.

(9) The connector monitoring schedule for each process unit as specified in § 60.482-11a(b)(3)(v).

(10) Records of each release from a pressure relief device subject to § 60.482-4a.

(f) The following information pertaining to all valves subject to the requirements of § 60.482-7a(g) and (h), all pumps subject to the requirements of § 60.482-2a(g), and all connectors subject to the requirements of § 60.482-11a(e) shall be recorded in a log that is kept in a readily accessible location:

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

(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.

(g) The following information shall be recorded for valves complying with § 60.483-2a:

(1) A schedule of monitoring.

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

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

(1) Design criterion required in §§ 60.482-2a(d)(5) and 60.482-3a(e)(2) and explanation of the design criterion; and

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

(i) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in § 60.480a(d):

(1) An analysis demonstrating the design capacity of the affected facility,

(2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and

(3) An analysis demonstrating that equipment is not in VOC service.

(j) 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.

(k) The provisions of § 60.7(b) and (d) do not apply to affected facilities subject to this subpart.

§ 60.487a Reporting requirements.

(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning 6 months after the initial startup date.

(b) The initial semiannual report to the Administrator shall include the following information:

(1) Process unit identification.

(2) Number of valves subject to the requirements of § 60.482-7a, excluding those valves designated for no detectable emissions under the provisions of § 60.482-7a(f).

(3) Number of pumps subject to the requirements of § 60.482-2a, excluding those pumps designated for no detectable emissions under the provisions of § 60.482-2a(e) and those pumps complying with § 60.482-2a(f).

(4) Number of compressors subject to the requirements of § 60.482-3a, excluding those compressors designated for no detectable emissions under the provisions of § 60.482-3a(i) and those compressors complying with § 60.482-3a(h).

(5) Number of connectors subject to the requirements of § 60.482-11a.

(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in § 60.486a:

(1) Process unit identification.

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

(i) Number of valves for which leaks were detected as described in § 60.482-7a(b) or § 60.483-2a,

(ii) Number of valves for which leaks were not repaired as required in § 60.482-7a(d)(1),

(iii) Number of pumps for which leaks were detected as described in § 60.482-2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),

(iv) Number of pumps for which leaks were not repaired as required in § 60.482-2a(c)(1) and (d)(6),

(v) Number of compressors for which leaks were detected as described in § 60.482-3a(f),

(vi) Number of compressors for which leaks were not repaired as required in § 60.482-3a(g)(1),

(vii) Number of connectors for which leaks were detected as described in § 60.482-11a(b)

(viii) Number of connectors for which leaks were not repaired as required in § 60.482-11a(d), and

(ix)-(x) [Reserved]

(xi) 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.

(4) Revisions to items reported according to paragraph (b) of this section if changes have occurred since the initial report or subsequent revisions to the initial report.

(d) An owner or operator electing to comply with the provisions of §§ 60.483-1a or 60.483-2a shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

(e) An owner or operator shall report the results of all performance tests in accordance with § 60.8 of the General Provisions. The provisions of § 60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.

(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a state under section 111(c) of the CAA, approves reporting requirements or an alternative means of compliance surveillance adopted by such state. In that event, affected sources within the state will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the state.

§ 60.488a Reconstruction.

For the purposes of this subpart:

(a) The cost of the following frequently replaced components of the facility shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital costs that would be required to construct a comparable new facility” under § 60.15: Pump seals, nuts and bolts, rupture disks, and packings.

(b) Under § 60.15, the “fixed capital cost of new components” includes the fixed capital cost of all depreciable components (except components specified in § 60.488a(a)) which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following the applicability date for the appropriate subpart. (See the “Applicability and designation of affected facility” section of the appropriate subpart.) For purposes of this paragraph, “commenced” means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

§ 60.489a List of chemicals produced by affected facilities.

Process units that produce, as intermediates or final products, chemicals listed in § 60.489 are covered under this subpart. The applicability date for process units producing one or more of these chemicals is November 8, 2006.

Attachment D

Part 70 Operating Permit No: 169-31191-00068

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

SOURCE: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

§ 60.110b Applicability and designation of affected facility.

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

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

(c) [Reserved]

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

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

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

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

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

(5) Vessels located at bulk gasoline plants.

(6) Storage vessels located at gasoline service stations.

(7) Vessels used to store beverage alcohol.

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

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

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

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

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

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

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

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

§ 60.111b Definitions.

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

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

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

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

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

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

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

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

(2) As obtained from standard reference texts; or

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

(4) Any other method approved by the Administrator.

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

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

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

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

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

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

(2) Subsurface caverns or porous rock reservoirs; or

(3) Process tanks.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in § 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in § 60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents 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. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, § 60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in § 60.114b of this subpart.

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

(1) A closed vent system and control device as specified in § 60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in § 60.114b of this subpart.

(c) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.* This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia (“site”).

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

§ 60.113b Testing and procedures.

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

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

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

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

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

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

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

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

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

(b) After installing the control equipment required to meet § 60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 Cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of § 60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external 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, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this

section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from § 60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by § 60.7(a)(1) or, if the facility is exempt from § 60.7(a)(1), as an attachment to the notification required by § 60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in § 60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, § 60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

§ 60.114b Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in § 60.112b, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in § 60.112b.

§ 60.115b Reporting and recordkeeping requirements.

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

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

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

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

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

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

(b) After installing control equipment in accordance with § 61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(2) and § 60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by § 60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by § 60.113b(b)(1), furnish the Administrator with a report that contains:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in § 60.113b (b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by § 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in § 60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by § 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with § 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2).

(d) After installing a closed vent system and flare to comply with § 60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by § 60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by § 60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under § 60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

§ 60.116b Monitoring of operations.

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

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

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

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

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

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

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

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

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

(3) For other liquids, the vapor pressure:

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

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

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

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

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in § 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

(i) ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or

(ii) ASTM D323-82 or 94 (incorporated by reference—see § 60.17); or

(iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of § 60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

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

§ 60.117b Delegation of authority.

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

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

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

Attachment H

Part 70 Operating Permit No: 169-31191-00068

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Source: 73 FR 1945, Jan. 10, 2008, unless otherwise noted.

What This Subpart Covers

§ 63.11110 What is the purpose of this subpart?

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

§ 63.11111 Am I subject to the requirements in this subpart?

(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in § 63.11116.

(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in § 63.11117.

(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in § 63.11118.

(e) An affected source shall, upon request by the Administrator, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, as specified in § 63.11112(b) and (c), recordkeeping to document monthly throughput must begin upon startup of the affected source. For existing sources, as specified in § 63.11112(d), recordkeeping to document monthly throughput must begin on January 10, 2008. For existing sources that are subject to this subpart only because they load gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, recordkeeping to document monthly throughput must begin on January 24, 2011. Records required under this paragraph shall be kept for a period of 5 years.

(f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).

(g) The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

(h) Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.

(i) If your affected source's throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

(j) The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to § 63.11116 of this subpart.

(k) For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under § 63.11124. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions, and noncompliance with this rule is not excused if it is later determined that your determination was in error, and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the Notification of Compliance Status does not alter or affect that responsibility.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4181, Jan. 24, 2011]

§ 63.11112 What parts of my affected source does this subpart cover?

(a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in § 63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in § 63.11111 at the time you commenced operation.

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in § 63.2.

(d) An affected source is an existing affected source if it is not new or reconstructed.

§ 63.11113 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section, except as specified in paragraph (d) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.

(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the monthly throughput, as specified in § 63.11111(c) or § 63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

(d) If you have a new or reconstructed affected source and you are complying with Table 1 to this subpart, you must comply according to paragraphs (d)(1) and (2) of this section.

(1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.

(2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

(e) The initial compliance demonstration test required under § 63.11120(a)(1) and (2) must be conducted as specified in paragraphs (e)(1) and (2) of this section.

(1) If you have a new or reconstructed affected source, you must conduct the initial compliance test upon installation of the complete vapor balance system.

(2) If you have an existing affected source, you must conduct the initial compliance test as specified in paragraphs (e)(2)(i) or (e)(2)(ii) of this section.

(i) For vapor balance systems installed on or before December 15, 2009, you must test no later than 180 days after the applicable compliance date specified in paragraphs (b) or (c) of this section.

(ii) For vapor balance systems installed after December 15, 2009, you must test upon installation of the complete vapor balance system.

(f) If your GDF is subject to the control requirements in this subpart only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must comply with the standards in this subpart as specified in paragraphs (f)(1) or (f)(2) of this section.

(1) If your GDF is an existing facility, you must comply by January 24, 2014.

(2) If your GDF is a new or reconstructed facility, you must comply by the dates specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) If you start up your GDF after December 15, 2009, but before January 24, 2011, you must comply no later than January 24, 2011.

(ii) If you start up your GDF after January 24, 2011, you must comply upon startup of your GDF.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4181, Jan. 24, 2011]

Emission Limitations and Management Practices

§ 63.11115 What are my general duties to minimize emissions?

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review

of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) You must keep applicable records and submit reports as specified in § 63.11125(d) and § 63.11126(b).

[76 FR 4182, Jan. 24, 2011]

§ 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

(1) Minimize gasoline spills;

(2) Clean up spills as expeditiously as practicable;

(3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports as specified in § 63.11125, § 63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(c) You must comply with the requirements of this subpart by the applicable dates specified in § 63.11113.

(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

§ 63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.

(a) You must comply with the requirements in section § 63.11116(a).

(b) Except as specified in paragraph (c) of this section, you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in § 63.11132, and as specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section. The applicable distances in paragraphs (b)(1) and (2) shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

(1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the tank.

(2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.

(3) Submerged fill pipes not meeting the specifications of paragraphs (b)(1) or (b)(2) of this section are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.

(c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section, but must comply only with all of the requirements in § 63.11116.

(d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(e) You must submit the applicable notifications as required under § 63.11124(a).

(f) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

§ 63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.

(a) You must comply with the requirements in §§ 63.11116(a) and 63.11117(b).

(b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.

(1) Each management practice in Table 1 to this subpart that applies to your GDF.

(2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.

(i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in § 63.11117.

(1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.

(2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.

(3) Gasoline storage tanks equipped with floating roofs, or the equivalent.

(d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.

(e) You must comply with the applicable testing requirements contained in § 63.11120.

(f) You must submit the applicable notifications as required under § 63.11124.

(g) You must keep records and submit reports as specified in §§ 63.11125 and 63.11126.

(h) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008]

Testing and Monitoring Requirements

§ 63.11120 What testing and monitoring requirements must I meet?

(a) Each owner or operator, at the time of installation, as specified in § 63.11113(e), of a vapor balance system required under § 63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see § 63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).

(2) You must demonstrate compliance with the static pressure performance requirement specified in item 1(h) of Table 1 to this subpart for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraphs (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.3,—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999 (incorporated by reference, see § 63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).

(iii) Bay Area Air Quality Management District Source Test Procedure ST-30—Static Pressure Integrity Test—Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994 (incorporated by reference, *see* § 63.14).

(b) Each owner or operator choosing, under the provisions of § 63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph § 63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see § 63.14).

(2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

(3) You must comply with the testing requirements specified in paragraph (a) of this section.

(c) Conduct of performance tests. Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (*i.e.,* performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) Owners and operators of gasoline cargo tanks subject to the provisions of Table 2 to this subpart must conduct annual certification testing according to the vapor tightness testing requirements found in § 63.11092(f).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

Notifications, Records, and Reports

§ 63.11124 What notifications must I submit and when?

(a) Each owner or operator subject to the control requirements in § 63.11117 must comply with paragraphs (a)(1) through (3) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in § 63.11117, unless you meet the requirements in paragraph (a)(3) of this section. If your affected source is subject to the control requirements in § 63.11117 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11117 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, within 60 days of the applicable compliance date specified in § 63.11113, unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

(3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in § 63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.

(b) Each owner or operator subject to the control requirements in § 63.11118 must comply with paragraphs (b)(1) through (5) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in § 63.11118. If your affected source is subject to the control requirements in § 63.11118 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11118 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, in accordance with the schedule specified in § 63.9(h). The Notification of

Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facility's throughput is determined based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

(3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.

(i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(4) You must submit a Notification of Performance Test, as specified in § 63.9(e), prior to initiating testing required by § 63.11120(a) and (b).

(5) You must submit additional notifications specified in § 63.9, as applicable.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

§ 63.11125 What are my recordkeeping requirements?

(a) Each owner or operator subject to the management practices in § 63.11118 must keep records of all tests performed under § 63.11120(a) and (b).

(b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

(c) Each owner or operator of a gasoline cargo tank subject to the management practices in Table 2 to this subpart must keep records documenting vapor tightness testing for a period of 5 years. Documentation must include each of the items specified in § 63.11094(b)(2)(i) through (viii). Records of vapor tightness testing must be retained as specified in either paragraph (c)(1) or paragraph (c)(2) of this section.

(1) The owner or operator must keep all vapor tightness testing records with the cargo tank.

(2) As an alternative to keeping all records with the cargo tank, the owner or operator may comply with the requirements of paragraphs (c)(2)(i) and (ii) of this section.

(i) The owner or operator may keep records of only the most recent vapor tightness test with the cargo tank, and keep records for the previous 4 years at their office or another central location.

(ii) Vapor tightness testing records that are kept at a location other than with the cargo tank must be instantly available (*e.g.,* via e-mail or facsimile) to the Administrator's delegated representative during the course of a site visit or within a mutually agreeable time frame. Such records must be an exact duplicate image of the original paper copy record with certifying signatures.

(d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.

(1) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

§ 63.11126 What are my reporting requirements?

(a) Each owner or operator subject to the management practices in § 63.11118 shall report to the Administrator the results of all volumetric efficiency tests required under § 63.11120(b). Reports submitted under this paragraph must be submitted within 180 days of the completion of the performance testing.

(b) Each owner or operator of an affected source under this subpart shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.

[76 FR 4183, Jan. 24, 2011]

Other Requirements and Information

§ 63.11130 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions apply to you.

§ 63.11131 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (3) of this section.

(1) Approval of alternatives to the requirements in §§ 63.11116 through 63.11118 and 63.11120.

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart.

(3) Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

§ 63.11132 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), or in subparts A and BBBBBB of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

Dual-point vapor balance system means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

Gasoline cargo tank means a delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load.

Gasoline dispensing facility (GDF) means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

Monthly throughput means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.

Motor vehicle means any self-propelled vehicle designed for transporting persons or property on a street or highway.

Nonroad engine means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 of this title or section 7521 of this title.

Nonroad vehicle means a vehicle that is powered by a nonroad engine, and that is not a motor vehicle or a vehicle used solely for competition.

Submerged filling means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in § 63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

Vapor balance system means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

Vapor-tight means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

Vapor-tight gasoline cargo tank means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in § 63.11092(f) of this part.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

Table 1 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More1

If you own or operate	Then you must
1. A new, reconstructed, or existing GDF subject to § 63.11118	Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).
	(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect.
	(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in § 63.11132.
	(c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.
	(d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.
	(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in § 63.11117(b).
	(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps.
	(g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.
	(h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation:
	$Pf = 2e^{-500.887/v}$
	Where:
	Pf = Minimum allowable final pressure, inches of water.
	v = Total ullage affected by the test, gallons.
	e = Dimensionless constant equal to approximately 2.718.
	2 = The initial pressure, inches water.
2. A new or reconstructed GDF, or any storage tank(s) constructed after November 9, 2006, at an existing affected facility subject to § 63.11118	Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in § 63.11132, and comply with the requirements of item 1 in this Table.

[1] The management practices specified in this Table are not applicable if you are complying with the requirements in § 63.11118(b)(2), except that if you are complying with the requirements in § 63.11118(b)(2)(i)(B), you must operate using management practices at least as stringent as those listed in this Table.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4184, Jan. 24, 2011]

Table 2 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Cargo Tanks Unloading at Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

If you own or operate	Then you must
A gasoline cargo tank	Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:
	(i) All hoses in the vapor balance system are properly connected,
	(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect,
	(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight,
	(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and
	(v) All hatches on the tank truck are closed and securely fastened.
	(vi) The filling of storage tanks at GDF shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried with the cargo tank, as specified in § 63.11125(c).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

Table 3 to Subpart CCCCCC of Part 63—Applicability of General Provisions

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes, specific requirements given in § 63.11111.
§ 63.1(c)(2)	Title V Permit	Requirements for obtaining a title V permit from the applicable permitting authority	Yes, § 63.11111(f) of subpart CCCCCC exempts identified area sources from the obligation to obtain title V operating permits.
§ 63.2	Definitions	Definitions for part 63 standards	Yes, additional definitions in § 63.11132.
§ 63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§ 63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, severability	Yes.
§ 63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes, except that these notifications are not required for facilities subject to § 63.11116
§ 63.6(a)	Compliance with Standards/Operation & Maintenance—Applicability	General Provisions apply unless compliance extension; General Provisions apply to area sources that become major	Yes.
§ 63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	No.
§ 63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	No, § 63.11113 specifies the compliance dates.
§ 63.6(c)(3)-(4)	[Reserved]		
§ 63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)	No.
§ 63.6(d)	[Reserved]		
63.6(e)(1)(i)	General duty to minimize emissions	Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met.	No.*See* § 63.11115 for general duty requirement.
63.6(e)(1)(ii)	Requirement to correct malfunctions ASAP	Owner or operator must correct malfunctions as soon as possible.	No.
§ 63.6(e)(2)	[Reserved]		
§ 63.6(e)(3)	Startup, Shutdown, and Malfunction (SSM) Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	No.
§ 63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	No.
§ 63.6(f)(2)-(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§ 63.6(g)(1)-(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§ 63.6(h)(1)	Compliance with Opacity/Visible Emission (VE) Standards	You must comply with opacity/VE standards at all times except during SSM	No.
§ 63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter	No.
§ 63.6(h)(2)(ii)	[Reserved]		
§ 63.6(h)(2)(iii)	Using Previous Tests To Demonstrate Compliance With Opacity/VE Standards	Criteria for when previous opacity/VE testing can be used to show compliance with this subpart	No.
§ 63.6(h)(3)	[Reserved]		
§ 63.6(h)(4)	Notification of Opacity/VE Observation Date	Must notify Administrator of anticipated date of observation	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.6(h)(5)(i), (iii)-(v)	Conducting Opacity/VE Observations	Dates and schedule for conducting opacity/VE observations	No.
§ 63.6(h)(5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with 30 6-minute averages	No.
§ 63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Must keep records available and allow Administrator to inspect	No.
§ 63.6(h)(7)(i)	Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test	Must submit COMS data with other performance test data	No.
§ 63.6(h)(7)(ii)	Using COMS Instead of EPA Method 9	Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test	No.
§ 63.6(h)(7)(iii)	Averaging Time for COMS During Performance Test	To determine compliance, must reduce COMS data to 6-minute averages	No.
§ 63.6(h)(7)(iv)	COMS Requirements	Owner/operator must demonstrate that COMS performance evaluations are conducted according to § 63.8(e); COMS are properly maintained and operated according to § 63.8(c) and data quality as § 63.8(d)	No.
§ 63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered	No.
§ 63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance	No.
§ 63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	No.
§ 63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§ 63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§ 63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§ 63.7(a)(3)	CAA Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§ 63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.7(b)(2)	Notification of Re-scheduling	If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§ 63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§ 63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
63.7(e)(1)	Conditions for Conducting Performance Tests	Performance test must be conducted under representative conditions	No, § 63.11120(c) specifies conditions for conducting performance tests.
§ 63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§ 63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes.
§ 63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§ 63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes.
§ 63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§ 63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§ 63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of 40 CFR part 60 apply	Yes.
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in § 63.11 apply	Yes.
§ 63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	No.
§ 63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	No.
§ 63.8(c)(1)(i)-(iii)	Operation and Maintenance of Continuous Monitoring Systems (CMS)	Must maintain and operate each CMS as specified in § 63.6(e)(1); must keep parts for routine repairs readily available; must develop a written SSM plan for CMS, as specified in § 63.6(e)(3)	No.
§ 63.8(c)(2)-(8)	CMS Requirements	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	No.
§ 63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions	No.
§ 63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	No.
§ 63.8(f)(1)-(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	No.
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)	No.
§ 63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average	No.
§ 63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§ 63.9(b)(1)-(2), (4)-(5)	Initial Notifications	Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each	Yes.
§ 63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§ 63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§ 63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.
§ 63.9(g)	Additional Notifications when Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes, however, there are no opacity standards.
§ 63.9(h)(1)-(6)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes, however, there are no opacity standards.
§ 63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change when notifications must be submitted	Yes.
§ 63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§ 63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§ 63.10(b)(1)	Recordkeeping/Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.
§ 63.10(b)(2)(i)	Records related to SSM	Recordkeeping of occurrence and duration of startups and shutdowns	No.
§ 63.10(b)(2)(ii)	Records related to SSM	Recordkeeping of malfunctions	No.*See* § 63.11125(d) for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunction.
§ 63.10(b)(2)(iii)	Maintenance records	Recordkeeping of maintenance on air pollution control and monitoring equipment	Yes.
§ 63.10(b)(2)(iv)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§ 63.10(b)(2)(v)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§ 63.10(b)(2)(vi)-(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	No.
§ 63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§ 63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§ 63.10(b)(2)(xiv)	Records	All documentation supporting Initial Notification and Notification of Compliance Status	Yes.
§ 63.10(b)(3)	Records	Applicability determinations	Yes.
§ 63.10(c)	Records	Additional records for CMS	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§ 63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§ 63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	No.
§ 63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§ 63.10(d)(5)	SSM Reports	Contents and submission	No.*See* § 63.11126(b) for malfunction reporting requirements.
§ 63.10(e)(1)-(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation	No.
§ 63.10(e)(3)(i)-(iii)	Reports	Schedule for reporting excess emissions	No.
§ 63.10(e)(3)(iv)-(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13)	No.
§ 63.10(e)(3)(iv)-(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13)	No, § 63.11130(K) specifies excess emission events for this subpart.
§ 63.10(e)(3)(vi)-(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS; requires all of the information in §§ 63.10(c)(5)-(13) and 63.8(c)(7)-(8)	No.
§ 63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No.
§ 63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.11(b)	Flares	Requirements for flares	No.
§ 63.12	Delegation	State authority to enforce standards	Yes.
§ 63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§ 63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§ 63.15	Availability of Information	Public and confidential information	Yes.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification and Significant Permit Modification

Source Description and Location

Source Name:	POET Biorefining - North Manchester, LLC
Source Location:	868 East 800 North, North Manchester, IN 46962
County:	Wabash
SIC Code:	2869 (Industrial Organic Chemicals, Not Elsewhere Classified) and 2048 (Prepared Feeds and Feed Ingredients for Animals and Fowls, Except for Dogs and Cats)
Operation Permit No.:	T169-31191-00068
Operation Permit Issuance Date:	August 2, 2012
Significant Source Modification No.:	169-37113-00068
Significant Permit Modification No.:	169-37123-00068
Permit Reviewer:	Thomas Olmstead

Existing Approvals

The source was issued Part 70 Operating Permit No. 169-31191-00068 on August 2, 2012. The source has since received the following approvals:

(a) Significant Permit Modification No. 169-33491-00068, issued on December 13, 2013.

County Attainment Status

The source is located in Wabash County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Wabash County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Wabash County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

Fugitive Emissions

The source includes a stationary ethanol production operation and boilers supporting the ethanol plant with a total heat input rating of greater than 250 million British thermal units per hour (MMBtu/hr).

(1) EPA published a final rule in the Federal Register on May 1, 2007, that excluded ethanol production facilities that produce ethanol through natural fermentation, from the major source category "Chemical Process Plants". Therefore, the fugitive emissions from ethanol production facilities are no longer counted toward determination of PSD, Emission Offset, and Part 70 Permit applicability.

(2) The boilers, with a total heat input rating of greater than 250 MMBtu/hr are considered one of the 28 listed source categories, based on the EPA guidance for “nesting activities”. Therefore, any fugitive emissions from these boilers are counted toward PSD, Emission Offset, and Part 70 Permit applicability.

Source Status - Existing Source

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	**Emissions** (ton/yr)
PM	200.63
PM_{10}	224.61
$PM_{2.5}$	235.50
SO_2	23.60
NO_X	135.62
VOC	200.84
CO	82.32
Worst Single HAP Methanol	7.70
Total HAPs	24.71

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court’s decision. U.S. EPA’s guidance states that U.S. EPA will no longer require PSD or Title V permits for sources “previously classified as ‘Major’ based solely on greenhouse gas emissions.”

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of

a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant, excluding GHGs, is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) On April 30, 2013 the Indiana Court of Appeals reversed the Indiana, Marion County Superior Court decision (Cause Nos. 49F12-1102-MI-5363, 49F12-1102-MI-5373, and 49F12-1102-MI-5298) that held that ethanol production plants that produce ethanol by natural fermentation do not constitute a "chemical process plant" under 326 IAC 2-2-1(ff)(1)(U). The Indiana Department of Environmental Management has filed a motion for rehearing with the Indiana Court of Appeals and takes the position that because the current Indiana State Implementation Plan is silent as to what constitutes a "chemical process plant" Indiana should follow the current federal law that specifically excludes fuel grade ethanol plants from the definition of "chemical process plants" if the fuel grade ethanol is produced through a natural fermentation process. During the appeal process IDEM amended its rule to include the federal rule language that specifically excludes fuel grade natural fermentation ethanol plants from the definition of "chemical process plant". IDEM submitted this rule to U.S. EPA for SIP approval in September 2011. For this reason, it is IDEM's position that this category of fuel ethanol production should be subject to the 250 tons per year threshold for Prevention of Significant Deterioration (PSD) New Source Review. POET Biorefining - North Manchester, LLC is aware that IDEM's interpretation of the Indiana PSD State Implementation Plan is still under court review and has asked IDEM to process its permit under current rule 326 IAC 2-2-1(ff)(1)(U) that excludes natural fermentation fuel ethanol plants from the definition of "chemical process plant".

(c) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, 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).

(d) These emissions are based upon Appendix A of Technical Support Document 169-33491-00068.

Nested Activity

The table below summarizes the potential to emit, reflecting all limits, of the emission units that are a nested activity under PSD.

	Potential To Emit of the Nested Activities (tons/year)								
Process/Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**Total HAPs**	**Single HAP**
Boiler (027) and (028)	2.33	9.33	9.33	0.74	36.84	6.75	24.56	2.32	2.21 (Hexane)
Total PTE of Nested Activity	**2.33**	**9.33**	**9.33**	**0.74**	**36.84**	**6.75**	**24.56**	**2.32**	**2.21** (Hexane))
PSD Major Source Thresholds	100	100	100	100	100	100	100	NA	NA

The nested activity is not a major stationary source for PSD (326 IAC 2-2) because the emissions of each regulated pollutant, excluding GHGs, are less than one hundred (<100) tons per year, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by POET Biorefining - North Manchester, LLC on April 22, 2016, relating to the following:

1. Construction and operation of fermenter (EU047), which will increase the capacity downstream due to the increase in yield on the available starch contained within the grain received and processed.
2. Increase production and loadout of denatured ethanol from 83,150,000 to 86,000,000 gallons per year.
3. Increase beer flow through fermentation and distillation processes from 58,500 and 57,000, respectively, to 60,000 gallons per hour, each.
4. Increase flow rate at the cooling tower from 26,000 to 30,000 gallons per minute.
5. Increase fugitive emissions from the new kettle style vaporizer used in the distillation process.
6. Increase in throughput of the DDGS handling (DDGS Dryers – EU025 and EU026, DDGS Fluid Bed Cooler – EU029, DDGS Storage Silo - EU030, DDGS Silo Bypass – EU031, and DDGS Storage Building – EU032) maximum throughput rate from 26 tons per hour to 29 tons per hour.

The following is a list of the proposed and modified emission units and pollution control device(s):

(a) One (1) fermentation process, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 60,000 gallons per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) Five (5) fermenters, identified as EU012 through EU016, approved in 2007 for construction.

(2) One (1) fermenter, identified as EU047, approved in 2016 for construction.

(3) One (1) yeast propagation tank, identified as EU017, approved in 2007 for construction.

(4) One (1) beer well, identified as EU018, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(b) One (1) distillation process, approved in 2007 for construction and approved in 2016 for modification, with a maximum input feed rate of 60,000 gallons of beer per hour and a maximum production rate of 12,000 gallons of ethanol per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through stack SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved in 2007 for construction.

(2) One (1) rectifier column, identified as EU020, approved in 2007 for construction.

(3) One (1) side stripper, identified as EU021, approved in 2007 for construction.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved in 2007 for construction.

(5) One (1) set of four (4) evaporators, identified as EU023, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(c) Two (2) natural gas fired DDGS dryers, identified as EU025 and EU026, approved in 2007 for construction and approved in 2016 for modification, each with a maximum heat input rate of 60 MMBtu/hr, with a total maximum throughput rate of 78 tons of wetcake per hour, and an output of 29 tons of DDGS produced per hour, controlled by multiclones CE013 and CE014, respectively, with emissions venting to thermal oxidizer CE009, and exhausting to stack SV009.

(d) One (1) fluidized DDGS cooler, identified as EU029, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 29 tons/hr of DDGS, controlled by baghouse CE010, exhausting to the DDGS Dryers (EU025 and EU026), and equipped with bypass stack SV010, exhausting to atmosphere.

(e) One (1) DDGS handling and storage operation, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 29 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS storage silo, identified as EU030, approved in 2007 for construction, controlled by baghouse CE011, with emissions exhausted to stack SV011.

(2) One (1) DDGS silo bypass, identified as EU031, approved in 2007 for construction, controlled by baghouse CE012, with emissions exhausted to stack SV012.

(3) One (1) DDGS storage building, identified as EU032, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(16), 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 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

Appendix A of this TSD reflects the unrestricted potential emissions of the modification.

PTE Change of the Modified Process			
Pollutant	**PTE Before Modification** (ton/yr)	**PTE After Modification** (ton/yr)	**Increase from Modification** (ton/yr)
PM	2556.93	2556.93	0.00E+00
PM_{10}	2563.74	2563.74	0.00E+00
$PM_{2.5}$	756.43	756.43	0.00E+00
SO_2	13.70	14.04	0.34
VOC	7601.31	8020.93	419.62
CO	135.30	135.30	0.00E+00
NO_X	156.69	156.69	0.00E+00

This source modification is subject to 326 IAC 2-7-10.5(g)(4)(D), modifications with a potential to emit greater than or equal to 25 tons of VOC per year. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d)(1), because the modification requires a case-by-case determination of an emission limitation or other standard.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the entire source, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values. Any control equipment is considered federally enforceable only after issuance of this Part 70 Significant Source Modification and Significant Permit Modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential To Emit of the Entire Source to accommodate the Proposed Part 70 Significant Source Modification and Significant Permit Modification (tons/year)								
Process/ Emission Unit	PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	Total HAPs[3]	Worst Single HAP methanol
Grain Receiving (EU001), Conveyors (EU002), and Grain Storage Bins (EU003)	23.98	25.22	25.70						
Corn Transfer Conveyor / Scalper (EU004, Surge Bin (EU005)	1.76	1.85	7.66						
Hammermill #1 (EU006)	7.23	7.60	7.75						
Hammermill #2 (EU007)	7.23	7.60	7.75						
Hammermill #3 (EU008)	7.23	7.60	7.75						
Hammermill #4 (EU009)	7.23	7.60	7.75						
Hammermill #5 (EU010)	7.23	7.60	7.75						
Fermentation Scrubber / RTO Bypass (EU011-EU023)						~~20.36~~ **21.05**		1.43	0.01
RTO Stack & DDGS Dryers (EU025 & EU026)[1]	116.68	130.09	124.39	~~10.29~~ **10.63**	90.18	163.09	54.11	~~14.68~~ **16.03**	7.67

	Potential To Emit of the Entire Source to accommodate the Proposed Part 70 Significant Source Modification and Significant Permit Modification (tons/year)								
Process/ Emission Unit	PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	Total HAPs[3]	Worst Single HAP methanol
DDGS Fluid Bed Cooler (EU029)	8.16	8.16	1.39			0.57		0.22	0.02
DDGS Silo Loading (EU030)	2.47	2.60	10.21						
DDGS Silo Bypass (EU031)	2.64	2.78	11.49						
DDGS Loadout Operations (EU032 - EU035)	5.99	6.31	6.31						
Ethanol Loading Rack (EU036)						~~2.99~~ **3.09**		4.38	
Other Miscellaneous Units (Not Specifically Limited in Permit)									
Boiler #1 (EU027)	1.17	4.67	4.67	0.37	18.42	3.38	12.28	1.16	
Boiler #2 (EU028)	1.17	4.67	4.67	0.37	18.42	3.38	12.28	1.16	
Enclosed Flare[2]	4.4E-04	1.8E-03	1.8E-03	1.4E-04	21.09	1.3E-03	53.00	4.38E-04	
Corn Oil Centrifuge						5.1E-03			
Corn Oil Centrifuge						3.0E-03			
Diesel Generator (EU037)	0.46	0.26	0.26	2.67	8.58	0.47	3.63	0.01	
Equipment Leaks								0.42	
Total PTE of Entire Source	200.63	224.61	235.50	~~13.70~~ **14.04**	156.69	~~200.84~~ **195.64**	135.30	~~23.47~~ **24.80**	7.70
Title V Major Source Thresholds	-	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	-	-

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".
** $PM_{2.5}$ listed is direct $PM_{2.5}$.
***The 100,000 CO_2e threshold represents the Title V and PSD subject-to-regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.
1. RTO Stack & DDGS Dryers calculation double counted the SO2 Process Emissions in excel.
2. The flare calculation incorrectly referenced the wrong cell in excel.
3. RTO combustion HAPs used incorrect conversion factor and formaldehyde emissions increased due to overall increase in throughput. The source also changed the centrifuge EU024 calculations.

The table below summarizes the potential to emit of the entire source after issuance of this Part 70 Significant Source Modification and Significant Permit Modification, reflecting all limits, of the emission units. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted).

	Potential To Emit of the Entire Source to accommodate the Proposed Part 70 Significant Source Modification and Significant Permit Modification (tons/year)								
Process/ Emission Unit	PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Grain Receiving (EU001), Conveyors (EU002), and Grain Storage Bins (EU003)	23.98	25.22	25.70						
Corn Transfer Conveyor / Scalper (EU004, Surge Bin (EU005)	1.76	1.85	7.66						

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Part 70 Significant Source Modification and Significant Permit Modification (tons/year)								
	PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Hammermill #1 (EU006)	7.23	7.60	7.75						
Hammermill #2 (EU007)	7.23	7.60	7.75						
Hammermill #3 (EU008)	7.23	7.60	7.75						
Hammermill #4 (EU009)	7.23	7.60	7.75						
Hammermill #5 (EU010)	7.23	7.60	7.75						
Fermentation Scrubber / RTO Bypass (EU011-EU023)						21.05		1.43	0.01
RTO Stack & DDGS Dryers (EU025 & EU026)[1]	116.68	130.09	124.39	10.63	90.18	163.09	54.11	16.03	7.67
DDGS Fluid Bed Cooler (EU029)	8.16	8.16	1.39			0.57		0.22	0.02
DDGS Silo Loading (EU030)	2.47	2.60	10.21						
DDGS Silo Bypass (EU031)	2.64	2.78	11.49						
DDGS Loadout Operations (EU032 - EU035)	5.99	6.31	6.31						
Ethanol Loading Rack (EU036)						3.09		4.38	
Other Miscellaneous Units (Not Specifically Limited in Permit)									
Boiler #1 (EU027)	1.17	4.67	4.67	0.37	18.42	3.38	12.28	1.16	
Boiler #2 (EU028)	1.17	4.67	4.67	0.37	18.42	3.38	12.28	1.16	
Enclosed Flare	4.4E-04	1.8E-03	1.8E-03	1.4E-04	21.09	1.3E-03	53.00	4.38E-04	
Corn Oil Centrifuge						5.1E-03			
Corn Oil Centrifuge						3.0E-03			
Diesel Generator (EU037)	0.46	0.26	0.26	2.67	8.58	0.47	3.63	0.01	
Equipment Leaks								0.42	
Total PTE of Entire Source	**200.63**	**224.61**	**235.50**	**14.04**	**156.69**	**195.64**	**135.30**	**24.80**	**7.70**
Title V Major Source Thresholds	-	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	-	-

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".
** $PM_{2.5}$ listed is direct $PM_{2.5}$.
***The 100,000 CO_2e threshold represents the Title V and PSD subject-to-regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

(a) This modification to an existing minor PSD stationary source is not major because the emissions increase of each PSD regulated pollutant are less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, 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).

The Permittee shall comply with the following emission limits for the RTO system (CE009) and Scrubber (CE008), and the DDGS Cooler (EU029):

(a) Unless operating under Alternative operating Scenario No. 1 (AOS1) or No. 2 (AOS2), the scrubber (CE008) and RTO (CE009) shall control emissions from the fermentation and distillation processes. Additionally, the RTO shall control emissions from the DDGS dryers (EU025 and EU026), and, when not producing wetcake, the set of four centrifuges. The emissions from the RTO (CE009) stack exhaust (SV009) shall be limited as follows:

(1) VOC emissions shall not exceed 39.49 lbs/hr.

(2) Acetaldehyde emissions shall not exceed 1.23 lbs/hr.

(3) Methanol emissions shall not exceed 1.75 lbs/hr.

(4) Acrolein emissions shall not exceed 0.21 lbs/hr.

(5) Total HAP emissions shall not exceed 3.73 lbs/hr.

(b) Alternative Operating Scenario No. 1 (AOS1)

When the Scrubber (CE008) is not operating, the RTO (CE009) shall control emissions from the fermentation and distillation processes, the DDGS dryers (EU025 and EU026), and, when not producing wetcake, the set of four centrifuges. The emissions from the RTO (CE009) stack exhaust (SV009) shall be limited as follows:

(1) VOC emissions shall not exceed 39.49 lbs/hr.

(2) Acetaldehyde emissions shall not exceed 1.23 lbs/hr.

(3) Methanol emissions shall not exceed 1.75 lbs/hr.

(4) Acrolein emissions shall not exceed 0.21 lbs/hr.

(5) Total HAP emissions shall not exceed 3.73 lbs/hr.

(c) Alternative Operating Scenario No.2 (AOS2)

When the RTO (CE009) is not operating, the Permittee shall comply with the following:

(1) The Scrubber shall continue to control the VOC emissions for the fermentation

and distillation processes, during the periods when the RTO is down. The RTO downtime shall not exceed more than five hundred (500) hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) VOC emissions from the scrubber (CE008) shall not exceed 84.21 pounds per hour.

(3) Acetaldehyde emissions from the scrubber (CE008) shall not exceed 5.60 lbs/hr.

(4) Total HAP emissions from the scrubber (CE008) shall not exceed 5.72 lbs/hr.

(d) The Permittee shall comply with the following emission limits for the DDGS cooler (EU029):

(1) VOC emissions from the DDGS cooler (EU029) bypass stack exhaust SV010, shall not exceed 5.685 lbs/hr.

(2) Acetaldehyde emissions from the DDGS cooler (EU029) bypass stack exhaust SV01, shall not exceed 1.61 lbs/hr.

(3) Total HAP emissions from the DDGS cooler (EU029) bypass stack exhaust SV01, shall not exceed 2.22 lbs/hr.

(4) The DDGS Cooler (EU029) shall not vent to atmosphere more than two hundred (200) hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(e) VOC emissions from the ethanol loading system (EU036) shall not exceed 4.17 lbs/hr.

(f) The total combined denatured ethanol and E-85 loadout from loading rack EU036 shall not exceed 86,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(g) The E-85 loadout from the ethanol loading rack EU036 shall not exceed 10,060,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

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

(j) The railcars and trucks shall not use vapor balance services during ethanol loading.

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

(l) Hexane emissions from the ethanol loading rack (EU036), exhausting to stack SV016 shall not exceed 0.79 lbs/hr.

(m) Total HAP emissions from the ethanol loading rack (EU036), exhausting to stack SV016 shall not exceed 1.00 lbs/hr.

Compliance with these limits and the unrestricted VOC emissions from all other emission units shall limit the VOC emissions from the entire source to less than two hundred fifty (250) tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are rendered not applicable.

Compliance with these limits and the unrestricted HAP PTE from all other emission units shall limit the HAP emissions from the entire source to less than ten (10) tons per year of any single

HAP, and less than twenty-five (25) tons per year of total HAP. Therefore, the entire source is rendered an area source of HAP emissions under 40 CFR 63.

Federal Rule Applicability Determination

The following federal rules are applicable to the source and have been evaluated due to the increase in production and loadout of denatured ethanol from 83,150,000 to 86,000,000 gallons per year:

NSPS:

(a) This source is not subject to the requirements of the New Source Performance Standard for Grain Elevators, 40 CFR 60.300, Subpart DD, because the total storage capacity of the four grain bins (EU003) used in the grain receiving and handling operation is 2,076,800 bushels. Since this is less than the NSPS Subpart DD applicability threshold of 2.5 million bushels, the requirements of 40 CFR 60, Subpart DD are still not included in the permit.

(b) Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984 (40 CFR 60, Subpart Kb):

(1) Tanks EU040 through EU044 have capacities less than 75 cubic meters (19,813 gallons) and will not be used to store volatile organic liquids. Therefore, these tanks are not subject to the requirements of 40 CFR 60, Subpart Kb.

(2) Tanks EU045 through EU046 have capacities greater than 75 cubic meters (19,813 gallons) but less than 151 cubic meters and will be used to store volatile organic liquids; however, the maximum true vapor pressure is less than 15.0 kilopascals (kPa). Therefore, these tanks are not subject to the requirements of 40 CFR 60, Subpart Kb.

(3) Tanks T001 through T005 have capacities greater than 75 cubic meters (19,813 gallons) and will be used to store volatile organic liquids. Therefore, these tanks are subject to the following requirements of 40 CFR 60, Subpart Kb.

The following units are subject to 40 CFR 60, Subpart Kb:

(A) Storage Tanks:

(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved in 2007 for construction, with a maximum capacity of 250,000 gallons.

(2) One (1) denaturant tank, identified as T002, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 250,000 gallons of natural gasoline.

(3) One (1) 200-proof ethanol tank, identified as T003, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(4) One (1) 200-proof ethanol tank, identified as T004, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(5) One (1) denaturant tank, identified as T005, approved in 2007 for construction, with a maximum capacity of 126,900 gallons of natural gasoline.

The tanks are subject to the following portions of 40 CFR 60, Subpart Kb:

(1) 40 CFR 60.110b(a) and (e)
(2) 40 CFR 60.111b
(3) 40 CFR 60.112b(a)(1)
(4) 40 CFR 60.113b(a)
(5) 40 CFR 60.115b(a)
(6) 40 CFR 60.116b(a), (b), (c), (d), and (e)
(7) 40 CFR 60.117b

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the storage tanks T001 through T005, except when otherwise specified in 40 CFR 60, Subpart Kb.

(c) Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 (40 CFR 60, Subpart VVa):

(1) Corn oil is not one of the chemicals listed in 40 CFR 60.489. All of the corn oil extracted by the corn oil centrifuges will be a new product for this facility. Separation of the corn oil is not a process step in the production of ethanol nor is corn oil an intermediate step in ethanol production. Therefore, the centrifuges associated with extraction of corn oil (EU038 and EU039) and the process tanks (EU040-EU044) and the storage tanks(EU045 and EU046) are not subject to the requirements of 40 CFR 60, Subpart VVa.

(2) Ethanol (CAS No. 64–17–5) is one of the chemicals listed in 40 CFR 60.489, and this ethanol plant was constructed after November 7, 2006. Therefore, this ethanol production plant is subject to the requirements of 40 CFR 60, Subpart VVa. Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit (as defined in 40 CFR 60.480a(f)) is an affected facility.

(3) The provisions of this subpart apply to affected facilities in the synthetic organic chemicals manufacturing industry. The group of all equipment (defined in §60.481a) within a process unit is an affected facility. "Equipment means each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service..." In VOC Service means that the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight.

(4) The set of four (4) centrifuges, identified as EU024, are not considered to be in VOC service because the equipment contains or contacts a process fluid that is less than 10 percent VOC by weight as demonstrated in the testing document performed by Keystone Laboratories, Inc. for the Otter Creek Ethanol, LLC d/b/a POET Biorefining - Ashton on April 21, 2015. Therefore, these four (4) centrifuges are not subject to the requirements of 40 CFR 60, Subpart VVa.

The following units are subject to 40 CFR 60, Subpart VVa:

(A) One (1) fermentation process, approved in 2007 for construction and approved in 2016 for modification, with a maximum throughput rate of 60,000 gallons per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) Five (5) fermenters, identified as EU012 through EU016, approved in 2007 for construction.

(2) One (1) fermenter, identified as EU047, approved in 2016 for construction.

(3) One (1) yeast propagation tank, identified as EU017, approved in 2007 for construction.

(4) One (1) beer well, identified as EU018, approved in 2007 for construction.

(B) One (1) distillation process, approved in 2007 for construction and approved in 2016 for modification, with a maximum input feed rate of 60,000 gallons of beer per hour and a maximum production rate of 12,000 gallons of ethanol per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through stack SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved in 2007 for construction.

(2) One (1) rectifier column, identified as EU020, approved in 2007 for construction.

(3) One (1) side stripper, identified as EU021, approved in 2007 for construction.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved in 2007 for construction.

(5) One (1) set of four (4) evaporators, identified as EU023, approved in 2007 for construction.

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

(D) Storage Tanks:

(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved in 2007 for construction, with a maximum capacity of 250,000 gallons.

(2) One (1) denaturant tank, identified as T002, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 250,000 gallons of natural gasoline.

(3) One (1) 200-proof ethanol tank, identified as T003, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(4) One (1) 200-proof ethanol tank, identified as T004, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(5) One (1) denaturant tank, identified as T005, approved in 2007 for construction, with a maximum capacity of 126,900 gallons of natural

gasoline.

The ethanol production plant is subject to the following portions of 40 CFR 60, Subpart VVa.

(1) 40 CFR 60.480a(a), (b), (c), (d), and (f)
(2) 40 CFR 60.481a
(3) 40 CFR 60.482-1a
(4) 40 CFR 60.482-2a
(5) 40 CFR 60.482-3a
(6) 40 CFR 60.482-4a
(7) 40 CFR 60.482-5a
(8) 40 CFR 60.482-6a
(9) 40 CFR 60.482-7a
(10) 40 CFR 60.482-8a
(11) 40 CFR 60.482-9a
(12) 40 CFR 60.482-10a
(13) 40 CFR 60.482-11a
(14) 40 CFR 60.483-1a
(15) 40 CFR 60.483-2a
(16) 40 CFR 60.484a
(17) 40 CFR 60.485a
(18) 40 CFR 60.486a
(19) 40 CFR 60.487a
(20) 40 CFR 60.488a
(21) 40 CFR 60.489a

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to this source, except when otherwise specified in 40 CFR 60, Subpart VVa.

NESHAP:

(a) The requirements of the National Emission Standards for Organic Hazardous Air Pollutants From Synthetic Organic Chemical Manufacturing Industry (40 CFR Part 63, Subpart F); National Emission Standards for Organic Hazardous Air Pollutants from Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater (40 CFR Part 63, Subpart G); National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks (40 CFR Part 63, Subpart H) are not included in this permit because this source has accepted limits that make it a minor source of hazardous air pollutants.

(b) The requirements of the National Emission Standards for Industrial Process Cooling Towers (40 CFR 63, Subpart Q) are not included in this permit because this source has accepted limits that make it a minor source of hazardous air pollutants. Therefore, the requirements for 40 CFR 63, Subpart Q, are not included in this permit.

(c) The requirements of the National Emission Standards for Organic Liquids Distribution (non-gasoline) (40 CFR 63, Subpart EEEE) are not included in this permit because this source has accepted limits that make it a minor source of hazardous air pollutants. Therefore, the requirements of 40 CFR 63, Subpart EEEE, are not included in this permit.

(d) The requirements of the National Emission Standards for Miscellaneous Organic Chemical Manufacturing (40 CFR 63, Subpart FFFF) are not included in this permit because this source has accepted limits that make it a minor source of hazardous air pollutants. Therefore, the requirements of 40 CFR 63, Subpart FFFF, are not included in this permit.

(e) The requirements of National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (40 CFR 63, Subpart BBBBBB) are not included in the permit. EPA has specifically stated that Subpart 6B does not apply to the storage of denatured ethanol because denatured ethanol does not meet the Reid vapor pressure ("RVP") threshold in Subpart BBBBBB to qualify as gasoline and is not itself a fuel for internal combustion engines. See 76 Fed. Reg. 4156 (Jan. 24, 2011). Therefore, the requirements of 40 CFR 63, Subpart BBBBBB have been removed from the permit.

The denaturant received, stored, and used to process denatured ethanol is "natural gasoline" and not "refined" gasoline. For the purposes of Subpart BBBBBB, gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines. Natural gasoline is not considered a petroleum distillate. Natural gasoline is derived from natural gas, whereas refined gasoline is derived from crude oil (petroleum). 40 CFR 80.2 defines natural gas liquids: "Natural gas liquids (NGL) means the components of natural gas (primarily propane, butane, pentane, hexane, and heptane) that are separated from the gas state in the form of liquids in facilities such as a natural gas production facility, a gas processing plant, a natural gas pipeline, or a refinery or similar facility. The higher temperature boiling components of NGL are sometimes referred to as 'natural gasoline'". 40 CFR 63, Subpart OOOO defines Natural Gas liquids as hydrocarbons, such as ethane, propane, butane, and pentane that are extracted from field gas. Natural gasoline itself is not used as a fuel in combustion engines. Therefore, the requirements of 40 CFR 63, Subpart BBBBBB are not included in the permit.

(f) National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities (40 CFR 63, Subpart CCCCCC)

(1) The vapor collection-equipped gasoline cargo tanks are not subject to 40 CFR 63, Subpart CCCCCC because these units are not affected facilities as specified in 63.11110. Therefore 40 CFR 63, Subpart CCCCCC is not subject to the vapor collection-equipped gasoline cargo tanks. The vapor collection-equipped gasoline cargo tanks were previously considered to be subject to 40 CFR 63, Subpart BBBBBB and were included in the permit because these units were considered affected facilities as specified in 63.11082. As discussed above in the 40 CFR 63, Subpart BBBBBB determination, the source is not subject to 40 CFR 63, Subpart BBBBBB.

(2) The source is subject to the requirements of 40 CFR 63, Subpart CCCCCC because it is an area source and this ethanol plant has a gasoline dispensing operation for plant vehicles. The affected sources include the following and are considered new affected sources pursuant to 40 CFR 63.11112(b) because construction commenced after November 9, 2006, and they are identified as part of the affected source under 40 CFR 63.11111:

(A) One (1) gasoline dispensing operation for plant vehicles, identified as T009, installed in 2008, with a 265 gallon capacity storage tank and an estimated annual throughput of 2,200 gallons per year.

The gasoline dispensing operation for plant vehicles (T009) and the vapor collection-equipped gasoline cargo tanks are subject to the following requirements of40 CFR 63, Subpart CCCCCC:

(1) 40 CFR 63.11110
(2) 40 CFR 63.11111 (a), (b), (e), (f), (h), (i), (j), and (k)
(3) 40 CFR 63.11112(a) and (b)
(4) 40 CFR 63.11113(a)(1)
(5) 40 CFR 63.11115
(6) 40 CFR 63.11116
(7) 40 CFR 63.11125(d)

(8) 40 CFR 63.11126(b)
(9) 40 CFR 63.11130
(10) 40 CFR 63.11131
(11) 40 CFR 63.11132
(12) Table 3 to 40 CFR 63 Subpart CCCCCC

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart CCCCCC.

(g) National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Chemical Manufacturing Area Sources, (40 CFR 63 Subpart VVVVVV)
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Chemical Manufacturing Area Sources, 40 CFR 63.11494, Subpart VVVVVV, are not included in this permit, because the source does not process, produce, or use any of the HAPs listed in Table 1 to this subpart in concentrations greater than 0.1 percent for the listed carcinogens or greater than 1.0 percent for the listed noncarcinogens. This is based on national test data submitted by the Iowa Renewable Fuels Association and verified by the Iowa Department of Natural Resources as well as test data from numerous ethanol plants in Indiana.

CAM:

(h) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

CAM Applicability Analysis							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
Fermentation (EU011, EU012, EU016-EU018) - VOC	Scrubber CE008 & RTO CE009	Y	4,122	4.71	100	Y	N
Fermentation (EU011, EU012, EU016-EU018) - HAP acetaldehyde	Scrubber CE008 & RTO CE009	Y	24.53	0.70	10	Y	N
Fermentation (EU011, EU012, EU016-EU018) - HAP methanol	Scrubber CE008 & RTO CE009	Y	0.18	0.01	10	N	N
Fermentation (EU011, EU012, EU016-EU018) - Total HAP	Scrubber CE008 & RTO CE009	Y	25.05	0.72	25	Y	N

CAM Applicability Analysis							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
Distillation RTO Stack & DDGS Dryers (EU025 & EU026) - VOC	Scrubber CE008 & RTO CE009	Y	2,953	59.07	100	Y	N
Distillation RTO Stack & DDGS Dryers (EU025 & EU026) - HAP acetaldehyde	Scrubber CE008 & RTO CE009	Y	179.37	5.38	10	Y	N
Distillation RTO Stack & DDGS Dryers (EU025 & EU026) - HAP acrolein	Scrubber CE008 & RTO CE009	Y	10.48	0.31	10	Y	N
Distillation RTO Stack & DDGS Dryers (EU025 & EU026) - HAP methanol	Scrubber CE008 & RTO CE009	Y	35.09	1.05	10	Y	N
Distillation RTO Stack & DDGS Dryers (EU025 & EU026) - Total HAP	Scrubber CE008 & RTO CE009	Y	227.30	8.00	25	Y	N
DDGS Cooler (EU029) - VOC	Scrubber CE008 & RTO CE009	Y	24.90	0.57	100	N	N
DDGS Cooler (EU029) - HAP acetaldehyde	Scrubber CE008 & RTO CE009	Y	7.03	0.14	10	N	N
DDGS Cooler (EU029) - HAP acrolein	Scrubber CE008 & RTO CE009	Y	0.79	0.02	10	N	N
DDGS Cooler (EU029) - HAP methanol	Scrubber CE008 & RTO CE009	Y	1.05	0.02	10	N	N
DDGS Cooler (EU029) - Total HAP	Scrubber CE008 & RTO CE009	Y	9.73	0.19	25	N	N
Ethanol Loading (EU036) - VOC	Flare CE015	Y	913.26	18.27	100	Y	N
Ethanol Loading (EU036) - HAP hexane	Flare CE015	Y	87.76	0.40	10	Y	N
Ethanol Loading (EU036) - Total HAP	Flare CE015	Y	91.78	0.42	25	Y	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the following:

- Fermentation (EU011, EU012, EU016-EU018) - VOC
- Fermentation (EU011, EU012, EU016-EU018) - HAP acetaldehyde
- Fermentation (EU011, EU012, EU016-EU018) - Total HAP
- Distillation RTO Stack & DDGS Dryers (EU025 & EU026) - VOC
- Distillation RTO Stack & DDGS Dryers (EU025 & EU026) - HAP acetaldehyde
- Distillation RTO Stack & DDGS Dryers (EU025 & EU026) - HAP acrolein
- Distillation RTO Stack & DDGS Dryers (EU025 & EU026) - HAP methanol

- Distillation RTO Stack & DDGS Dryers (EU025 & EU026) - Total HAP
- Ethanol Loading (EU036) - VOC
- Ethanol Loading (EU036) - HAP hexane
- Ethanol Loading (EU036) - Total HAP

upon issuance of the Title V Renewal. A CAM plan must be submitted as part of the Renewal application.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (PSD)
PSD applicability is discussed under the Permit Level Determination – PSD section.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit acetaldehyde, acrolein, methanol, and hexane from the entire source before control is greater than ten (10) tons/yr, each, and the potential to emit total HAP from the entire source before control is greater than twenty five (25) tons/yr.

In order to render the requirements of 326 IAC 2 4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable:

(a) Unless operating under Alternative operating Scenario No. 1 (AOS1) or No. 2 (AOS2), the scrubber (CE008) and RTO (CE009) shall control emissions from the fermentation and distillation processes. Additionally, the RTO shall control emissions from the DDGS dryers (EU025 and EU026), and, when not producing wetcake, the set of four centrifuges. The emissions from the RTO (CE009) stack exhaust (SV009) shall be limited as follows:

(1) Acetaldehyde emissions shall not exceed 1.23 lbs/hr.

(2) Methanol emissions shall not exceed 1.75 lbs/hr.

(3) Acrolein emissions shall not exceed 0.21 lbs/hr.

(4) Total HAP emissions shall not exceed 3.73 lbs/hr.

(b) Alternative Operating Scenario No. 1 (AOS1)

When the Scrubber (CE008) is not operating, the RTO (CE009) shall control emissions from the fermentation and distillation processes, the DDGS dryers (EU025 and EU026), and, when not producing wetcake, the set of four centrifuges. The emissions from the RTO (CE009) stack exhaust (SV009) shall be limited as follows:

(1) Acetaldehyde emissions shall not exceed 1.23 lbs/hr.

(2) Methanol emissions shall not exceed 1.75 lbs/hr.

(3) Acrolein emissions shall not exceed 0.21 lbs/hr.

(4) Total HAP emissions shall not exceed 3.73 lbs/hr.

(c) Alternative Operating Scenario No.2 (AOS2)

When the RTO (CE009) is not operating, the Permittee shall comply with the following:

(1) The Scrubber shall continue to control the VOC emissions for the fermentation

and distillation processes, during the periods when the RTO is down. The RTO downtime shall not exceed more than five hundred (500) hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) Acetaldehyde emissions from the scrubber (CE008) shall not exceed 5.60 lbs/hr.

(3) Total HAP emissions from the scrubber (CE008) shall not exceed 5.72 lbs/hr.

(d) The Permittee shall comply with the following emission limits for the DDGS cooler (EU029):

(1) Acetaldehyde emissions from the DDGS cooler (EU029) bypass stack exhaust SV01, shall not exceed 1.61 lbs/hr.

(2) Total HAP emissions from the DDGS cooler (EU029) bypass stack exhaust SV01, shall not exceed 2.22 lbs/hr.

(3) The DDGS Cooler (EU029) shall not vent to atmosphere more than two hundred (200) hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(e) The total combined denatured ethanol and E-85 loadout from loading rack EU036 shall not exceed 86,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(f) The E-85 loadout from the ethanol loading rack EU036 shall not exceed 10,060,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

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

(i) The railcars and trucks shall not use vapor balance services during ethanol loading.

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

(k) Hexane emissions from the ethanol loading rack (EU036), exhausting to stack SV016 shall not exceed 0.79 lbs/hr.

(l) Total HAP emissions from the ethanol loading rack (EU036), exhausting to stack SV016 shall not exceed 1.00 lbs/hr.

Compliance with these limits and the unrestricted HAP PTE from all other emission units shall limit the HAP emissions from the entire source to less than ten (10) tons per year of any single HAP, and less than twenty-five (25) tons per year of total HAP. Therefore, the requirements of 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants) are rendered not applicable to the source.

326 IAC 2-6 (Emission Reporting)

Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3(b)(1), an emission statement must be submitted triennially. The first report is due no later than July 1, 2004, and subsequent reports are due every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 2-7-6(5) (Annual Compliance Cerification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

326 IAC 6.5 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 PM Limitations for Lake County
This source is not subject to 326 IAC 6.8 becuase it is not located in Lake County.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
DDGS Handling
Pursuant to 326 IAC 6-3-1(a), the requirements of 326 IAC 6-3-2 are applicable to the units in the table below, since it is a manufacturing process not exempted from this rule under 326 IAC 6-3-1(b) and is not subject to a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule as specified in 326 IAC 6-3-1(c). Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the units in the table below shall not exceed E pounds per hour when operating at a process weight rate of P tons per hour. The pound per hour limitation was calculated with 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

Summary of Process Weight Rate Limits		
Process / Emission Unit	**P (ton/hr)**	**E (lb/hr)**
Fluidized DDGS Cooler (EU029)	29.0	39.1
DDGS Silo Loading (EU030)	29.0	39.1
DDGS Silo Bypass (EU031)	29.0	39.1
DDGS Dryer (EU025)	78.0	48.8
DDGS Dryer (EU026)	78.0	48.8
DDGS storage building (EU032)	29.0	39.1

According to the emission calculations (see Appendix A), the potential to emit PM after control from the DDGS Silo Loading (EU030), DDGS Silo Bypass (EU031), and DDGS storage building (EU032) is less than the emission limits above. Therefore, these operations can comply with 326 IAC 6-3-2 without the use of a control device.

The baghouse (CE010) shall be in operation at all times the fluidized DDGS Cooler (EU029) is in operation, in order to comply with this limit.

The RTO (CE009) shall be in operation at all times the DDGS dryers (EU025 and EU026) are in operation, in order to comply with this limit.

Cooling Tower
Pursuant to 326 IAC 6-3-1(b)(11), particulate emissions from the cooling tower are exempt from the requirements of 326 IAC 6-3.

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is subject to the requirements of 326 IAC 6-5, because the uncaptured grain receiving, uncaptured DDGS handling, truck traffic, and cooling towers have potential fugitive particulate emissions greater than 25 tons per year. Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan, which is included as Attachment A to the permit.

326 IAC 8-1-6 (General Reduction Requirements for VOC Emissions)
(a) The fermentation process, distillation process (RTO system (CE009) and scrubber (CE008)), DDGS dryers (EU025 and EU026), and ethanol load-out operation (EU036) are subject to the requirements in 326 IAC 8-5-6. Therefore, these operations are not subject to the requirements of 326 IAC 8-1-6 (BACT).

(b) The DDGS cooler (EU029) was constructed after January 1, 1980, but does not have potential VOC emissions greater than 25 tons per year. The source has chosen a 5.685 lb/hr limit as a safety factor for demonstrating potential emissions will remain below twenty-five (25) tons/yr. The source verified from a stack test conducted at N. Manchester on 3/5/2009 that the DDGS Cooler (EU029) is below the limit of 5.685 lb/hr. Therefore, the DDGS cooler (EU029) is not subject to 326 IAC 8-1-6 when exhausted to the atmosphere.

326 8-4-3 (Petroleum Liquid Storage Facilities)
(a) Pursuant to 326 IAC 8-4-3(a), storage tanks T001, T003, and T004 are not petroleum liquid storage vessels with capacities greater than one hundred fifty thousand (150,000) liters (thirty-nine thousand (39,000) gallons) containing volatile organic compounds whose true vapor pressure is greater than 10.5 kPa (1.52 psi). These tanks will store denatured ethanol. Therefore, these tanks are not subject to the requirements of 326 IAC 8-4-3.

(b) The denaturant storage tanks T002 and T005 are not petroleum liquid storage vessels. They store natural gasoline which is not a petroleum liquid. Natural gasoline is derived from natural gas, whereas refined gasoline is derived from crude oil (petroleum). Therefore, tanks T002 and T005 are not subject to the requirements of 326 IAC 8-4-3.

(c) Tank T009 and all other tanks either have a capacity of less than 39,000 gallons or they are not considered petroleum liquid storage vessels; therefore, they are not subject to the requirements of 326 IAC 8-4-3.

326 IAC 8-4-4 (Bulk Gasoline Terminals)
The source does not operate a bulk gasoline terminal, as defined in 326 IAC 1-2-8, because it does not deliver gasoline to bulk gasoline plants or to commercial or retail accounts primarily by transport. Therefore, the requirements of 326 IAC 8-4-4 are not applicable.

326 IAC 8-4-5 (Bulk Gasoline Plants)
The source does not operate a bulk gasoline plant, as defined in 326 IAC 1-2-7, because it does not dispense gasoline via account trucks to local farms, businesses and service stations. Therefore, the requirements of 326 IAC 8-4-5 are not applicable.

326 8-4-6 (Gasoline Dispensing Facilities)
The source is not subject to 326 8-4-6 (Gasoline Dispensing Facilities) because the one (1) gasoline dispensing operation for plant vehicles, identified as T009, is not a gasoline storage tank at a gasoline dispensing facility with a monthly gasoline throughput of ten thousand (10,000) gallons per month or greater. Therefore, 326 8-4-6 (Gasoline Dispensing Facilities) does not apply to the source.

326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)
The source is still subject to the requirements in 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills).

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
The source is not located in Clark, Floyd, Lake, or Porter County. Therefore, the requirements of 326 IAC 8-9-1 are not applicable to the tanks at this source.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no new Compliance Determination and Compliance Monitoring Requirements applicable to this source after issuance of this modification. IDEM, OAQ has determined that the prior stack testing performed at the source for the standard operating permit condition in D.2.1(a), Alternative Operating Scenario No. 1 (AOS1) in permit condition in D.2.1(b), Alternative Operating Scenario No.2 (AOS2) in permit condition in D.2.1(c), DDGS cooler (EU029) bypass stack exhaust in permit condition in D.2.1(d), and for the ethanol loading system in permit section D.4 is sufficiently low such that the 3.42% increase in throughput with the addition of the 6th fermenter provides confidence that the emission units and the source will continue to operate below the existing emission unit and source wide PSD limits. Therefore, adjustments to the current compliance demonstration requirements were deemed not necessary by IDEM, OAQ Compliance and Enforcement Branch.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 169-33491-00068. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Proposed Changes

(a) Condition A.2 - Emission Units and Pollution Control Equipment Summary, Section D.2 Emissions Unit Description Box, and Section E.1 Emissions Unit Description Box have been revised to include the new 6th fermenter that is associated with this modification.

(b) Condition A.2 - Emission Units and Pollution Control Equipment Summary, Section D.2 Emissions Unit Description Box, and Section E.1 Emissions Unit Description Box have been revised. The fermentation and distillation processes have increased throughput from a maximum throughput rate of 58,500 and 57,000, respectively, to 60,000 gallons of beer per hour that is associated with this modification. The distillation process has a maximum production rate of 12,000 gallons of ethanol per hour.

(c) Condition A.2 - Emission Units and Pollution Control Equipment Summary, Condition A.3 Specifically Regulated Insignificant Activities, and Section D.2 Emissions Unit Description Box have been revised to add "DDGS is not being produced" that replaces "during wetcake production" for clarity to the set of four (4) centrifuges, identified as EU024, and two (2) centrifuges, identified as EU038 and EU039.

(d) Condition A.2 - Emission Units and Pollution Control Equipment Summary, Section D.2 Emissions Unit Description Box, and Section E.1 have been revised. The set of four (4) centrifuges, identified as EU024, are not considered to be in VOC service because the equipment contains or contacts a process fluid that is less than 10 percent VOC by weight as demonstrated in the testing document performed by Keystone Laboratories, Inc. for the Otter Creek Ethanol, LLC d/b/a POET Biorefining - Ashton on April 21, 2015. Therefore, these four (4) centrifuges are not subject to the requirements of 40 CFR 60, Subpart VVa.

(e) Condition A.2 - Emission Units and Pollution Control Equipment Summary, Section D.1, and Section D.2 have been revised to increase the throughput of the DDGS handling (DDGS Dryers – EU025 and EU026, DDGS Fluid Bed Cooler – EU029, DDGS Storage Silo - EU030, DDGS Silo Bypass – EU031, and DDGS Storage Building – EU032) maximum throughput rate from 26 tons per hour to 29 tons per hour that is associated with this modification. The DDGS Dryers – EU025 and EU026 have a total maximum throughput rate of 78 tons of wetcake per hour and this has been specified in the permit. The DDGS handling and storage operation has an input rate into the storage operation of 29 tons/hr of DDGS and a loadout into truck or rail of 220 tons/hr of DDGS. 326 IAC 6-3-2 has been updated in the permit for the DDGS handling.

(f) Condition A.2 - Emission Units and Pollution Control Equipment Summary and Condition A.3 Specifically Regulated Insignificant Activities have been revised and Section E.6 has been removed from the permit. The requirements of 40 CFR 63, Subpart BBBBBB are not included in the permit. EPA has specifically stated that Subpart 6B does not apply to the storage of denatured ethanol because denatured ethanol does not meet the Reid vapor pressure (“RVP”) threshold in Subpart BBBBBB to qualify as gasoline and is not itself a fuel for internal combustion engines. See 76 Fed. Reg. 4156 (Jan. 24, 2011). The denaturant received, stored, and used to process denatured ethanol is "natural gasoline" and not "refined" gasoline. Therefore, the requirements of 40 CFR 63, Subpart BBBBBB have been removed from the permit.

(g) Condition A.3 Specifically Regulated Insignificant Activities and Section E.1 have been revised. The two (2) centrifuges, identified as EU038 and EU039, are not subject to 40 CFR 60, Subpart VVa. Corn oil is not one of the chemicals listed in 40 CFR 60.489. All of the corn oil extracted by the corn oil centrifuges will be a new product for this facility. Separation of the corn oil is not a process step in the production of ethanol nor is corn oil an intermediate step in ethanol production. Therefore, the centrifuges associated with extraction of corn oil (EU038 and EU039) and the process tanks (EU040-EU044) and the storage tanks(EU045 and EU046) are not subject to the requirements of 40 CFR 60, Subpart VVa.

(h) Condition A.3 Specifically Regulated Insignificant Activities and Section E.1 have been revised. IDEM specified the affected facilities subject to 40 CFR 60, Subpart VVa. Tanks 001 through 005 are considered process units as defined in 60.481a and clarified in 72 FR 64860.

(i) Condition A.3 Specifically Regulated Insignificant Activities has been revised and Sections D.5.3, D.5.7, and Part 70 Quarterly Report form have been removed. The source is not subject to 326 8-4-6 (Gasoline Dispensing Facilities) because the one (1) gasoline dispensing operation for plant vehicles, identified as T009, is not a gasoline storage tank at a gasoline dispensing facility with a monthly gasoline throughput of ten thousand (10,000) gallons per month or greater. Therefore, 326 8-4-6 (Gasoline Dispensing Facilities) does not apply to the source.

(j) Condition A.3 Specifically Regulated Insignificant Activities and Section E.6 have been revised. The vapor collection-equipped gasoline cargo tanks are not subject to 40 CFR 63, Subpart CCCCCC because these units are not affected facilities as specified in 63.11110.

(k) Condition A.4 Insignificant Activities has been revised. The cooling tower has a maximum throughput of 30,000 gallons per minute.

(l) Condition D.2.1 PSD and HAP Minor Limits has been revised to change the Total HAP emissions limit from 3.70 to 3.73 lbs/hr in D.2.1(a) and D.2.1(b). This is because of the incorrect RTO HAP calcs and also the overall throughput increase with the addition of the new 6th fermenter for formaldehyde, which is unlimited. The source also changed the centrifuge EU024 calculations.

(m) Condition D.2.1 PSD and HAP Minor Limits has been revised to change the VOC emissions limit from 81.43 to 84.21 lbs/hr in D.2.1(c). This is because of the overall throughput increase with the addition of the new 6th fermenter.

(n) Conditions D.2.4 National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources, D.2.8(d) Testing Requirements, D.5.2 National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources, and D.5.5 Testing Requirements have been removed from the permit. The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Chemical Manufacturing Area Sources, 40 CFR 63.11494, Subpart VVVVVV, are not included in this permit, because the source does not process, produce, or use any of the HAPs listed in Table 1 to this subpart in concentrations greater than 0.1 percent for the listed carcinogens or greater than 1.0 percent for the listed noncarcinogens. This is based on national test data submitted by the Iowa Renewable Fuels Association and verified by the Iowa Department of Natural Resources as well as test data from numerous ethanol plants in Indiana.

(o) Condition D.2.5 VOC and HAP Control has been revised.

(1) Condition D.2.1(a) says the scrubber (CE008) and RTO (CE009) shall control emissions from the fermentation and distillation processes. Additionally, the RTO shall control emissions from the DDGS dryers (EU025 and EU026), and, when DDGS is being produced, the set of four centrifuges. Therefore, D.2.5(a) has been revised.

(2) Condition D.2.1(b) specifies when the Scrubber (CE008) is not operating, the RTO (CE009) shall control emissions from the fermentation and distillation processes, the DDGS dryers (EU025 and EU026), and, when DDGS is being produced, the set of four centrifuges. Therefore, D.2.5(b) has been revised.

(3) Condition D.2.1(c) does not specify that when the RTO is down, the DDGS dryers shall not be in operation. Therefore, D.2.5(c) has been revised.

(4) Condition D.2.5(d) has been added to the permit to assure compliance with Condition D.2.1(d) because the DDGS cooler (EU029) vents to the RTO (CE009) except for the two hundred (200) hours per twelve (12) consecutive month period when the DDGS Cooler (EU029) vents to the atmosphere.

(5) Condition D.2.5(e) has been added to the permit to assure compliance with Condition D.2.2.

(p) Conditions D.2.9 Regenerative Thermal Oxidizer Temperature, D.2.10 Parametric Monitoring, and D.2.11 Scrubber Pressure Drop and Flow Rate have been revised to specify compliance for the appropriate operating scenario.

(q) Condition D.2.14(e) Record Keeping has been revised. The source is only required to maintain quarterly summaries for the hours of operation for the DDGS cooler (EU029) and not VOC or HAP limits.

(r) Condition D.2.15 Reporting Requirements has been revised. The source is only required to record keep quarterly summaries for the hours of operation for the scrubber under Alternative Operating Scenario No.2 (AOS2) and quarterly summaries for the hours of operation for the DDGS cooler (EU029) and not VOC or HAP limits.

(s) Condition D.4.2 HAP Minor Limits and Part 70 Quarterly Report Form have been revised to change the total combined denatured ethanol and E-85 loadout from loading rack EU036 from 83,150,000 to 86,000,000 gallons because of the addition of the new 6th fermenter.

(t) Section D.5 has been removed. Pursuant to 326 IAC 8-4-3(a), storage tanks T001, T003, and T004 are not petroleum liquid storage vessels with capacities greater than one hundred fifty thousand (150,000) liters (thirty-nine thousand (39,000) gallons) containing volatile organic compounds whose true vapor pressure is greater than 10.5 kPa (1.52 psi). The denaturant storage tanks T002 and T005 are not petroleum liquid storage vessels. Tank T009 and all other tanks either have a capacity of less than 39,000 gallons or they are not considered petroleum liquid storage vessels. Therefore, these tanks are not subject to the requirements of 326 IAC 8-4-3.

Additional Changes

(a) Typographical errors have been corrected throughout. Conditions have been renumbered throughout.

(b) Condition A.1 - General Information has been revised to include the change in phone number for the source contact and to specify the SIC Code description.

(c) Condition A.1 - General Information has been revised to remove GHGs because this source is not an anyway source. Therefore GHG emissions are not reviewed.

(d) Condition A.3 Specifically Regulated Insignificant Activities has been revised to remove the Indiana Administrative Code citations per IDEM model updates for the paved roads.

(e) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule citations listed in the permit. These changes are not changes to the underlining provisions. The change is only to cite of these rules in Section B - Permit Renewal, Section B - Operational Flexibility, Section C - Risk Management Plan, and Section C - Emission Statement.

(f) Condition B.11 Emergency Provisions has been revised to remove the Northwest Regional Office phone because the source is located in Wabash County and Wabash County is located in the Indianpolis Central Office Regional Area.

(g) D and E Section Emission Unit Description boxes have been revised to match the units in the A section of the permit.

(h) After discussions with EPA, OAQ decided to add a rule cite for the Compliance Determination Requirements subsection title in the D Sections. The addition of this rule cite is to satisfy EPA's concerns. The rule citation has been changed throughout the permit as follows:

Compliance Determination Requirements **[326 IAC 2-7-5(1)]**

(i) Condition D.1.4 Particulate Control has been revised to update the correct citations to ensure compliance with the particulate emission limitations in conditions D.1.1 and D.1.2.

(j) Conditions D.1.7 and D.2.14 Parametric Monitoring have been removed. IDEM, OAQ's current policy is to only include one compliance monitoring requirement for this type of control. Therefore, IDEM has removed Conditions D.1.7 and D.2.14 Parametric Monitoring since the permit also contains a Visible Emissions Notations requirement for the baghouse exhaust stack. The associated Record Keeping Requirements for Conditions D.1.7 and D.2.14 Parametric Monitoring have also been removed.

(k) Conditions D.2.1, D.2.2, D.2.6, D.2.7, D.2.12, and D.2.15 have been updated to current IDEM, OAQ model language and for clarity for permittee requirements. POET Alexandria has similar model language.

(l) IDEM, OAQ has updated the E sections of the permit for clarity.

The permit has been revised as follows:

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.~~3~~**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 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary ethanol production plant.

Source Address:	868 East 800 North, North Manchester, Indiana 46962
General Source Phone Number:	(260) 774-~~3601~~**3532**
~~SIC Code:~~	~~2869 and 2048~~
SIC Code:	**2869 (Industrial Organic Chemicals, Not Elsewhere Classified) and 2048 (Prepared Feeds and Feed Ingredients for Animals and Fowls, Except for Dogs and Cats)**
County Location:	Wabash
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD and Emission Offset Rules ~~Greenhouse Gas (GHG) potential to emit (PTE) is equal to or more than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year~~ ~~———~~Minor Source, Section 112 of the Clean Air Act Minor Nested Source, under PSD Rules, with fossil fuel fired boilers totaling more than two hundred fifty million

(250,000,000) British thermal units per hour heat input, as 1 of 28 Source Categories, within a non-listed source

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

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

(a) One (1) grain receiving and handling operation, approved in 2007 for construction, controlled by baghouse CE001, exhausting through stack SV001, and consisting of the following:

(1) Two (2) truck dump pits and one (1) rail dump pit, identified as EU001, approved in 2007 for construction, with a maximum throughput rate of 840 tons of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, approved in 2007 for construction, with a maximum throughput rate of 840 tons per hour.

(3) Four (4) grain bins, identified as EU003, approved in 2007 for construction, with a maximum throughput rate of 840 tons per hour. Three (3) of these grain bins have the capacity to store up to 674,600 bushels each. The fourth bin has a capacity of 53,000 bushels for a total storage capacity of 2,076,800 bushels.

(b) One (1) corn transfer conveyor system, identified as EU004, approved in 2007 for construction, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(c) One (1) surge bin, identified as EU005, approved in 2007 for construction, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(d) Five (5) hammermills, identified as EU006, EU007, EU008, EU009, and EU010, approved in 2007 for construction, each with a maximum throughput rate of 20 tons of corn per hour, controlled by baghouses CE003, CE004, CE005, CE006, and CE007, respectively, and exhausting through stacks SV003, SV004, SV005, SV006, and SV007, respectively.

(e) One (1) fermentation process, approved in 2007 for construction **and approved in 2016 for modification**, with a maximum throughput rate of ~~58,500~~**60,000** gallons per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) Five (5) fermenters, identified as EU012 through EU016, approved in 2007 for construction.

(2) One (1) **fermenter, identified as EU047, approved in 2016 for construction.**

(3) One (1) yeast propagation tank, identified as EU017, approved in 2007 for construction.

(~~3~~**4**) One (1) beer well, identified as EU018, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(f) One (1) regenerative thermal oxidizer (RTO), identified as CE009, approved in 2007 for construction, with a maximum heat input capacity of 30 MMBtu/hr, using natural gas as fuel, with emissions exhausted through stack SV009.

(g) One (1) distillation process, approved in 2007 for construction **and approved in 2016 for modification**, with a maximum ~~throughput~~**input feed** rate of ~~57~~**60,000 gallons of beer per hour and a maximum production rate of 12**,000 gallons of ethanol per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through stack SV009. During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved in 2007 for construction.

(2) One (1) rectifier column, identified as EU020, approved in 2007 for construction.

(3) One (1) side stripper, identified as EU021, approved in 2007 for construction.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved in 2007 for construction.

(5) One (1) set of four (4) evaporators, identified as EU023, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(h) One (1) set of four (4) centrifuges, identified as EU024, approved in 2007 for construction, controlled by regenerative thermal oxidizer (RTO) CE009~~ during normal operation~~, with emissions exhausted through stack SV009. ~~During wetcake production~~**When DDGS is not being produced**, emissions from EU024 are exhausted through bypass stack SV017.

~~Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.~~

(i) Two (2) natural gas fired DDGS dryers, identified as EU025 and EU026, approved in 2007 for construction **and approved in 2016 for modification**, each with a maximum heat input rate of 60 MMBtu/hr, with a total maximum throughput rate of ~~26~~**78 tons of wetcake per hour, and an output of 29** tons of DDGS **produced** per hour, controlled by multiclones CE013 and CE014, respectively, with emissions venting to thermal oxidizer CE009, and exhausting to stack SV009.

(j) Two (2) natural gas fired boilers, identified as EU027 and EU028, approved in 2007 for construction, each with a maximum heat input rate of 143 MMBtu/hr each, with emissions exhausting to stacks SV013 and SV014, respectively.

Under 40 CFR, Subpart Db, the two (2) boilers are new steam generating units.

(k) One (1) fluidized DDGS cooler, identified as EU029, approved in 2007 for construction **and approved in 2016 for modification**, with a maximum throughput rate of ~~26~~**29** tons/hr of DDGS, controlled by baghouse CE010, exhausting to the DDGS Dryers (EU025 and EU026), and equipped with bypass stack SV010, exhausting to atmosphere.

(l) One (1) DDGS handling and storage operation, approved in 2007 for construction **and approved in 2016 for modification**, with a maximum throughput rate of ~~220~~**29** tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS storage silo, identified as EU030, approved in 2007 for construction, controlled by baghouse CE011, with emissions exhausted to stack SV011.

(2) One (1) DDGS silo bypass, identified as EU031, approved in 2007 for construction, controlled by baghouse CE012, with emissions exhausted to stack SV012.

(3) One (1) DDGS storage building, identified as EU032, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(m) One (1) DDGS loadout operation, approved in 2007 for construction, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS conveyor, identified as EU033, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(2) One (1) DDGS truck loadout spout, identified as EU034, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(3) One (1) DDGS rail loadout spout, identified as EU035, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

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

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility. ~~Under NESHAP, Subpart BBBBBB, this unit is an affected source.~~

(o) One (1) diesel generator, identified as EU037, approved in 2007 for construction, with a maximum power output rate of 2,640 HP, and exhausting to stack SV015.

Under NSPS, Subpart IIII, this unit is an affected source.
Under NESHAP, Subpart ZZZZ, this unit is an affected source.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14~~)~~**)]**

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

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

(b) Two (2) centrifuges, identified as EU038 and EU039, approved in 2012 for construction, used in series to separate corn oil from the syrup system, exhausted to the thermal oxidizer CE009 and stack SV009. During wetcake production, emissions from EU038 and EU039 are exhausted through a pressure relief vent. ~~[40 CFR 60, Subpart VVa]~~

(c) Storage Tanks:

(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved in 2007 for construction, with a maximum capacity of 250,000 gallons. ~~[40 CFR 60, Subpart Kb]~~

(2) One (1) denaturant tank, identified as T002, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 250,000 gallons of ~~denaturant. [40 CFR 60, Subpart Kb][40 CFR 63, Subpart BBBBBB]~~**natural gasoline.**

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

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

(5) One (1) denaturant tank, identified as T005, approved in 2007 for construction, with a maximum capacity of 126,900 gallons of natural gasoline. ~~[326 IAC 8-9][40 CFR 60, Subpart Kb][40 CFR 63, Subpart BBBBBB]~~

Under 40 CFR 60, Subpart Kb, these units are affected facilities. Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(d) One (1) gasoline dispensing operation for plant vehicles, identified as T009, installed in 2008, with a 265 gallon capacity storage tank and an estimated annual throughput of 2,200 gallons per year. ~~[326 IAC 8-4-6][40 CFR 63, Subpart CCCCCC]~~

Under 40 CFR 63, Subpart CCCCCC, this is an affected unit.

(e) Vapor collection-equipped gasoline cargo tanks. ~~[326 IAC 8-4-6][40 CFR 63, Subpart BBBBBB][40 CFR 63, Subpart CCCCCC]~~

A.4 ~~Other~~ Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities~~ which are not specifically regulated, as defined in 326 IAC 2-7-1(21):~~**:**

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

(b) Forced and induced draft cooling tower system not regulated under a NESHAP. **The cooling tower has a maximum throughput of 30,000 gallons per minute.**

***

B.11 Emergency Provisions [326 IAC 2-7-16]

(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.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
~~Northwest Regional Office phone: (219) 464-0233; fax: (219) 464-0553.~~

***

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(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 2-7-4. 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~~**42**). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

***

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

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

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

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

(4) The Permittee notifies the:

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(~~36~~**37**)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

***

C.14 Risk Management Plan [326 IAC 2-7-5(~~12~~**11**)][40 CFR 68]

***

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(~~32~~**33**) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

***

SECTION D.1EMISSIONS UNIT OPERATION CONDITIONS~~ – **Grain and DDGS Handling Processes**~~

Emissions Unit Description:
~~**Grain and DDGS Handling Processes**~~

(a) One (1) grain receiving and handling operation, approved in 2007 for construction, controlled by baghouse CE001, exhausting through stack SV001, and consisting of the following:

(1) ~~Four (4~~**Two (2**) truck dump pits and one (1) rail dump pit, identified as EU001, approved in 2007 for construction, with a maximum throughput rate of 840 tons of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, approved in 2007 for construction, with a maximum throughput rate of 840 tons per hour.

(3) Four (4) grain bins, identified as EU003, approved in 2007 for construction, with a maximum throughput rate of 840 tons per hour. Three (3) of these grain bins have the capacity to store up to 674,600 bushels each. The fourth bin has a capacity of 53,000 bushels for a total storage capacity of 2,076,800 bushels.

(b) One (1) corn transfer conveyor system, identified as EU004, approved in 2007 for construction, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(c) One (1) surge bin, identified as EU005, approved in 2007 for construction, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(d) Five (5) hammermills, identified as EU006, EU007, EU008, EU009, and EU010, approved in 2007 for construction, each with a maximum throughput rate of 20 tons of corn per hour, controlled by baghouses CE003, CE004, CE005, CE006, and CE007, respectively, and exhausting through stacks SV003, SV004, SV005, SV006, and SV007, respectively.

(l) One (1) DDGS handling and storage operation, approved in 2007 for construction **and approved in 2016 for modification**, with a maximum throughput rate of ~~220~~**29** tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS storage silo, identified as EU030, approved in 2007 for construction, controlled by baghouse CE011, with emissions exhausted to stack SV011.

(2) One (1) DDGS silo bypass, identified as EU031, approved in 2007 for construction, controlled by baghouse CE012, with emissions exhausted to stack SV012.

(3) One (1) DDGS storage building, identified as EU032, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack ~~SV001~~**SV018**.

(m) One (1) DDGS loadout operation, approved in 2007 for construction, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS conveyor, identified as EU033, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(2) One (1) DDGS truck loadout spout, identified as EU034, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

(3) One (1) DDGS rail loadout spout, identified as EU035, approved in 2007 for construction, controlled by baghouse CE016, with emissions exhausted to stack SV018.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM, PM_{10}, and $PM_{2.5}$, emissions shall not exceed the following:

Unit ID	Unit Description	Baghouse ID	PM Emission Limit (lbs/hr)	PM_{10} Emission Limit (lbs/hr)	$PM_{2.5}$ Emission Limit (lbs/hr)

Unit ID	Unit Description	Baghouse ID	PM Emission Limit (lbs/hr)	PM_{10} Emission Limit (lbs/hr)	$PM_{2.5}$ Emission Limit (lbs/hr)
EU001, EU002, EU003	Grain Receiving, Conveyors, and Storage Bins	CE001	5.47 (combined)	5.76 (combined)	5.87 (combined)
EU004, EU005	Corn Scalper, Surge Bin	CE002	0.40 (combined)	0.42 (combined)	--
EU006	Hammermill #1	CE003	1.65	1.74	1.77
EU007	Hammermill #2	CE004	1.65	1.74	1.77
EU008	Hammermill #3	CE005	1.65	1.74	1.77
EU009	Hammermill #4	CE006	1.65	1.74	1.77
EU010	Hammermill #5	CE007	1.65	1.74	1.77
EU030	DDGS Silo Loading	CE011	0.56	0.59	--
EU031	DDGS Silo Bypass	CE012	0.60	0.63	--
EU032, EU033, EU035	DDGS conveying, storage, and loadout	CE016	1.37 (combined)	1.44 (combined)	1.44 (combined)

***

D.1.2 Particulate Emission Limitations [326 IAC 6-3-2]

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

Unit ID	**Unit Description**	**Max. Throughput Rate** (tons/hr)	**Particulate Emission Limit** (lbs/hr)
EU001, EU002, EU003	Grain Receiving, Conveyors, and Storage Bins	840	75.4
EU004, EU005	Corn Scalper, Surge Bin	140	54.7
EU006	Hammermill #1	20	30.5
EU007	Hammermill #2	20	30.5
EU008	Hammermill #3	20	30.5
EU009	Hammermill #4	20	30.5
EU010	Hammermill #5	20	30.5
EU030	DDGS Silo Loading	~~26~~**29**	~~36.4~~**39.1**
EU031	DDGS Silo Bypass	~~26~~**29**	~~36.4~~**39.1**
EU032	DDGS Storage Building	~~220~~**29**	~~59.5~~**39.1**
EU033	DDGS Conveyor	220	59.5
EU034	**DDGS Truck Loadout Spout**	**220**	**59.5**
EU035	DDGS Rail Loadout Spout	220	59.5

***

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

***

Compliance Determination Requirements [326 IAC 2-7-5(1~~)][326 IAC 2-7-6(1)])~~]

D.1.4 Particulate Control

In order to ensure compliance with Conditions D.1.~~4(a)~~**1** and D.1.~~5~~**2**, each of the following emission units shall be controlled by the associated baghouse, as listed in the table below, when these units are in operation:

Unit ID	Unit Description	Baghouse ID
EU001, EU002, EU003	Grain Receiving, Conveyors, and Storage Bins	CE001
EU004, EU005	Corn Scalper, Surge Bin	CE002
EU006	Hammermill #1	CE003
EU007	Hammermill #2	CE004
EU008	Hammermill #3	CE005

Unit ID	Unit Description	Baghouse ID
EU009	Hammermill #4	CE006
EU010	Hammermill #5	CE007
EU030	DDGS Silo Loading	CE011
EU031	DDGS Silo Bypass	CE012
EU032, EU033, EU035	DDGS conveying, storage, and loadout	CE016

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.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

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Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.1.6 Visible Emissions Notations

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~~D.1.7 Parametric Monitoring~~

~~(a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the grain receiving and handling operations (baghouses CE001 and CE002), the hammermills (baghouses CE003 through CE007), and the DDGS handling and loadout operations (baghouses CE011, CE012, and CE016), at least once per day when these units are in operation. When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 0.5 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.~~

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

~~D.1.8~~ Broken or Failed Bag Detection - Single Compartment Baghouses

***

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.1.~~9~~**8** Record Keeping Requirements

(a) To document the compliance status with Condition D.1.6, the Permittee shall maintain a daily record of 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 the compliance status with Condition D.1.7, the Permittee shall maintain a daily record of the pressure drop across the baghouse controlling the process. 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~~**(b**) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the record keeping requirements of this requirement.

SECTION D.2EMISSIONS UNIT OPERATION CONDITIONS~~ – Fermentation/Distillation and DDGS Drying~~

Emissions Unit Description:~~ Fermentation/Distillation and DDGS Drying~~

(e) One (1) fermentation process, approved in 2007 for construction **and approved in 2016 for modification**, with a maximum throughput rate of ~~58,500~~**60,000** gallons per hour, controlled by scrubber CE008 and **regenerative** thermal oxidizer **(RTO)** CE009, with emissions exhausted through ~~stack~~ SV009. **During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008.** This process consists of the following:

(1) Five (5) fermenters, identified as EU012 through EU016, approved in 2007 for construction.

(2) One (1) **fermenter, identified as EU047, approved in 2016 for construction.**

(3) One (1) yeast propagation tank, identified as EU017, approved in 2007 for construction.

(~~3~~**4**) One (1) beer well, identified as EU018, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(f) One (1) regenerative thermal oxidizer~~,~~ **(RTO),** identified as CE009, approved in 2007 for construction, with a maximum heat input capacity of 30 MMBtu/hr, using natural gas as fuel, with emissions exhausted through stack SV009.

(g) One (1) distillation process, approved in 2007 for construction **and approved in 2016 for modification**, with a maximum ~~throughput~~**input feed** rate of ~~57~~**60,000 gallons of beer per hour and a maximum production rate of 12**,000 gallons of ethanol per hour, controlled by scrubber CE008 and **regenerative** thermal oxidizer **(RTO)** CE009, with emissions exhausted through **stack** SV009. **During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008.** This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved in 2007 for construction.

(2) One (1) rectifier column, identified as EU020, approved in 2007 for construction.

(3) One (1) side stripper, identified as EU021, approved in 2007 for construction.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved in 2007 for construction.

(5) One (1) set of four (4) evaporators, identified as EU023, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(h) One (1) set of four (4) centrifuges, identified as EU024, approved in 2007 for construction, controlled by **regenerative** thermal oxidizer **(RTO)** CE009~~ during normal operation~~, with emissions exhausted through stack SV009. ~~During wetcake production~~**When DDGS is not being produced**, emissions from EU024 are exhausted through bypass stack SV017.

(i) Two (2) natural gas fired DDGS dryers, identified as EU025 and EU026, approved in 2007 for construction **and approved in 2016 for modification**, each with a maximum heat input rate of 60 MMBtu/hr, with a total maximum throughput rate of ~~26~~**78 tons of wetcake per hour, and an output of 29** tons of DDGS **produced** per hour, controlled by multiclones CE013 and CE014, respectively, with emissions venting to thermal oxidizer CE009, and exhausting to stack SV009.

(k) One (1) fluidized DDGS cooler, identified as EU029, approved in 2007 for construction **and approved in 2016 for modification**, with a maximum throughput rate of ~~26~~**29** tons/hr of DDGS, controlled by baghouse CE010, exhausting to the DDGS Dryers (EU025 and EU026), and equipped with bypass stack SV010, exhausting to atmosphere.

Insignificant Activities**:**

(b) Two (2) centrifuges, identified as EU038 and EU039, approved in 2012 for construction, ~~each with a maximum throughput of 85 gallons per minute (GPM), used~~**used in series** to separate corn oil from the syrup system, exhausted to the thermal oxidizer CE009 and stack SV009. During wetcake production, emissions from ~~EU024~~**EU038 and EU039** are exhausted through ~~bypass stack SV017. [40 CFR 60, Subpart VVa]~~**a pressure relief vent.**

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 PSD and HAP Minor Limits [326 IAC 2-2][326 IAC 2-4.1][40 CFR 63]

The Permittee shall comply with the following emission limits for the RTO system (CE009) and Scrubber (CE008), and the DDGS Cooler (EU029):

(a) Unless operating under Alternative operating Scenario No. 1 (AOS1) or No. 2 (AOS2), the scrubber (CE008) and RTO (CE009) shall control emissions from the fermentation and distillation processes. Additionally, the RTO shall control emissions from the DDGS dryers (EU025 and EU026), and, when ~~not producing wetcake~~**DDGS is being produced**, the set of four centrifuges. The emissions from the RTO (CE009) stack exhaust (SV009) shall be limited as follows:

(1) PM emissions shall not exceed 26.64 lbs/hr.

(2) PM_{10} emissions shall not exceed 29.70 lbs/hr.

(3) $PM_{2.5}$ emissions shall not exceed 28.40 lbs/hr.

(4) VOC emissions shall not exceed 39.49 lbs/hr.

(5) Acetaldehyde emissions shall not exceed 1.23 lbs/hr.

(6) Methanol emissions shall not exceed 1.75 lbs/hr.

(7) Acrolein emissions shall not exceed 0.21 lbs/hr.

(8) Total HAP emissions shall not exceed 3.~~70~~**73** lbs/hr.

(b) Alternative Operating Scenario No. 1 (AOS1)

When the Scrubber (CE008) is not operating, the RTO (CE009) shall control emissions from the fermentation and distillation processes, the DDGS dryers (EU025 and EU026), and, when ~~not producing wetcake~~**DDGS is being produced**, the set of four centrifuges. The emissions from the RTO (CE009) stack exhaust (SV009) shall be limited as follows:

(1) PM emissions shall not exceed 26.64 lbs/hr.

(2) PM_{10} emissions shall not exceed 29.70 lbs/hr.

(3) $PM_{2.5}$ emissions shall not exceed 28.40 lbs/hr.

(4) VOC emissions shall not exceed 39.49 lbs/hr.

(5) Acetaldehyde emissions shall not exceed 1.23 lbs/hr.

(6) Methanol emissions shall not exceed 1.75 lbs/hr.

(7) Acrolein emissions shall not exceed 0.21 lbs/hr.

(8) Total HAP emissions shall not exceed 3.~~70~~**73** lbs/hr.

(c) Alternative Operating Scenario No.2 (AOS2)

When the RTO (CE009) is not operating, the Permittee shall comply with the following:

(1) The Scrubber shall continue to control the VOC emissions for the fermentation and distillation processes, during the periods when the RTO is down. The RTO downtime shall not exceed more than five hundred (500) hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) VOC emissions from the scrubber (CE008) shall not exceed ~~81.43~~**84.21** pounds per hour.

(3) Acetaldehyde emissions from the scrubber (CE008) shall not exceed 5.60 lbs/hr.

(4) Total HAP emissions from the scrubber (CE008) shall not exceed 5.72 lbs/hr.

(d) The Permittee shall comply with the following emission limits for the DDGS cooler (EU029):

(1) VOC emissions from the DDGS cooler (EU029) bypass stack exhaust SV010, shall not exceed 5.685 lbs/hr.

(2) Acetaldehyde emissions from the DDGS cooler (EU029) bypass stack exhaust SV01, shall not exceed 1.61 lbs/hr.

(3) Total HAP emissions from the DDGS cooler (EU029) bypass stack exhaust SV01, shall not exceed 2.22 lbs/hr.

(4) The DDGS Cooler (EU029) shall not vent to atmosphere more than two hundred (200) hours per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, **combined with** the ~~limits in Conditions D.1.1, D.4.2(a), D.4.2(b),~~

~~and D.4.3, and the unrestricted~~**potential to emit** PM, PM_{10}, $PM_{2.5}$, and VOC ~~emissions~~ from all other emission units **at the source,** shall limit the **source-wide potential to emit of** PM, PM_{10}, $PM_{2.5}$, and VOC ~~emissions from the entire source~~ to less than two hundred fifty (250) tons per year, each~~. Therefore,~~**, and shall render** the requirements of 326 IAC 2-2 (PSD) ~~are rendered~~ not applicable.

Compliance with these limits, ~~the limits in Condition D.4.2, and the unrestricted~~**combined with the potential to emit** HAP ~~PTE~~ from all other emission units **at the source,** shall limit ~~the~~ HAP emissions from the entire source to less than ten (10) tons per year of any single HAP, and less than twenty-five (25) tons per year of total HAP. Therefore, the requirements of 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants) are rendered not applicable to the fermentation and distillation processes and the DDGS dryers (EU025 and EU026~~) ,~~**),** and ~~the entire~~**this** source is ~~rendered~~ an area source of HAP emissions under ~~40 CFR 63.~~**Section 112 of the Clean Air Act (CAA).**

D.2.2 VOC Emissions [326 IAC 8-5-6]

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

(a) Fermentation and Distillation ~~processes and the DDGS dryers (EU025 and EU026) using the following controls:~~**Process**

(~~a~~**1**) The VOC emissions from the fermentation and distillation process shall be controlled by either the scrubber CE008 or the regenerative thermal oxidizer CE009 or a combination of both the scrubber CE008 and RTO system CE009~~, as specified in D.2.1~~.

(~~b~~**2**) The overall efficiency for the scrubber CE008 and **regenerative** thermal oxidizer CE009 (including the capture efficiency and destruction efficiency) ~~shall be at least~~**of not less than** 98%, or ~~the VOC outlet~~**resulting in a volatile organic compound** concentration ~~shall~~**of** not ~~exceed~~**more than** 10 ppmv.

(~~c~~**3**) The overall efficiency for the scrubber CE008 (including the capture efficiency and ~~the~~ destruction efficiency) ~~shall be at least~~**of not less than** 98%, or ~~the VOC outlet~~**resulting in a volatile organic compound** concentration ~~shall~~**of** not ~~exceed~~**more than** 20 ppmv.

~~(d~~**(4) The overall efficiency for the regenerative thermal oxidizer CE009 (including the capture efficiency and destruction efficiency) of not less than 98%, or resulting in a volatile organic compound concentration of not more than 10 ppmv.**

(b) DDGS dryers

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

(~~e~~**2**) The overall efficiency for the regenerative thermal oxidizer CE009 ~~controlling the DDGS dryers (EU025 and EU026)~~ (including the capture efficiency and destruction efficiency) ~~shall be at least~~**of not less than** 98%, or ~~the VOC outlet~~**resulting in a volatile organic compound** concentration ~~shall~~**of** not ~~exceed 10~~**more than10** ppmv.

D.2.3 Particulate Emission Limitations [326 IAC 6-3-2]

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

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
EU025	DDGS Dryer	~~26~~**78**.0	~~36.4~~**48.8**
EU026	DDGS Dryer	~~26~~**78**.0	~~36.4~~**48.8**
EU029	DDGS Cooler	~~26~~**29**.0	~~36.4~~**39.1**

The pounds per hour limitations were calculated using the following ~~equation~~**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

~~D.2.4 National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources [40 CFR 63, Subpart VVVVVV]~~

~~In order to render the requirements of the NESHAP for Chemical Manufacturing Area Sources (40 CFR Part 63, Subpart VVVVVV), not applicable, the Permittee shall comply with the following at the scrubber (CE008), at the beer well (EU018), and at the beer stripper (EU019):~~

~~Any HAP listed in Table 1 of 40 CFR 63, Subpart VVVVVV, that is generated or produced in the chemical manufacturing process unit (CMPU) and is present in process fluid shall be less than 0.1 percent for carcinogens, as defined by the Occupational Safety and Health Administration at 29 CFR 1910.1200(d)(4), and less than 1.0 percent for noncarcinogens.~~

~~Compliance with this limit, in conjunction with the limit in condition D.5.2 and the concentration of HAPs in process fluids at other locations of the source, shall render the requirements of 40 CFR Part 63, Subpart VVVVVV (National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources) not applicable~~**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.2.4~~5~~ Preventive Maintenance Plan [326 IAC 2-7-5(12)]

***

Compliance Determination Requirements [326 IAC 2-7-5(1)~~**][326 IAC 2-7-6(1)])]**~~

D.2.~~6~~**5** VOC and HAP Control [326 IAC 8-5-6]

(a) Unless operating under AOS1 or AOS2:
In order to ~~comply~~**assure compliance** with Condition D.2.1(a),

(i) the **regenerative thermal oxidizer (RTO) CE009 shall be in operation and control emissions from the DDGS dryers (EU025 and EU026) at all times that the dryers are in operation, and, when DDGS is being produced, the set of four centrifuges.**

(ii) the regenerative thermal oxidizer (RTO) CE009 and the scrubber CE008 shall be in operation and control emissions from ~~:~~
~~DDGS dryers (EU025 and EU026) at all times that the dryers are in operation, and~~
the fermentation and distillation processes at all times that these units are in operation.

(b) When operating under AOS1:
In order to ~~comply~~**assure compliance** with D.2.1(b), when the scrubber CE008 is down, emissions from the fermentation and distillation processes ~~and~~**, the** DDGS dryers **(EU025 and EU026), and, when DDGS is being produced, the set of four centrifuges** shall be

controlled by the RTO CE009 ~~only~~**at all times that these processes are in operation**.

(c) When operating under AOS2:
In order to ~~comply~~**assure compliance** with D.2.1(c), when the regenerative thermal oxidizer (RTO) CE009 is down, emissions from the fermentation and distillation processes shall be controlled by the scrubber CE008 ~~only. When the RTO is down, the DDGS dryers shall not be~~**at all times that these processes are** in operation.

(d) In order to assure compliance with Condition D.2.1(d), the regenerative thermal oxidizer (RTO) CE009 shall be in operation and control emissions from the DDGS Cooler (EU029) at all times that the cooler is in operation, except for the two hundred (200) hours per twelve (12) consecutive month period when the DDGS Cooler (EU029) vents to the atmosphere.

(e) In order to assure compliance with Condition D.2.2 the regenerative thermal oxidizer (RTO) CE009 and/or the scrubber CE008 shall be in operation and control emissions from the fermentation and distillation processes, and the DDGS dryers at all times these processes are in operation.

D.2.~~D.2.7 Particulate Control~~
~~In order to ensure~~**6 Particulate Control**

In order to assure compliance with Condition D.2.3, Baghouse CE010 shall be in operation and control emissions from the DDGS cooler (EU029) at all times that this unit is in operation.

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.2.~~8~~**7** Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.2.1(a), D.2.2, and D.2.3, when both the RTO (CE009) and scrubber (CE008) control emissions from the fermentation and distillation processes ~~and~~**,** DDGS dryers, **and four (4) centrifuges (EU024),** the Permittee shall perform PM, PM10, PM2.5, VOC (including emission rate, destruction efficiency, and capture efficiency), and Acetaldehyde testing for the RTO system stack (SV009~~). The testing shall utilize~~**), utilizing** methods as approved by the Commissioner~~, be conducted no later than 180 days after issuance of Permit No. T169-31191-00068, and~~**. These tests shall** be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM10 and PM2.5 includes filterable and condensable PM. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. **Note: During the test, the DDGS cooler shall be venting to the DDGS dryers.**

(b) In order to demonstrate compliance with Conditions D.2.1(b), D.2.2, and D.2.3, the Permittee shall perform PM, PM10, PM2.5, VOC (including emission rate, destruction efficiency, and capture efficiency), and Acetaldehyde testing for the RTO system (CE009) with the fermentation and distillation processes ~~and~~**,** DDGS dryers**, and four (4) centrifuges (EU024)** all exhausting to the RTO without the scrubber (CE008) operating~~. The testing shall utilize~~**, utilizing** methods as approved by the Commissioner~~, be conducted no later than 180 days after issuance of Permit No. T169-33491-00068, and~~ **. These tests shall** be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM10 and PM2.5 includes filterable and condensable PM. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Note: During the test, the DDGS cooler shall be venting to the DDGS dryers.

(c) In order to demonstrate compliance with Condition D.2.1(c), the Permittee shall perform VOC (including emission rate, destruction efficiency, and capture efficiency) and Acetaldehyde testing for the scrubber (CE008~~) five (5) years from the date of the most recent valid compliance demonstration for the Scrubber stack (SV008~~), utilizing methods approved by the Commissioner. These tests shall be performed without the RTO operating and shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

~~(d) In order to demonstrate compliance with Condition D.2.4, the Permittee shall perform acetaldehyde testing of the process fluid from the beer well (EU018), the bottom of the scrubber (CE008), and the beer stripper (EU019), utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.~~

~~(e~~**(d)** In order to demonstrate compliance with Condition D.2.1(d), the Permittee shall perform VOC, and Acetaldehyde testing for the DDGS cooler (EU029) baghouse bypass stack (SV010), utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.2.~~9~~**8** Visible Emissions Notations

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D.2.~~10~~**9** Regenerative Thermal Oxidizer Temperature [326 IAC 8-5-6]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the RTO system (CE009) for measuring operating temperature. For the purpose of this condition, continuous means no less than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average.

(b) **When not operating under AOS1 or AOS2:**
The Permittee shall determine the 3-hour average temperature from the ~~latest~~**most recent** valid stack test that demonstrates compliance with limits in Conditions D.2.1~~, D.2.2, D.2.3,~~ and D.2.4**2**.

When operating under AOS1:
The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.2.1 and D.2.2.

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

(d) ~~for the appropriate operating scenario.~~ If the 3-hour average temperature falls below the ~~level observed during the latest compliant stack test~~**above mentioned 3-hour average temperature**, the Permittee shall take a reasonable response. Section C –

Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.2.~~11~~**10** Parametric Monitoring [326 IAC 8-5-6]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the RTO system (CE009) for measuring **the** duct pressure or fan amperage. For the purpose of this condition, continuous means no less **often** than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average.

(b) **When not operating under AOS1 or AOS2:**
The Permittee shall determine the **appropriate 3-hour average duct pressure or fan amperage from the latest valid stack test that demonstrates compliance with limits in Conditions D.2.1 and D.2.2.**

When operating under AOS1:
The Permittee shall determine the appropriate 3-hour average duct pressure or fan amperage from the latest valid stack test that demonstrates compliance with limits in Conditions D.2.1~~, D.2.2, D.2.3,~~ and D.2.~~4~~**2**.

(c) ~~The 3-hour average duct pressure or fan amperage shall be observed at least once per day when the RTOs are in operation.~~ On and after the date the stack test results are available, the **3-hour average** duct pressure or fan amperage shall be maintained within the **3-hour average** normal range as established in ~~the~~ latest compliant stack test.

(d) ~~The instruments used for determining the duct pressure or fan amperage shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.~~

~~(e)~~ When, for any one reading, the 3-~~hr~~**hour** average ~~temperature, the~~ duct pressure or fan amperage ~~falls~~**is** outside ~~of the appropriate range~~**the above mention 3-hour average ranges**, the Permittee shall take a reasonable response. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.2.~~12~~**11** Scrubber Pressure Drop and **Water** Flow Rate [326 IAC 8-5-6]

(a) The Permittee shall monitor and record the **water** flow rate of the scrubber (CE008) at least once per day when the ~~fermentation and/or the distillation process is~~**associated processes are** in operation.

~~(1)~~ **(b) When not operating under AOS1 or AOS2:**
The Permittee shall determine the minimum **water** flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.2.1 and **D.2.2.**
~~D.2.2.~~

~~(2~~
When operating under AOS2:
The Permittee shall determine the minimum water flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.2.1 and D.2.2.

(c) On and after the date the stack test results are available, the Permittee shall maintain a **water** flow rate at or above the minimum rate as observed during the latest compliant stack test ~~for the appropriate operating scenario. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.~~**.**

(d) When for any one reading, the water flow rate is below the above mentioned minimum, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

((~~b~~**e**) The Permittee shall monitor and record the pressure drop across the scrubber (CE008) at least once per day when the associated processes are in operation. When for any one reading, the pressure drop across ~~a~~**the** scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 1.0 and 12.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

~~(d)~~ D.2.~~13~~**12** Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

~~Failed units~~**(a) For a scrubber controlling emissions from a process operated continuously, a failed unit** and the associated process will be shut down immediately until the failed ~~units~~**unit has** have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). ~~Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard~~

(b) For a scrubber controlling emissions from a batch process, the feed to the ~~reasonable response steps required by this condition. Failure to take response steps~~**process** shall be ~~considered a deviation from this permit.~~**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).**

~~D.2.14 Baghouse Parametric Monitoring~~

~~(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the DDGS cooler (EU029) at least once per day when this unit is in operation. When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 0.5 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. **D.2.13**b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated or replaced at least once every six (6) months.~~

~~D.2.15~~**13** Broken or Failed Bag Detection - Single Compartment Baghouses

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Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.2.1~~6~~**14** Record Keeping Requirements

(a) To document the compliance status with ~~Conditions~~**Condition** D.2.1(c)(1), the Permittee shall maintain monthly records of the number of hours the scrubber (CE008) is vented to the atmosphere.

(b) To document the compliance status with Condition D.2.~~9~~**8**, the Permittee shall maintain a daily record of visible emission notations of the RTO system stack (SV009) and the DDGS Cooler baghouse stack exhaust (stack SV010). 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 the compliance status with Condition D.2.~~10~~**9**, the Permittee shall maintain continuous temperature records for the thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the ~~latest valid~~**most recent compliant** stack test.

(d) To document the compliance status with Condition D.2.~~11~~**10**, the Permittee shall maintain continuous duct pressure or fan amperage records for the RTO system (CE009) and the 3-hour average duct pressure or fan amperage used to demonstrate compliance during the ~~latest valid~~**most recent compliant** stack test.

(e) To document the compliance status with Conditions D.2.1(d)(~~1) and D.2.1(d)(~~3~~4~~), the Permittee shall maintain monthly records of the number of hours the fluidized DDGS cooler (EU029) exhausts to the atmosphere.

(f) To document the compliance status with Condition D.2.~~13~~**11**, the Permittee shall maintain a daily record of pressure drop and **water** flow rate for scrubber CE008. The Permittee shall include in its daily record whether the system is operating under AOS2. The Permittee shall include in its daily record when ~~pressure drop and flow rate~~**the readings** are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

~~(g) To document the compliance status with Condition D.2.14, the Permittee shall maintain a daily record of the pressure drop across the baghouse controlling the DDGS cooler (EU029). 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).~~

(~~h~~**g**) Documentation of the dates, including the time, the system is operating under AOS1 or AOS2.

(~~i~~**h**) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the ~~recordkeeping requirements of~~**records required by** this ~~requirement~~**condition**.

D.2.1~~7~~**15** Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.2.1(c)(1~~), D.2.1(c)(2), D.2.1(d)(1),~~**)** and D.2.1(d)(~~3~~**4**), shall be submitted not later than thirty (30) days ~~following~~**after** the end of the ~~calendar~~ quarter~~.~~ **being reported. Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.** The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(~~3~~4~~). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.~~**35).**

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS~~**— Boilers**~~

Emissions Unit Description: ~~**Boilers**~~

(j) Two (2) natural gas fired boilers, identified as EU027 and EU028, approved in 2007 for construction, each with a maximum heat input rate of 143 MMBtu/hr **each**, with emissions exhausting to stacks SV013 and SV014, respectively.

Under 40 CFR, Subpart Db, the two (2) boilers are new steam generating units.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PSD Minor Limits [326 IAC 2-2]

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D.3.2 Particulate Emissions [326 IAC 6-2-4]

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D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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Compliance Determination Requirements [326 IAC 2-7-5(1~~)][326 IAC 2-7-6(1)])~~]

D.3.4 Continuous Emissions Monitoring [326 IAC 3-5]

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Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.3.5 Record Keeping Requirements

(a) In order to document the compliance status with Condition D.3.~~3~~**1**, the Permittee shall maintain records of all NO_X and O_2 or CO_2 continuous emissions monitoring data, pursuant to 326 IAC 3-5-6. Records shall be complete and sufficient to establish compliance with the requirements of 326 IAC 3-5-6.

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SECTION D.4EMISSIONS UNIT OPERATION CONDITIONS~~ – Ethanol Loading Racks~~

Emissions Unit Description: ~~**Ethanol Loading Racks**~~

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

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 VOC Emissions [326 IAC 8-5-6]

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D.4.2 HAP Minor Limits [326 IAC 2-4.1][40 CFR 63]

(a) The total combined denatured ethanol and E-85 loadout from loading rack EU036 shall not exceed ~~83,150~~**86,000**,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

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D.4.3 PSD Minor Limit [326 IAC 2-2]

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D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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Compliance Determination Requirements [326 IAC 2-7-5(1~~)][326 IAC 2-7-6(1)])~~]

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~~**SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS – Storage Tanks**~~

~~**Emissions Unit Description:**~~

~~**Insignificant Activities**~~

~~(c) Storage Tanks:~~

~~(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved in 2007 for construction, with a maximum capacity of 250,000 gallons.~~

~~(2) One (1) denaturant tank, identified as T002, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 250,000 gallons of denaturant.~~

~~(3) One (1) 200-proof ethanol tank, identified as T003, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.~~

~~(4) One (1) 200-proof ethanol tank, identified as T004, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.~~

~~(5) One (1) denaturant tank, identified as T005, approved in 2007 for construction, with a maximum capacity of 126,900 gallons of natural gasoline.~~

~~(d) One (1) gasoline dispensing operation for plant vehicles, identified as T009, installed in 2008, with a 265 gallon capacity storage tank and an estimated annual throughput of 1,200 gallons per year.~~

~~(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 2-7-5(1)]**~~

~~D.5.1 Volatile Organic Compounds (VOC) [326 IAC 8-4-3]~~

~~(a) Pursuant to 326 IAC 8-4-3(b)(1)(B), storage tanks T001, T002, T003, T004, and T005 shall be maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials.~~

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

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

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

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

~~D.5.2 National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources [40 CFR 63, Subpart VVVVVV]~~

~~In order to render the requirements of the NESHAP for Chemical Manufacturing Area Sources (40 CFR Part 63, Subpart VVVVVV), not applicable, the Permittee shall comply with the following at either T003 and T004:~~

~~Any HAP listed in Table 1 of 40 CFR 63, Subpart VVVVVV, that is generated or produced in the chemical manufacturing process unit (CMPU) and is present in process fluid shall be less than 0.1 percent for carcinogens, as defined by the Occupational Safety and Health Administration at 29 CFR 1910.1200(d)(4), and less than 1.0 percent for noncarcinogens.~~

~~Compliance with this limit, in conjunction with the limit in condition D.2.5 and the concentration of HAPs in process fluids at other locations of the source, shall render the requirements of 40 CFR Part 63, Subpart VVVVVV (National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources) not applicable.~~

~~D.5.3 Volatile Organic Compounds (VOC) [326 IAC 8-4-6]~~

~~In order to render the requirements of 326 IAC 8-4-6 not applicable for the 300 gallon gasoline dispensing operation storage tank, the Permittee shall comply with the following:~~

~~The monthly gasoline throughput from the gallon gasoline dispensing operation storage tank shall be less than 10,000 gallons per month, with compliance determined at the end of each month.~~

~~Compliance with this limit shall render the requirements of 326 IAC 8-4-6 (Gasoline Dispensing Facilities) not applicable.~~

~~D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]~~

~~A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.~~

~~Compliance Determination Requirements~~

~~D.5.5 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]~~

~~In order to demonstrate compliance with Condition D.5.2, and to verify that the Acetaldehyde is present in process fluid at less than 0.1 percent, the Permittee shall perform Acetaldehyde testing of the process fluid from one of the 200-Proof ethanol tanks, identified as T003 or T004, not later than 180 days after the issuance date of Permit No. T169-31191-00068, utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. The Permittee shall alternate the tank to be tested every five (5) years. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source~~

~~Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.~~

~~**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]**~~

~~D.5.6 Record Keeping Requirements~~

~~(a) To document the compliance status with Condition D.5.1, the Permittee shall maintain the following records for tanks T001, T002, T003, T004, and T005:~~

~~(1) The types of volatile petroleum liquid stored;~~

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

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

~~(b) To document the compliance status with Condition D.5.3, the Permittee shall maintain monthly records of the gasoline throughput for the 300 gallon gasoline dispensing operation storage tank.~~

~~(c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the recordkeeping requirements of this requirement.~~

~~D.5.7 Reporting Requirements~~

~~A quarterly summary of the information to document the compliance status with Condition D.5.3 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1(34).~~

~~**SECTION E.1 Standard of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction Commenced After November 7, 2006 [40 CFR Part 60, Subpart VVa][326 IAC 12]**~~

SECTION E.1 NSPS

Emissions Unit Description: ~~**Equipment Leaks**~~

(e) One (1) fermentation process, approved in 2007 for construction **and approved in 2016 for modification**, with a maximum throughput rate of ~~58,500~~**60,000** gallons per hour, controlled by scrubber CE008 and **regenerative** thermal oxidizer **(RTO)** CE009, with emissions exhausted through ~~stack~~ SV009. **During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008.** This process consists of the following:

(1) Five (5) fermenters, identified as EU012 through EU016, approved in 2007 for construction.

(2) One (1) **fermenter, identified as EU047, approved in 2016 for construction.**

(3) One (1) yeast propagation tank, identified as EU017, approved in 2007 for construction.

(~~3~~**4**) One (1) beer well, identified as EU018, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(g) One (1) distillation process, approved in 2007 for construction **and approved in 2016 for modification**, with a maximum ~~throughput~~**input feed** rate of ~~57~~**60,000 gallons of beer per hour and a maximum production rate of 12**,000 gallons of ethanol per hour, controlled by scrubber CE008 and **regenerative** thermal oxidizer **(RTO)** CE009, with emissions exhausted through stack SV009. **During RTO downtime, emissions from the fermentation process are exhausted through RTO bypass stack SV008.** This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved in 2007 for construction.

(2) One (1) rectifier column, identified as EU020, approved in 2007 for construction.

(3) One (1) side stripper, identified as EU021, approved in 2007 for construction.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved in 2007 for construction.

(5) One (1) set of four (4) evaporators, identified as EU023, approved in 2007 for construction.

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

~~(h) One (1) set of four (4) centrifuges, identified as EU024, approved in 2007 for construction, controlled by thermal oxidizer CE009 during normal operation, with emissions exhausted through tack SV009. During wetcake production, emissions from EU024 are exhausted through bypass stack SV017.~~

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

Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

ignificant Activities**:**

~~(g) Two (2) centrifuges~~

(c) Storage Tanks:

(1) One (1) off spec tank for 190-proof ethanol, identified as ~~EU038 and EU039~~**T001**, approved in ~~2012~~**2007** for construction, ~~each~~ with a maximum ~~throughput~~**capacity** of ~~85~~**250,000** gallons ~~per minute (GPM), used to separate corn oil from the syrup system, exhausted to the thermal oxidizer CE009 and stack SV009. During wetcake production, emissions from EU024 are exhausted through bypass stack SV017. [~~**.**

(2) One (1) denaturant tank, identified as T002, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 250,000 gallons of natural gasoline.

(3) One (1) 200-proof ethanol tank, identified as T003, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(4) One (1) 200-proof ethanol tank, identified as T004, approved in 2007 for

construction, approved in 2009 for modification, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol.

(5) One (1) denaturant tank, identified as T005, approved in 2007 for construction, with a maximum capacity of 126,900 gallons of natural gasoline.

Under 40 CFR 60, Subpart **Kb, these units are affected facilities. Under NSPS, Subpart** VVa~~]~~**, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.**

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

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

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

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, **for the emission unit(s) listed above,** except as otherwise specified in 40 CFR Part 60, Subpart VVa.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

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

~~Pursuant to 40 CFR Part 60, Subpart VVa,~~ The Permittee shall comply with the **following** provisions of ~~Standard of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction Commenced After November 7, 2006~~**40 CFR Part 60, Subpart VVa** (included as Attachment B **to the operating permit**), which are incorporated by reference as 326 IAC 12, ~~as specified as follows~~**for the emission unit(s) listed above**:

(1) 40 CFR 60.480a(a), (b), (c), (d), and (f)
(2) 40 CFR 60.481a
(3) 40 CFR 60.482-1a
(4) 40 CFR 60.482-2a
(5) 40 CFR 60.482-3a
(6) 40 CFR 60.482-4a
(7) 40 CFR 60.482-5a
(8) 40 CFR 60.482-6a
(9) 40 CFR 60.482-7a
(10) 40 CFR 60.482-8a
(11) 40 CFR 60.482-9a
(12) 40 CFR 60.482-10a
(13) 40 CFR 60.482-11a
(14) 40 CFR 60.483-1a
(15) 40 CFR 60.483-2a

(16) 40 CFR 60.484a
(17) 40 CFR 60.485a
(18) 40 CFR 60.486a
(19) 40 CFR 60.487a
(20) 40 CFR 60.488a
(21) 40 CFR 60.489a

~~**SECTION E.2 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR Part 60, Subpart Db][326 IAC 12]**~~

SECTION E.2 NSPS

Emissions Unit Description: ~~**Boilers**~~

(j) Two (2) natural gas fired boilers, identified as EU027 and EU028, approved in 2007 for construction, each with a maximum heat input rate of 143 MMBtu/hr each, with emissions exhausting to stacks SV013 and SV014, respectively.

Under 40 CFR, Subpart Db, the two (2) boilers are new steam generating units.

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

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

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

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

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

(b) Pursuant to 40 CFR ~~Part 60, Subpart Db~~**.4**, the Permittee shall ~~comply with the provisions of Standard of Performance for~~ **submit all required notifications and reports to:**

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

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

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Db (included as Attachment C **to the operating permit**), which are incorporated by reference as 326 IAC 12, for ~~boilers EU027 and EU028 as specified as follows~~**the emission unit(s) listed above**:

(1) 40 CFR 60.40b(a), (g), and (j)
(2) 40 CFR 60.41b
(3) 40 CFR 60.44b(a), (h), (i), (l)(2), and (l)(3)
(4) 40 CFR 60.46b(a), (c), (e), (e)(1), (e)(4), and (g)
(5) 40 CFR 60.48b(b), (b)(1), (c), (d), (e)(2)(i), (f), and (g)
(6) 40 CFR 60.49(a)(1), (a)(3), (b). (c), (d), (g), (h), (h)(2)(ii), (h)(4), (i), (o), (v), and (w)

~~**SECTION E.3 Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) [40 CFR Part 60, Subpart Kb][326 IAC 12]**~~

SECTION E.3 NSPS

Emissions Unit Description:

ignificant Activities:

(c) Storage Tanks**:**

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

(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved in 2007 for construction, with a maximum capacity of 250,000 gallons. ~~[40 CFR 60, Subpart Kb]~~

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

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

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

(5) One (1) denaturant tank, identified as T005, approved in 2007 for construction, with a maximum capacity of 126,900 gallons of natural gasoline. ~~[326 IAC 8-9][40 CFR 60, Subpart Kb]~~

Under 40 CFR 60, Subpart Kb, ~~storage tanks T001 through T005~~**these units** are ~~new volatile organic liquid storage tanks~~**affected facilities. Under NSPS, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility**.

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

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

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

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

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

E.3.2 Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) [**for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 NSPS [326 IAC 12][**40 CFR Part 60, Subpart Kb][~~326 IAC 12~~]

~~Pursuant to 40 CFR Part 60, Subpart Kb,~~ The Permittee shall comply with the **following** provisions of ~~Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)~~**40 CFR Part 60, Subpart Kb** (included as Attachment D **to the operating permit**), which are incorporated by reference as 326 IAC 12, for ~~tanks T001, T002, T003, T004, and T005 as follows~~**the emission unit(s) listed above**:

(1) 40 CFR 60.110b(a) and (e)
(2) 40 CFR 60.111b
(3) 40 CFR 60.112b(a)(1)
(4) 40 CFR 60.113b ~~and~~ (a)
(5) 40 CFR 60.115b ~~and~~ (a)
(6) 40 CFR 60.116b(a), (b), (c), (d), and (e)
(7) 40 CFR 60.117b

~~**SECTION E.4 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII][326 IAC 12]**~~

SECTION E.4 NSPS

Emissions Unit Description: ~~**Diesel Generator**~~

(o) One (1) diesel generator, identified as EU037, approved in 2007 for construction, with a maximum power output rate of 2,640 HP, and exhausting to stack SV015.

Under NSPS, Subpart IIII, this unit is an affected source.
Under NESHAP, Subpart ZZZZ, this unit is an affected source.

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

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

E.4.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1**,** for ~~emergency generator EU037~~**the emission unit(s) listed above**, except as otherwise specified in 40 CFR Part 60, Subpart IIII.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue

MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.4.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines ~~[~~**NSPS [326 IAC 12][**40 CFR Part 60, Subpart IIII~~][326 IAC 12~~]

~~Pursuant to 40 CFR Part 60, Subpart IIII,~~ The Permittee shall comply with the **following** provisions of ~~Standards of Performance for Stationary Compression Ignition Internal Combustion Engines~~**40 CFR Part 60, Subpart IIII** (included as Attachment E **to the operating permit**), which are incorporated by reference as 326 IAC 12, for ~~emergency generator EU037 as follows~~**the emission unit(s) listed above**:

(1) 40 CFR 60.4200 (a)(2)(i) and (c)
(2) 40 CFR 60.4205 (b)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207(a), (b), and (c)
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211 (a), (c), and (e)
(8) 40 CFR 60.4212
(9) 40 CFR 60.4214 (b) and (c)
(10) 40 CFR 60.4218
(11) 40 CFR 60.4219
(12) Table 1 to 40 CFR 60, Subpart IIII
(13) Table 8 to 40 CFR 60, Subpart IIII

~~**SECTION E.5 National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ][326 IAC 20-82]**~~

SECTION E.5 NESHAP

Emissions Unit Description: ~~**Diesel Generator**~~

(o) One (1) diesel generator, identified as EU037, approved in 2007 for construction, with a maximum power output rate of 2,640 ~~horsepower~~**HP**, and exhausting to stack SV015.

Under NSPS, Subpart IIII, this unit is an affected source.
Under NESHAP, Subpart ZZZZ, this unit is an affected source.

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

National ~~**Emissions**~~**Emission** Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.5.1 General Provisions Relating to National ~~Emissions~~**Emission** Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.~~340(b),~~**1** the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-~~82~~**1**, for the ~~reciprocating internal combustion engines~~**emission unit(s) listed above, except** as **otherwise** specified in ~~Table 8 of~~ 40 CFR Part ~~63, Subpart ZZZZ in accordance with the schedule in 40 CFR~~ 63, Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management

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

E.5.2 National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines **NESHAP** [40 CFR Part 63, Subpart ZZZZ][326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment F **to the operating permit**), which are incorporated by reference as 326 IAC 20-82**,** for the ~~reciprocating internal combustion engine~~**emission unit(s) listed above**:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585, (a), (c), and (d)
(3) 40 CFR 63.6590, (a), (a)(2)(iii), and (c)(1)
(4) 40 CFR 63.6595(a)(6), (b)
(5) 40 CFR 63.6665
(6) 40 CFR 636.6670
(7) 40 CFR 63.6675

~~**SECTION E.6 National Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities [40 CFR Part 63, Subpart BBBBBB]**~~

~~**Emission Unit Description [326 IAC 2-7-5(14)]:**~~

~~(n) One (1) ethanol and E85 loading system, identified as EU036, consisting of two (2) racks for trucks and two (2) racks for railcars, approved for construction in 2006 and modified in 2007, with a maximum throughput rate of 39,000 gallons per hour when loading trucks, and 144,000 gallons per hour when loading railcars. This unit is controlled by enclosed flare CE015, which is fueled by natural gas and has a pilot gas flare heat input capacity of 54,000 Btu/hr, and exhausting through stack SV016.~~

~~**Insignificant Activities**~~
~~(c)(2) One (1) denaturant tank, identified as T002, approved in 2007 for construction, approved in 2009 for modification, with a maximum capacity of 250,000 gallons of denaturant.~~

~~(c)(5) One (1) denaturant tank, identified as T005, approved for construction in 2006, with a maximum capacity of 126,900 gallons of natural gasoline.~~

~~(d) One (1) gasoline dispensing operation for plant vehicles, identified as T009, installed in 2008, with a 265 gallon capacity storage tank and an estimated annual throughput of 1,200 gallons per year.~~

~~(e) Vapor collection-equipped gasoline cargo tanks.~~

~~Under the NESHAP for Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (Area Sources) (40 CFR 63, Subpart BBBBBB) the ethanol loading system (EU036), the denaturant tanks (T002 and T005), and the associated vapor collection-equipped gasoline cargo tanks are affected facilities.~~

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

~~**National Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]**~~

~~E.6.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]~~

~~Pursuant to 40 CFR 63.11098, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, as specified in Table 3 to 40 CFR 63, Subpart BBBBBB, in accordance with schedule in 40 CFR 63, Subpart BBBBBB, for the ethanol loading system (EU036), the denaturant tanks (T002 and T005), and the associated vapor collection-equipped gasoline cargo tanks.~~

~~E.6.2 National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (Area Sources) [40 CFR Part, Subpart BBBBBB]~~

~~The Permittee shall comply with the following provisions of 40 CFR 63, Subpart BBBBBB (National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (Area Sources)), which are included as Attachment G:~~

~~(a) for the ethanol loading system (EU036), the denaturant tanks (T002 and T005), and the associated vapor collection-equipped gasoline cargo tanks, no later than January 10, 2008:~~

~~(1) 40 CFR 63.11080~~
~~(2) 40 CFR 63.11081 (a)(1), (b), (f), (g), (h), (i), and (j)~~
~~(3) 40 CFR 63.11082(a) and (b)~~
~~(4) 40 CFR 63.11083(a)(1)~~
~~(5) 40 CFR 63.11085~~
~~(6) 40 CFR 63.11087(f)~~
~~(7) 40 CFR 63.11088~~
~~(8) 40 CFR 63.11089~~
~~(9) 40 CFR 63.11092(a)(4), (b)(2), (f), (g)~~
~~(10) 40 CFR 63.11093~~
~~(11) 40 CFR 63.11094~~
~~(12) 40 CFR 63.11095~~
~~(13) 40 CFR 63.11098~~
~~(14) 40 CFR 63.11099~~
~~(15) 40 CFR 63.11100~~
~~(16) Table 1 to Subpart BBBBBB of Part 63, Item 2(b) and (d)~~
~~(17) Table 2 to Subpart BBBBBB of Part 63, Item 2~~
~~(18) Table 3 to Subpart BBBBBB of Part 63~~

~~(b) for the gasoline dispensing operation for plant vehicles (T009):~~

~~(1) 40 CFR 63.11080~~
~~(2) 40 CFR 63.11081(c)~~
~~(3) 40 CFR 63.11082(a) and (b)~~
~~(4) 40 CFR 63.11100~~

~~*SECTION E.7 National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities [40 CFR Part 63, Subpart CCCCCC]*~~

SECTION E.6 NESHAP

~~Emission~~Emissions Unit Description **~~[326 IAC 2-7-5(14)]~~:**

Insignificant Activities:

(d) One (1) gasoline dispensing operation for plant vehicles, identified as T009, installed in 2008, with a 265 gallon capacity storage tank and an estimated annual throughput of ~~1~~**2**,200 gallons per year.

~~(e) Vapor collection-equipped gasoline cargo tanks.~~

Under 40 CFR 63, Subpart CCCCCC ~~the gasoline fuel tank (T009) and the associated vapor collection-equipped gasoline cargo tanks are the~~**, this is an** affected ~~facility~~**unit**.

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

National **~~Emissions~~Emission** Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.~~7~~**6**.1 General Provisions Relating to National ~~Emissions~~**Emission** Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.~~11130,~~**1** the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, ~~as~~**which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise** specified in ~~Table 3 to~~ 40 CFR **Part** 63, Subpart CCCCCC~~, in accordance with schedule in~~**.**

(b) **Pursuant to** 40 CFR 63~~, Subpart CCCCCC, for~~**.10,** the ~~gasoline fuel tank (T009)~~**Permittee shall submit all required notifications** and ~~the associated vapor collection-equipped gasoline cargo tanks.~~**reports to:**

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

E.~~7~~**6**.2 National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities **NESHAP** [40 CFR Part **63**, Subpart CCCCCC]

The Permittee shall comply with the following provisions of 40 CFR **Part** 63, Subpart CCCCCC (~~National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities), which are~~ included as Attachment H~~, for~~ **to** the ~~gasoline fuel tank (T009) and~~ **operating permit), for** the ~~associated vapor collection-equipped gasoline cargo tanks, no later than January 10, 2008~~**emission unit(s) listed above**:

(1) 40 CFR 63.11110
(2) 40 CFR 63.11111 (a), (b), (e), (f), (h), (i), (j), and (k)
(3) 40 CFR 63.11112(a) and (b)
(4) 40 CFR 63.11113(a~~), (a)(1), (d), (d~~)(1~~), (e), and (e)(1)~~**)**
(5) 40 CFR 63.11115
(6) 40 CFR 63.11116
(7) 40 CFR 63.11125(d)
(8) 40 CFR 63.11126(b)
(9) 40 CFR 63.11130
(10) 40 CFR 63.11131
(11) 40 CFR 63.11132
(12) Table 3 to **40 CFR 63** Subpart CCCCCC ~~of Part 63~~

Source Name: POET Biorefining - North Manchester
Source Address: 868 East 800 North, North Manchester, Indiana 46962
Part 70 Permit No.: T169-31191-00068
Facility: Ethanol Loading Rack EU036
Parameter: Denatured Ethanol Loadout
Limit: Less than ~~83.15~~**86.00** MMgal per twelve (12) consecutive month period with compliance determined at the end of each month.

****

~~**OFFICE OF AIR QUALITY**~~
~~**COMPLIANCE AND ENFORCEMENT BRANCH**~~

~~**Part 70 Quarterly Report**~~

~~Source Name: POET Biorefining - North Manchester~~
~~Source Address: 868 East 800 North, North Manchester, Indiana 46962~~
~~Part 70 Permit No.: T169-31191-00068~~
~~Facility: Gasoline Dispensing Operation T009~~
~~Parameter: Monthly Gasoline Throughput~~
~~Limit: Less than 10,000 gallons per month, with compliance determined at the end of each month.~~

~~**QUARTER: YEAR:**~~

~~Month~~	~~Gasoline Throughput for This Month (gallons)~~

~~No deviation occurred in this quarter.~~
~~Deviations occurred in this quarter.~~
~~Deviation has been reported on:~~

~~Submitted By:~~
~~Title/Position:~~
~~Signature:~~
~~Date:~~
~~Phone:~~

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 169-37113-00068 and Significant Permit Modification No. 169-37123-00068. The staff recommend to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Thomas Olmstead at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-9664 or toll free at 1-800-451-6027 extension 3-9664.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A: Emission Calculations
PTE Summary

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

Potential to Emit after Issuance (tons/yr)									
Emission Point	Description	PM ton/yr	PM_{10} ton/yr	$PM_{2.5}$ ton/yr	NO_X ton/yr	SO_2 ton/yr	VOC ton/yr	CO ton/yr	GHG (CO_2e) ton/yr
Point Source Emissions									
SV001	Grain Receiving (EU001), Conveyors (EU002), and Grain Storage Bins (EU003)	**23.98**	**25.22**	**25.70**					
SV002	Corn Transfer Conveyor / Scalper (EU004, Surge Bin (EU005)	**1.76**	**1.85**	7.66					
SV003	Hammermill #1 (EU006)	**7.23**	**7.60**	**7.75**					
SV004	Hammermill #2 (EU007)	**7.23**	**7.60**	**7.75**					
SV005	Hammermill #3 (EU008)	**7.23**	**7.60**	**7.75**					
SV006	Hammermill #4 (EU009)	**7.23**	**7.60**	**7.75**					
SV007	Hammermill #5 (EU010)	**7.23**	**7.60**	**7.75**					
SV008	Fermentation Scrubber / RTO Bypass (EU011-EU023)						**21.05**		
SV009	RTO Stack & DDGS Dryers (EU025 & EU026)	**116.68**	**130.09**	**124.39**	90.18	10.63	**163.09**	54.11	77,702
SV010	DDGS Fluid Bed Cooler (EU029)	**8.16**	**8.16**	**1.39**			**0.57**		
SV011	DDGS Silo Loading (EU030)	**2.47**	**2.60**	10.21					
SV012	DDGS Silo Bypass (EU031)	**2.64**	**2.78**	11.49					
SV018	DDGS Loadout Operations (EU032 - EU035)	**5.99**	**6.31**	**6.31**					
SV016	Ethanol Loading Rack (EU036)						**3.09**		
Other Miscellaneous Units (Not Specifically Limited in Permit)									
SV013	Boiler #1 (EU027)	1.17	4.67	4.67	18.42	0.37	3.38	12.28	73,839
SV014	Boiler #2 (EU028)	1.17	4.67	4.67	18.42	0.37	3.38	12.28	73,839
CE015	Enclosed Flare	4.4E-04	1.8E-03	1.8E-03	21.09	1.4E-04	1.3E-03	53.00	28.51
EU024	Set of four (4) Centrifuges***						0.60		
EU038	Corn Oil Centrifuge						5.1E-03		
EU039	Corn Oil Centrifuge						3.0E-03		
SV015	Diesel Generator (EU037)	0.46	0.26	0.26	8.58	2.67	0.47	3.63	159.51
Total Emissions for PSD & Part 70		**200.63**	**224.61**	**235.50**	**156.69**	**14.04**	**195.64**	**135.30**	**225,567**

***The centrifuges are normally controlled by the RTO. Emissions are included in the RTO Stack. During RTO downtime, emissions are uncontrolled and shown here.

Fugitive Emissions									
F001	Uncaptured Grain Receiving (Fugitive)	29.25	8.46	1.44					
F002	DDGS Loadout Spout (Fugitive)	11.65	3.93	0.67					
F003	Truck Traffic	6.71	1.34	0.33					
F004	Equipment Leaks						7.07		
F005	Cooling Tower	8.22	8.22	8.22					
T001	190 Proof Ethanol Shift Tank						0.35		
T002	Denaturant Storage Tank						1.41		
T003	200 Proof Ethanol Storage Tank						0.31		
T004	200 Proof Ethanol Storage Tank						0.31		
T005	Denaturant Storage Tank						0.84		
T006	Diesel Storage Tank						0.17		
T009	Vehicle Refueling Operations (Gasoline)						0.17		
EU040	Corn Oil / Defatted Syrup Process Tank						0.0051		
EU041	Corn Oil / Defatted Syrup Process Tank						0.0030		
EU042	Corn Oil / Defatted Syrup Process Tank						0.0019		
EU043	Corn Oil / Defatted Syrup Process Tank						0.0013		
EU044	Corn Oil / Defatted Syrup Process Tank						0.00057		
EU045	Corn Oil / Defatted Syrup Storage Tank						0.00017		
EU046	Corn Oil / Defatted Syrup Storage Tank						0.00017		
Total Fugitive Emissions		**55.84**	**21.95**	**10.66**	**0.00**	**0.00**	**10.65**	**0.00**	**0.00**

Total Emissions	**256.47**	**246.56**	**246.16**	**156.69**	**14.04**	**206.29**	**135.30**	**225567.34**

EPA published a final rule in the Federal Register on May 1, 2007, that excluded ethanol production facilities that produce ethanol through natural fermentation, from the major source category "Chemical Process Plants". Therefore, the fugitive emissions from ethanol production facilities are no longer counted toward determination of PSD, Emission Offset, and Part 70 Permit applicability.

Note: The shaded cells indicate where limits are included.

Appendix A: Emission Calculations
PTE Limited

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

Potential to Emit after Issuance (tons/yr)

Emission Point	Description	PM		PM_{10}		$PM_{2.5}$		NO_X		SO_2		VOC		CO		GHG (CO_2e)	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Point Source Emissions																	
SV001	Grain Receiving (EU001), Conveyors (EU002), and Grain Storage Bins (EU003)	5.47	**23.98**	5.76	**25.22**	5.87	**25.70**										
SV002	Corn Transfer Conveyor / Scalper (EU004, Surge Bin (EU005)	0.40	**1.76**	0.42	**1.85**	1.75	7.66										
SV003	Hammermill #1 (EU006)	1.65	**7.23**	1.74	**7.60**	1.77	**7.75**										
SV004	Hammermill #2 (EU007)	1.65	**7.23**	1.74	**7.60**	1.77	**7.75**										
SV005	Hammermill #3 (EU008)	1.65	**7.23**	1.74	**7.60**	1.77	**7.75**										
SV006	Hammermill #4 (EU009)	1.65	**7.23**	1.74	**7.60**	1.77	**7.75**										
SV007	Hammermill #5 (EU010)	1.65	**7.23**	1.74	**7.60**	1.77	**7.75**										
SV008	Fermentation Scrubber / RTO Bypass (EU011-EU023)											84.21	**21.05**				
SV009	RTO Stack & DDGS Dryers (EU025 & EU026)	26.64	**116.68**	29.70	**130.09**	28.40	**124.39**	20.59	90.18	2.43	10.63	39.49	**163.09**	12.35	54.11	17,740	77,702
SV010	DDGS Fluid Bed Cooler (EU029)	81.60	**8.16**	81.60	**8.16**	13.87	**1.39**					5.69	**0.57**				
SV011	DDGS Silo Loading (EU030)	0.56	**2.47**	0.59	**2.60**	2.33	10.21										
SV012	DDGS Silo Bypass (EU031)	0.60	**2.64**	0.63	**2.78**	2.62	11.49										
SV018	DDGS Loadout Operations (EU032 - EU035)	1.37	**5.99**	1.44	**6.31**	1.44	**6.31**										
SV016	Ethanol Loading Rack (EU036)											4.17	**3.09**				
Other Miscellaneous Units (Not Specifically Limited in Permit)																	
SV013	Boiler #1 (EU027)	0.27	1.17	1.07	4.67	1.07	4.67	4.21	18.42	0.08	0.37	0.77	3.38	2.80	12.28	16,858	73,839
SV014	Boiler #2 (EU028)	0.27	1.17	1.07	4.67	1.07	4.67	4.21	18.42	0.08	0.37	0.77	3.38	2.80	12.28	16,858	73,839
CE015	Enclosed Flare	1.0E-04	4.4E-04	4.0E-04	1.8E-03	4.0E-04	1.8E-03	4.81	21.09	3.2E-05	1.4E-04	2.9E-04	1.3E-03	12.10	53.00	6.51	28.51
EU024	Set of four (4) Centrifuges***												0.60				
EU038	Corn Oil Centrifuge												5.1E-03				
EU039	Corn Oil Centrifuge												3.0E-03				
SV015	Diesel Generator (EU037)	0.11	0.46	0.06	0.26	0.06	0.26	1.96	8.58	0.61	2.67	0.11	0.47	0.83	3.63	36.42	159.51
Total Emissions for PSD & Part 70			**200.63**		**224.61**		**235.50**		**156.69**		**14.04**		**195.64**		**135.30**		**225,567**

***The centrifuges are normally controlled by the RTO. Emissions are included in the RTO Stack. During RTO downtime, emissions are uncontrolled and shown here.

Fugitive Emissions																	
F001	Uncaptured Grain Receiving (Fugitive)	6.68	29.25	1.93	8.46	0.33	1.44										
F002	DDGS Loadout Spout (Fugitive)	2.66	11.65	0.90	3.93	0.15	0.67										
F003	Truck Traffic	1.53	6.71	0.31	1.34	0.08	0.33										
F004	Equipment Leaks											1.61	7.07				
F005	Cooling Tower	1.88	8.22	1.88	8.22	1.88	8.22										
T001	190 Proof Ethanol Shift Tank											0.08	0.35				
T002	Denaturant Storage Tank											0.32	1.41				
T003	200 Proof Ethanol Storage Tank											0.07	0.31				
T004	200 Proof Ethanol Storage Tank											0.07	0.31				
T005	Denaturant Storage Tank											0.19	0.84				
T006	Diesel Storage Tank											0.04	0.17				
T009	Vehicle Refueling Operations (Gasoline)											0.04	0.17				
EU040	Corn Oil / Defatted Syrup Process Tank											1.2E-03	0.0051				
EU041	Corn Oil / Defatted Syrup Process Tank											6.9E-04	0.0030				
EU042	Corn Oil / Defatted Syrup Process Tank											4.3E-04	0.0019				
EU043	Corn Oil / Defatted Syrup Process Tank											3.0E-04	0.0013				
EU044	Corn Oil / Defatted Syrup Process Tank											1.3E-04	0.00057				
EU045	Corn Oil / Defatted Syrup Storage Tank											3.9E-05	0.00017				
EU046	Corn Oil / Defatted Syrup Storage Tank											3.9E-05	0.00017				
Total Fugitive Emissions			**55.84**	**5.01**	**21.95**	**2.43**	**10.66**	**0.00**	**0.00**	**0.00**	**0.00**	**2.43**	**10.65**	**0.00**	**0.00**	**0.00**	**0.00**

Total Emissions			**256.47**	**5.01**	**246.56**	**2.43**	**246.16**	**0.00**	**156.69**	**0.00**	**14.04**	**2.43**	**206.29**	**0.00**	**135.30**	**0.00**	**225567.34**

EPA published a final rule in the Federal Register on May 1, 2007, that excluded ethanol production facilities that produce ethanol through natural fermentation, from the major source category "Chemical Process Plants". Therefore, the fugitive emissions from ethanol production facilities are no longer counted toward determination of PSD, Emission Offset, and Part 70 Permit applicability.

Note: The shaded cells indicate where limits are included.

Appendix A: Emission Calculations
PTE Summary

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

Uncontrolled Potential to Emit (tons/yr)

Emission Point	Description	PM		PM_{10}		$PM_{2.5}$		NO_x		SO_2		VOC		CO		GHG (CO_2e)	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Point Source Emissions																	
SV001	Grain Receiving (EU001), Conveyors (EU002), and Grain Storage Bins (EU003)	136.11	596.18	136.11	596.18	23.14	101.35										
SV002	Corn Transfer Conveyor / Scalper (EU004, Surge Bin (EU005)	10.29	45.05	10.29	45.05	1.75	7.66										
SV003	Hammermill #1 (EU006)	41.14	180.21	41.14	180.21	6.99	30.63										
SV004	Hammermill #2 (EU007)	41.14	180.21	41.14	180.21	6.99	30.63										
SV005	Hammermill #3 (EU008)	41.14	180.21	41.14	180.21	6.99	30.63										
SV006	Hammermill #4 (EU009)	41.14	180.21	41.14	180.21	6.99	30.63										
SV007	Hammermill #5 (EU010)	41.14	180.21	41.14	180.21	6.99	30.63										
SV008	Fermentation Scrubber / RTO Bypass (EU011-EU023)											941.11	4,122				
SV009	RTO Stack & DDGS Dryers (EU025 & EU026)	85.99	376.65	85.99	376.65	85.99	376.65	20.59	90.18	4.77	10.63	674.31	2,953	12.35	54.11	17,740	77,702
SV010	DDGS Fluid Bed Cooler (EU029)	81.60	357.41	81.60	357.41	13.87	60.76					5.69	24.90				
SV011	DDGS Silo Loading (EU030)	13.71	60.07	13.71	60.07	2.33	10.21										
SV012	DDGS Silo Bypass (EU031)	15.43	67.58	15.43	67.58	2.62	11.49										
SV018	DDGS Loadout Operations (EU032 - EU035)	34.29	150.17	34.29	150.17	5.83	25.53										
SV016	Ethanol Loading Rack (EU036)											208.51	913.26				
CE015	Enclosed Flare	1.01E-04	4.4E-04	4.0E-04	1.8E-03	4.0E-04	1.8E-03	4.81	21.09	3.18E-05	1.4E-04	2.91E-04	1.28E-03	12.10	53.00	6.51	28.51
SV013	Boiler #1 (EU027)	0.27	1.17	1.07	4.67	1.07	4.67	4.21	18.42	0.08	0.37	0.77	3.38	2.80	12.28	16,858	73,839
SV014	Boiler #2 (EU028)	0.27	1.17	1.07	4.67	1.07	4.67	4.21	18.42	0.08	0.37	0.77	3.38	2.80	12.28	16,858	73,839
Other Miscellaneous Units (Not Specifically Limited in Permit)																	
EU038	Corn Oil Centrifuge											1.16E-03	5.1E-03				
EU039	Corn Oil Centrifuge											6.87E-04	3.0E-03				
SV015	Diesel Generator (EU037)	0.11	0.46	0.06	0.26	0.06	0.26	1.96	8.58	0.61	2.67	0.11	0.47	0.83	3.63	3,190	159.51
Total Point Sources (Sub-Total; non-fugitive)			**2,557**		**2,564**		**756.43**		**156.69**		**14.04**		**8,021**		**135.30**		**225,567**
Fugitive Emissions																	
F001	Uncaptured Grain Receiving (Fugitive)	6.68	29.25	1.93	8.46	0.33	1.44										
F002	DDGS Loadout Spout (Fugitive)	2.66	11.65	0.90	3.93	0.15	0.67										
F003	Truck Traffic	1.53	6.71	0.31	1.34	0.08	0.33										
F004	Equipment Leaks											20.50	89.81				
F005	Cooling Tower	1.88	8.22	1.88	8.22	1.88	8.22										
T001	190 Proof Ethanol Shift Tank											0.08	0.35				
T002	Denaturant Storage Tank											0.32	1.41				
T003	200 Proof Ethanol Storage Tank											0.07	0.31				
T004	200 Proof Ethanol Storage Tank											0.07	0.31				
T005	Denaturant Storage Tank											0.19	0.84				
T006	Diesel Storage Tank											3.94E-02	0.17				
T009	Vehicle Refueling Operations (Gasoline)											3.94E-02	0.17				
EU040	Corn Oil / Defatted Syrup Process Tank											1.16E-03	5.1E-03				
EU041	Corn Oil / Defatted Syrup Process Tank											6.91E-04	3.0E-03				
EU042	Corn Oil / Defatted Syrup Process Tank											4.32E-04	1.9E-03				
EU043	Corn Oil / Defatted Syrup Process Tank											2.96E-04	1.3E-03				
EU044	Corn Oil / Defatted Syrup Process Tank											1.29E-04	5.7E-04				
EU045	Corn Oil / Defatted Syrup Storage Tank											3.88E-05	1.7E-04				
EU046	Corn Oil / Defatted Syrup Storage Tank											3.88E-05	1.7E-04				
Total Fugitive Emissions			**55.84**		**21.95**		**10.66**						**93.39**				
Total Emissions			**2,613**		**2,586**		**767.08**		**156.69**		**14.04**		**8,114**		**135.30**		**225,567**

Appendix A: Emission Calculations
PTE Summary

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

Potential to Emit after Control (tons/yr)

Emission Point	Description	PM		PM_{10}		$PM_{2.5}$		NO_X		SO_2		VOC		CO		GHG (CO_2e)	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Point Source Emissions																	
SV001	Grain Receiving (EU001), Conveyors (EU002), and Grain Storage Bins (EU003)	1.36	5.96	1.36	5.96	0.23	1.01										
SV002	Corn Transfer Conveyor / Scalper (EU004, Surge Bin (EU005)	0.10	0.45	0.10	0.45	0.02	0.08										
SV003	Hammermill #1 (EU006)	0.41	1.80	0.41	1.80	0.07	0.31										
SV004	Hammermill #2 (EU007)	0.41	1.80	0.41	1.80	0.07	0.31										
SV005	Hammermill #3 (EU008)	0.41	1.80	0.41	1.80	0.07	0.31										
SV006	Hammermill #4 (EU009)	0.41	1.80	0.41	1.80	0.07	0.31										
SV007	Hammermill #5 (EU010)	0.41	1.80	0.41	1.80	0.07	0.31										
SV008	Fermentation Scrubber / RTO Bypass (EU011-EU023)											18.82	4.71				
SV009	RTO Stack & DDGS Dryers (EU025 & EU026)	8.60	37.67	8.68	38.03	8.68	38.03	20.59	90.18	2.43	10.63	13.49	59.07	1.24	5.41	17,740	77,702
SV010	DDGS Fluid Bed Cooler (EU029)	0.82	8.16	0.82	8.16	0.14	1.39					5.69	0.57				
SV011	DDGS Silo Loading (EU030)	0.14	0.60	0.14	0.60	0.02	0.10										
SV012	DDGS Silo Bypass (EU031)	0.15	0.68	0.15	0.68	0.03	0.11										
SV018	DDGS Loadout Operations (EU032 - EU035)	0.34	1.50	0.34	1.50	0.06	0.26										
SV016	Ethanol Loading Rack (EU036)											4.17	18.27				
CE015	Enclosed Flare	1.01E-04	4.4E-04	4.0E-04	1.8E-03	4.0E-04	1.8E-03	0.33	1.44	3.18E-05	1.4E-04	2.91E-04	1.28E-03	0.82	3.61	6.51	28.51
SV013	Boiler #1 (EU027)	0.27	1.17	1.07	4.67	1.07	4.67	4.21	18.42	0.08	0.37	0.77	3.38	2.80	12.28	16,858	73,839
SV014	Boiler #2 (EU028)	0.27	1.17	1.07	4.67	1.07	4.67			0.08	0.37	0.77	3.38	2.80	12.28	16,858	73,839
Other Miscellaneous Units (Not Specifically Limited in Permit)																	
EU038	Corn Oil Centrifuge											1.16E-03	5.1E-03				
EU039	Corn Oil Centrifuge											6.87E-04	3.0E-03				
SV015	Diesel Generator (EU037)	0.11	0.46	0.06	0.26	0.06	0.26	1.96	8.58	0.61	2.67	0.11	0.47	0.83	3.63	3,190	159.51
Total Point Sources (Sub-Total; non-fugitive)			**66.82**		**73.99**		**52.11**		**118.61**		**14.04**		**89.84**		**37.21**		**225,567**
Fugitive Emissions																	
F001	Uncaptured Grain Receiving (Fugitive)	6.68	29.25	1.93	8.46	0.33	1.44										
F002	DDGS Loadout Spout (Fugitive)	2.66	11.65	0.90	3.93	0.15	0.67										
F003	Truck Traffic	1.53	6.71	0.31	1.34	0.08	0.33										
F004	Equipment Leaks											1.61	7.07				
F005	Cooling Tower	1.88	8.22	1.88	8.22	1.88	8.22										
T001	190 Proof Ethanol Shift Tank											0.08	0.35				
T002	Denaturant Storage Tank											0.32	1.41				
T003	200 Proof Ethanol Storage Tank											0.07	0.31				
T004	200 Proof Ethanol Storage Tank											0.07	0.31				
T005	Denaturant Storage Tank											0.19	0.84				
T006	Diesel Storage Tank											3.94E-02	0.17				
T009	Vehicle Refueling Operations (Gasoline)											3.94E-02	0.17				
EU040	Corn Oil / Defatted Syrup Process Tank											1.16E-03	5.1E-03				
EU041	Corn Oil / Defatted Syrup Process Tank											6.91E-04	3.0E-03				
EU042	Corn Oil / Defatted Syrup Process Tank											4.32E-04	1.9E-03				
EU043	Corn Oil / Defatted Syrup Process Tank											2.96E-04	1.3E-03				
EU044	Corn Oil / Defatted Syrup Process Tank											1.29E-04	5.7E-04				
EU045	Corn Oil / Defatted Syrup Storage Tank											3.88E-05	1.7E-04				
EU046	Corn Oil / Defatted Syrup Storage Tank											3.88E-05	1.7E-04				
Total Fugitive Emissions			**55.84**		**21.95**		**10.66**						**10.65**				
Total Emissions			**122.66**		**95.95**		**62.77**		**118.61**		**14.04**		**100.49**		**37.21**		**225,567**

Appendix A: Emission Calculations
HAP Summary

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

Uncontrolled Potential to Emit (tons/yr)																			
	CAS	DDGS Cooler		Scrubber/ RTO Bypass		RTO Stack - Processing		NG Boilers		E85 Loadout		Flare Pilot Flame		Diesel Generator		Equipment Leaks		Total	
HAP Pollutant		(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	**(ton/yr)**
Organic HAP																			
Acetaldehyde	75-07-0	1.61	7.03	5.60	24.53	40.95	179.37							2.66E-05	1.16E-04	3.23E-04	1.41E-03	48.16	**210.93**
Acrolein	107-02-8	0.18	0.79			2.39	10.48							8.31E-06	3.64E-05			2.57	**11.26**
Benzene	71-43-2					3.09E-04	1.35E-03	5.89E-04	2.58E-03	0.54	2.37	1.11E-07	4.87E-07	8.19E-04	3.59E-03	4.03E-03	1.77E-02	0.55	**2.40**
Carbon Disulfide	75-15-0															3.23E-05	1.41E-04	3.23E-05	**1.41E-04**
Cumene	98-82-8															1.61E-03	7.07E-03	1.61E-03	**0.01**
Dichlorobenzene	106-46-7							3.36E-04	1.47E-03			6.35E-08	2.78E-07					3.37E-04	**1.47E-03**
Ethylbenzene	100-41-4															8.07E-05	3.53E-04	8.07E-05	**3.53E-04**
Formaldehyde	50-00-0	0.20	0.86	0.04	0.18	0.27	1.20	2.10E-02	9.21E-02			3.97E-06	1.74E-05	8.32E-05	3.65E-04			0.53	**2.33**
Hexane	110-54-3					0.26	1.16	0.50	2.21	20.04	87.76	9.53E-05	4.17E-04			8.07E-02	3.53E-01	20.89	**91.49**
Methanol	67-56-1	0.24	1.05	0.04	0.18	8.01	35.09											8.29	**36.31**
Naphthalene	91-20-3					8.97E-05	3.93E-04							2.24E-04	9.79E-04			3.13E-04	**1.37E-03**
Proprionaldehyde	123-38-6			0.04	0.18													0.04	**0.18**
Toluene	108-88-3					5.00E-04	2.19E-03	9.53E-04	4.18E-03	0.38	1.64	1.80E-07	7.88E-07	2.96E-04	1.30E-03	3.23E-04	1.41E-03	0.38	**1.65**
Xylenes	1330-20-7													2.04E-04	8.92E-04	8.07E-03	3.53E-02	0.01	**0.04**
Inorganic HAP																			
Arsenic	7440-38-2					2.94E-05	1.29E-04											2.94E-05	**1.29E-04**
Beryllium	7440-41-7					1.76E-06	7.73E-06											1.76E-06	**7.73E-06**
Cadmium	7440-43-7					1.62E-04	7.09E-04	3.08E-04	1.35E-03			5.82E-08	2.55E-07					4.70E-04	**2.06E-03**
Chromium	7440-47-3					2.06E-04	9.02E-04	3.93E-04	1.72E-03			7.41E-08	3.25E-07					5.99E-04	**2.62E-03**
Cobalt	7440-48-4					1.24E-05	5.41E-05											1.24E-05	**5.41E-05**
Lead	TRI N420					7.35E-05	3.22E-04	1.40E-04	6.14E-04			2.65E-08	1.16E-07					2.14E-04	**9.36E-04**
Manganese	7439-96-5					5.59E-05	2.45E-04	1.07E-04	4.67E-04			2.01E-08	8.81E-08					1.62E-04	**7.12E-04**
Mercury	7439-97-6					3.82E-05	1.67E-04											3.82E-05	**1.67E-04**
Nickel	7440-02-0					3.09E-04	1.35E-03	5.89E-04	2.58E-03			1.11E-07	4.87E-07					8.98E-04	**3.93E-03**
Selenium	7782-49-2					3.53E-06	1.55E-05											3.53E-06	**1.55E-05**
Combined HAPs		**2.22**	**9.73**	**5.72**	**25.05**	**51.90**	**227.30**	**0.53**	**2.32**	**20.95**	**91.78**	**9.99E-05**	**4.38E-04**	**1.66E-03**	**7.27E-03**	**0.10**	**0.42**	**81.42**	**356.61**

Appendix A: Emission Calculations
HAP Summary

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

Potential to Emit after Issuance (tons/yr)																			
	CAS	DDGS Cooler		Scrubber/ RTO Bypass		RTO Stack - Processing		NG Boilers		E85 Loadout		Flare Pilot Flame		Diesel Generator		Equipment Leaks		Total	
HAP Pollutant		(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	**(ton/yr)**
Organic HAP																			
Acetaldehyde	75-07-0	1.61	0.16	5.60	1.40	1.23	5.07							2.66E-05	1.16E-04	3.23E-04	1.41E-03	8.43	**6.64**
Acrolein	107-02-8	0.18	0.02			0.21	0.92							8.31E-06	3.64E-05			0.39	**0.94**
Benzene	71-43-2					3.09E-04	1.35E-03	5.89E-04	2.58E-03	0.54	2.37	1.11E-07	4.87E-07	8.19E-04	3.59E-03	4.03E-03	1.77E-02	0.55	**2.40**
Carbon Disulfide	75-15-0															3.23E-05	1.41E-04	3.23E-05	**1.41E-04**
Cumene	98-82-8															1.61E-03	7.07E-03	1.61E-03	**0.01**
Dichlorobenzene	106-46-7							3.36E-04	1.47E-03			6.35E-08	2.78E-07					3.37E-04	**1.47E-03**
Ethylbenzene	100-41-4															8.07E-05	3.53E-04	8.07E-05	**3.53E-04**
Formaldehyde	50-00-0	0.20	0.02	0.04	0.01	0.27	1.20	2.10E-02	9.21E-02			3.97E-06	1.74E-05	8.32E-05	3.65E-04			0.53	**1.32**
Hexane	110-54-3					0.26	1.16	0.50	2.21	0.79	3.46	9.53E-05	4.17E-04			8.07E-02	0.35	1.64	**7.18**
Methanol	67-56-1	0.24	0.02	0.04	0.01	1.75	7.67											2.03	**7.70**
Naphthalene	91-20-3					8.97E-05	3.93E-04							2.24E-04	9.79E-04			3.13E-04	**1.37E-03**
Proprionaldehyde	123-38-6			0.04	0.01													0.04	**0.01**
Toluene	108-88-3					5.00E-04	2.19E-03	9.53E-04	4.18E-03	0.38	1.64	1.80E-07	7.88E-07	2.96E-04	1.30E-03	3.23E-04	1.41E-03	0.38	**1.65**
Xylenes	1330-20-7													2.04E-04	8.92E-04	8.07E-03	3.53E-02	0.01	**3.62E-02**
Inorganic HAP																			
Arsenic	7440-38-2					2.94E-05	1.29E-04											2.94E-05	**1.29E-04**
Beryllium	7440-41-7					1.76E-06	7.73E-06											1.76E-06	**7.73E-06**
Cadmium	7440-43-7					1.62E-04	7.09E-04	3.08E-04	1.35E-03			5.82E-08	2.55E-07					4.70E-04	**2.06E-03**
Chromium	7440-47-3					2.06E-04	9.02E-04	3.93E-04	1.72E-03			7.41E-08	3.25E-07					5.99E-04	**2.62E-03**
Cobalt	7440-48-4					1.24E-05	5.41E-05											1.24E-05	**5.41E-05**
Lead	TRI N420					7.35E-05	3.22E-04	1.40E-04	6.14E-04			2.65E-08	1.16E-07					2.14E-04	**9.36E-04**
Manganese	7439-96-5					5.59E-05	2.45E-04	1.07E-04	4.67E-04			2.01E-08	8.81E-08					1.62E-04	**7.12E-04**
Mercury	7439-97-6					3.82E-05	1.67E-04											3.82E-05	**1.67E-04**
Nickel	7440-02-0					3.09E-04	1.35E-03	5.89E-04	2.58E-03			1.11E-07	4.87E-07					8.98E-04	**3.93E-03**
Selenium	7782-49-2					3.53E-06	1.55E-05											3.53E-06	**1.55E-05**
Combined HAPs		**2.22**	**0.22**	**5.72**	**1.43**	**3.73**	**16.03**	**0.53**	**2.32**	**1.00**	**4.38**	**9.99E-05**	**4.38E-04**	**1.66E-03**	**0.01**	**0.10**	**0.42**	**13.30**	**24.80**

Limitations Parameters:

DDGS cooler limits are uncontrolled HAP emissions limited by hours of bypassing the vent to the dryer.
Scrubber/RTO bypass limits for Methanol is based on uncontrolled emissions and hours of operation limit.
Note: The shaded cells indicate where limits are included.

Appendix A: Emissions Calculations
Modification Summary

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

Uncontrolled Potential to Emit (tons/yr)[2]							
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO_2**	**NOx**	**VOC**	**CO**
Total Emissions for PSD & Part 70 Existing Source1	2556.93	2563.74	756.43	13.70	156.69	7601.31	135.30
Total Emissions for PSD & Part 70 due to the Modification	2556.93	2563.74	756.43	14.04	156.69	8020.93	135.30
Total	**0.00**	**0.00**	**0.00**	**0.34**	**0.00**	**419.62**	**0.00**

Potential to Emit after Issuance (tons/yr)2							
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**
Total Emissions for PSD & Part 70 Existing Source1	200.63	224.61	235.50	13.70	156.69	200.84	135.30
Total Emissions for PSD & Part 70 due to the Modification	200.63	224.61	235.50	14.04	156.69	195.64	135.30
Total	**0.00**	**0.00**	**0.00**	**0.34**	**0.00**	**0.00**	**0.00**

1. Based upon Appendix A of Technical Support Document 169-33491-00068
2. The before and after PTE for each individual unit is not shown because there are no decreases associated with this modification. All units have the potential to be affected by the overall throughput increase.

Appendix A: Emission Calculations
Project Parameters

Company Name:	**POET Biorefining - North Manchester, LLC**
Address City IN Zip:	**868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.:	**169-37113-00068**
Significant Permit Modification No.:	**169-37123-00068**
Reviewer:	**Thomas Olmstead**
Date:	**August, 2016**

Receiving	**SSM 169-37113-00068**		**% Production Increase 169-37113-00068**
Annual Grain Receiving	29,327,778	bushel/yr	**3.42%**
Denaturant Delivery (actual):	6,815,000	gal/yr	
Grain Receiving Capacity	30,000	bushel/hr	
Grain Receiving Capacity	840	ton/hr	
Annual Grain Receiving	821,178	ton/yr	
Grain Density:	56	lb/bushel	
Gallons Ethanol Produced per Bushel of Corn:	2.70	gal/bu	

Production	**SSM 169-37113-00068**		
Total Production in Gallons Anhydrous Ethanol Produced per Year:	79,185,000		gal/yr
E-85 Operation (assume 10% of Anhydrous Ethanol Production is loaded out at E70):			
Gallons E-85 Produced:	10,060,000	(1)	gal/yr
Denaturant Throughput:	3,018,000	(3)	gal/yr
Gallons Anhydrous Ethanol Loaded out in E-85 Service:	7,042,000	(2)	gal/yr
Normal Denatured Ethanol Operation:			
Gallons Denatured Ethanol Produced:	75,940,000		gal/yr
Denaturant Throughput:	3,797,000	(4)	gal/yr
Gallons Anhydrous Ethanol Loaded out in Denatured Service:	72,143,000		gal/yr
Combined Denatured Ethanol and E85 Production Rate	**86,000,000**	**(1)**	**gal/yr**

Dry Distillers Grain with Solubles (DDGS) Production	**SSM 169-37113-00068**	
Hourly DDGS Production	31.88	ton/hr
Annual DDGS Production	270,989	ton/yr
Percent Grain Throughput that becomes DDGS	33.0%	

	SSM 169-37113-00068	
DDGS Haul Out	10,840	truck/yr
Ethanol Haul Out	10,750	truck/yr
Denaturant Delivery	852	truck/yr
Grain Delivery	32,847	truck/yr
Tons Hauled per Truck	25	ton/truck
Gallons Hauled per Truck	8,000	gal/truck

Storage Tanks	**SSM 169-37113-00068**		
190 or 200 Proof Ethanol Shift Tank (T001)	79,185,000		gal/yr
Denaturant Storage Tank (T002)	4,520,430	(5)	gal/yr
200 Proof Ethanol Storage Tank (T003)	86,000,000		gal/yr
200 Proof Ethanol Storage Tank (T004)	86,000,000		gal/yr
Denaturant Storage Tank (T005)	2,294,570	(5)	gal/yr

(1) Current permit limit.
(2) Assume 10% of combined production is E-85.
(3) E-85 can be blended anywhere between 70% to 83% undenatured ethanol, depending on atmospheric conditions. Assume denaturant is 30% of E-85 product.
(4) Assume denaturant is 5% of denatured alcohol product.
(5) Assumed worst case scenario of denaturant throughput divided through tanks T002 and T005 based on tank capacities

Appendix A: Emission Calculations
PM/PM10/PM2.5 Emissions from the Grain Receiving and Handling Operations

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

1. Potential to Emit PM/PM10/PM2.5 - Captured Emissions:

Baghouse ID	Process Description	Control Device	Outlet Grain Loading *** (gr/dscf)	Maximum Air Flow Rate (scfm)	PTE of PM after Control* (lbs/hr)	PTE of PM after Control (tons/yr)	PTE of PM10 after Control* (lbs/hr)	PTE of PM10 after Control (tons/yr)	PTE of PM2.5 after Control** (lbs/hr)	PTE of PM2.5 after Control (tons/yr)	Control Efficiency (%)	PTE of PM before Control (lbs/hr)	PTE of PM10 before Control (lbs/hr)	PTE of PM2.5 before Control (lbs/hr)	PTE of PM before Control (tons/yr)	PTE of PM10 before Control (tons/yr)	PTE of PM2.5 before Control (tons/yr)
CE001	Grain Receiving (EU001), Conveyors (EU002), and Grain Storage Bins (EU003)	Baghouse	0.004	39,700	1.36	**5.96**	1.36	**5.96**	0.23	**1.01**	99%	136.11	136.11	23.14	**596.18**	**596.18**	**101.35**
CE002	Corn Transfer Conveyor / Scalper (EU004, Surge Bin (EU005)	Baghouse	0.004	3,000	0.10	**0.45**	0.10	**0.45**	0.02	**0.08**	99%	10.29	10.29	1.75	**45.05**	**45.05**	**7.66**
CE003	Hammermill #1 (EU006)	Baghouse	0.004	12,000	0.41	**1.80**	0.41	**1.80**	0.07	**0.31**	99%	41.14	41.14	6.99	**180.21**	**180.21**	**30.63**
CE004	Hammermill #2 (EU007)	Baghouse	0.004	12,000	0.41	**1.80**	0.41	**1.80**	0.07	**0.31**	99%	41.14	41.14	6.99	**180.21**	**180.21**	**30.63**
CE005	Hammermill #3 (EU008)	Baghouse	0.004	12,000	0.41	**1.80**	0.41	**1.80**	0.07	**0.31**	99%	41.14	41.14	6.99	**180.21**	**180.21**	**30.63**
CE006	Hammermill #4 (EU009)	Baghouse	0.004	12,000	0.41	**1.80**	0.41	**1.80**	0.07	**0.31**	99%	41.14	41.14	6.99	**180.21**	**180.21**	**30.63**
CE007	Hammermill #5 (EU010)	Baghouse	0.004	12,000	0.41	**1.80**	0.41	**1.80**	0.07	**0.31**	99%	41.14	41.14	6.99	**180.21**	**180.21**	**30.63**
CE011	DDGS Silo Loading (EU030)	Baghouse	0.004	4,000	0.14	**0.60**	0.14	**0.60**	0.02	**0.10**	99%	13.71	13.71	2.33	**60.07**	**60.07**	**10.21**
CE012	DDGS Silo Bypass (EU031)	Baghouse	0.004	4,500	0.15	**0.68**	0.15	**0.68**	0.03	**0.11**	99%	15.43	15.43	2.62	**67.58**	**67.58**	**11.49**
CE016	DDGS Loadout Operations (EU032 - EU035)	Baghouse	0.004	10,000	0.34	**1.50**	0.34	**1.50**	0.06	**0.26**	99%	34.29	34.29	5.83	**150.17**	**150.17**	**25.53**
Total					4.16	**18.20**	4.16	**18.20**	0.71	**3.09**		415.54	415.54	70.64	**1,820.08**	**1,820.08**	**309.41**

*Assume all PM emissions equal PM10 emissions.

** Assume controlled PM2.5 emissions equal 17% PM/PM10 emissions (AP-42 Table 9.9.1-1 Reference 40, "Emission Factors for Barges and Marine Vessels, Final Test Report to the National Grain and Feed Association", Washington, DC, October 2001).
*** Outlet Grain Loading was supplied by the source.

Methodology
PTE after Control (lbs/hr) = Outlet Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7000 lb/gr
PTE after Control (tons/yr) = Outlet Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7000 lb/gr x 8760 hr/yr x 1 ton/2000 lbs
PTE before Control (tons/yr) = PTE after Control (tons/yr) / (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 PM2.5 Emission Factor (lbs/ton)	Uncontrolled Fugitive PM Emissions (tons/yr)	Uncontrolled Fugitive PM10 Emissions (tons/yr)	Uncontrolled Fugitive PM2.5 Emissions** (tons/yr)
F001	Uncaptured Emissions From Grain Handling (F001)	821,178	0.071	0.0206	0.0035	29.25	8.46	1.44
F002	Uncaptured Emissions From DDGS Loadout Spout (F002)	270,989	0.086	0.0290	0.0049	11.65	3.93	0.67
Total						40.91	12.39	2.11

Note:
Emission factors are from AP-42, Chapter 9.9.1-1 and AP-42, Chapter 9.9.1-2. Assume all the grain receiving and DDGS loadout is by truck, which is the worst case scenario.
Emission factors for grain receiving are a weighted average emission factor based on 75% hopper bottom trucks and 25% straight trucks
Assume PM10 emissions equal to PM2.5 emissions.
There are no fugitive emissions from the grain handling operations because the emissions from these units are 100% captured.

Methodology
Fugitive PM/PM10/PM2.5 (tons/yr) = Annual Throughput Limit (tons/yr) x Uncontrolled Emission Factor (lbs/ton) x (1-Capture Efficiency%) x 1 ton/2000 lbs

Appendix A: Emission Calculations
VOC and HAP Emissions
From the Distillation and Fermentation Scrubber / RTO Bypass (Stack SV008)

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**
Date: **August, 2016**

1. Process Description:
The RTO must occasionally be temporarily shut down for unscheduled maintenance or other operational reasons. In this event, the DDGS dryers will be shut down, however, the fermentation tanks and distillation systems will continue to be operated in normal mode. The emissions from these sources will be vented to the scrubber stack (RTO by-pass stack) SV008. The emissions will be controlled by the wet scrubber, CE008.

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

Scrubber VOC Control Efficiency = 98.0%
Scrubber HAP Control Efficiency = 50.0%
Yearly operation limit = 500 hours

		@ 500 hrs	*@ 8760 hrs*
PTE Before Control	lb/hr	ton/yr	*ton/yr*
VOC	941.11	235.28	*4,122*
Acetaldehyde	5.60	1.40	*24.53*
Formaldehyde	0.04	0.01	*0.18*
Methanol	0.04	0.01	*0.18*
Propionaldehyde	0.04	0.01	*0.18*
Total Uncontrolled HAP	5.72	1.43	*25.05*

PTE After Control (500 hrs)	lb/hr	ton/yr
VOC	18.82	4.71
Acetaldehyde	2.80	0.70
Formaldehyde	0.02	0.01
Methanol	0.02	0.01
Propionaldehyde	0.02	0.01
Total Controlled HAP	2.86	0.72

Limited PTE	lb/hr	ton/yr
VOC	84.21	21.05
Acetaldehyde	5.60	1.40
Formaldehyde	0.04	0.01
Methanol	0.04	0.01
Propionaldehyde	0.04	0.01
Total Limited HAP	5.72	1.43

Note:
PTE After Control VOC and acetaldehyde emission rates based on performance test conducted March 2009.
PTE After Control VOC emission rates are expected to increase by 3.42% because of the added throughput due to the additional fermenter (EU047) SSM169-37113-00068.

Methodology:
PTE Before Control (lb/hr) = PTE After Control (lb/hr) / 100% - Control Efficiency)
PTE Before Control (ton/yr) = PTE Before Control x 500 hours / 2,000 lbs
PTE After Control (lb/hr) = Emission Rate based on performance tests performed at this facility in March 2009
PTE After Control (ton/yr) = PTE After Control (lb/hr) x 500 hours / 2,000 lbs
Limited PTE (lb/hr) = lb/hr emission rate chosen by source
Limited (ton/yr) = Limited PTE (lb/hr) x 500 hours / 2,000 lbs

Appendix A: Emission Calculations
PM, PM10, NOx, SOx, VOC, CO and HAP Emissions
From the RTO controlling the Fermenters, Distillation System, and DDGS Dryers

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**
Date: **August, 2016**

1. Process Description:

Emission point SV009 includes the emissions from the fermentation system, the distillation system, and the DDGS dryers. The fermentation system and distillation system vent to a scrubber which then exhausts into the regenerative thermal oxidizer (RTO). The DDGS dryers vent directly to the RTO. The RTO exhausts through stack SV009. The RTO is scheduled to operate 8760 hr/yr, however by permit it is allowed to be by-passed up to 500 hr/yr.

2. Potential to Emit (PTE) from fermentation, distillation and dryers:

DDGS Dryers and RTO Burners

Each dryer has a 60 MMBtu/hr natural gas fired burner. The dryers do not have the capacity to combust any other fuel. The dryers are connected in series, therefore, all of the DDGS is processed by each dryer.

The RTO is equipped with five natural gas fired burners rated at 6 MMBtu/hr each for a total of 30 MMBTU/hr. The RTO is not equipped with burners to combust any other fuel.

DDGS Dryer EU025	60 MMBtu/hr		NG burners:	5
DDGS Dryer EU026	60 MMBtu/hr			6 MMBtu/hr
	120 MMBtu/hr			**30 MMBtu/hr**

Combustion Emissions			**Dryers**		**RTO**	
Pollutant	**lb/MMCF**	**lb/MMBTU**	**lb/hr**	**ton/year**	**lb/hr**	**ton/year**
PM	1.9	0.0019	0.22	0.98	0.06	0.24
PM_{10}	7.6	0.0075	0.89	3.92	0.22	0.98
$PM_{2.5}$	7.6	0.0075	0.89	3.92	0.22	0.98
CO	84	0.0824	9.88	43.28	2.47	10.82
NO_X	140	0.1373	16.47	72.14	4.12	18.04
SO_2	0.6	0.0006	0.07	0.31	0.02	0.08
VOC	5.5	0.0054	0.65	2.83	0.16	0.71

AP-42 emission factors from Section 1.4 were converted to lb/MMBtu assuming a heating value of 1020 Btu/ft3 for natural gas.

Appendix A: Emission Calculations
PM, PM10, NOx, SOx, VOC, CO and HAP Emissions
From the RTO controlling the Fermenters, Distillation System, and DDGS Dryers

Company Name:	**POET Biorefining - North Manchester, LLC**
Address City IN Zip:	**868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.:	**169-37113-00068**
Significant Permit Modification No.:	**169-37123-00068**
Reviewer:	**Thomas Olmstead**

Process Emissions - $PM/PM_{10}/PM_{2.5}$ (For both Dryers)

Dryer Feed Rate =	78.0	ton/hr	solids + water
RTO Exhaust Flow Rate =	50,000	dscfm	
	0.200	gr/dscf	
Uncontrolled emission rate =	85.71	lb/hr	
	375.43	ton/yr	
Allowable Emissions Under 326 IAC 6-3-2 =	48.82	lb/hr	
Controlled Emission Rate =	8.57	lb/hr	
	37.54	ton/yr	

Methodology:
Dryer Feed Rate increase due to added throughput due to the additional fermenter (EU047) SSM169-37113-00068.

Process Emissions - SO_2 (RTO)

Ethanol Production (MMgal/yr)	**Emission Factor** (lb/gal)	**Emission Rate** (lb/hr)	**Emission Rate** (ton/yr)	
67.55	0.00024	1.837	8.05	estimated by test data
86.00	0.00024	2.34	**10.24**	potential @ max production rate

Annual DDGS Production	270,989	ton/yr
SO_2 emission Rate =	0.0756	lb/ton DDGS

Test Parameters

720	gal/min beer feed rate
17%	% by volume ethanol
122.4	gal/min anhydrous ethanol production
7344	gal/hr
128.52	gal/min denatured ethanol production

Note:

The lb/hr SO_2 emission rate is based on test data from March 3, 2009. Since the RTO is not controlling SO_2, this represents unrestricted potential to emit.

Methodology:
Emission Rate (lb/hr) = Ethanol Production Limit (MMGal/yr) * Emission Factor (lb/gal) / 8,760 hrs.
Emission Rate (ton/yr) = Emission Rate (lb/hr) * 8,760 hrs / 2,000 lbs.

Appendix A: Emission Calculations
PM, PM10, NOx, SOx, VOC, CO and HAP Emissions
From the RTO controlling the Fermenters, Distillation System, and DDGS Dryers

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**

Process Emissions - VOC/HAP (Dryers)

Given:

The VOC and HAPs contained in the water fraction of the feed to the dryers is evaporated.

The VOC content of the water = 0.006 lb VOC/lb water
The dryer feed rate = 78.0 ton/hour solids + water
Water content of dryer feed = 66.7%
Therefore: 0.32 ton VOC /hr

	Total		Each Dryer	
	lb/hr	*ton/yr*	*lb/hr*	*ton/yr*
Inlet VOC Emissions to RTO	645.27	2,826	322.64	1,413
Inlet HAP Emissions to RTO	50.52	221.30	25.26	110.65

Process Emissions - VOC/HAP (Fermentation & Distillation System)

	Total		Each Dryer	
	lb/hr	*ton/yr*	*lb/hr*	*ton/yr*
Inlet VOC Emissions to RTO	25.81	113.05	12.91	56.53
Inlet HAP Emissions to RTO	2.02	8.85	1.01	4.43

Total Emissions from RTO Stack (from March 2009 test data)

	Uncontrolled Emission Rate		Controlled Emission Rate		Control Efficiency
Pollutant	*lb/hr*	*ton/year*	*lb/hr*	*ton/year*	*%*
PM	10.50	45.99	1.05	4.60	90%
PM_{10}	47.50	208.05	4.75	20.81	90%
$PM_{2.5}$	47.50	208.05	4.75	20.81	90%
CO	97.80	428.36	9.78	42.84	90%
NO_X	5.82	25.49	5.82	25.49	0%
SO_2	1.80	7.88	1.80	7.88	0%
VOC	242.50	1,062	4.85	21.24	98%
Acetaldehyde*	40.90	179.14	0.15	0.66	97%
Acrolein	2.39	10.46	0.07	0.31	97%
Formaldehyde	0.26	1.13	0.01	0.03	97%
Methanol	8.00	35.05	0.24	1.05	97%
Total HAP	51.55	225.78	0.47	2.06	97%

Total Emissions from the RTO Stack

	Unrestricted		Limited		Controlled		Control Efficiency
Pollutant	**lb/hr**	**ton/year**	**lb/hr**	**ton/year**	**lb/hr**	**ton/year**	*%*
PM	85.99	376.65	26.64	**116.68**	8.60	37.67	90%
PM_{10}	86.83	380.32	29.70	**130.09**	8.68	38.03	90%
$PM_{2.5}$	86.83	380.32	28.40	**124.39**	8.68	38.03	90%
CO	12.35	54.11	12.35	54.11	1.24	5.41	90%
NO_X	20.59	90.18	20.59	90.18	20.59	90.18	0%
SO_2	2.43	10.63	2.43	10.63	2.43	10.63	0%
VOC*	674.31	2,953	39.49	**163.09**	13.49	59.07	98%
Acetaldehyde*	40.95	179.37	1.23	**5.07**	1.23	5.38	97%
Acrolein**	2.39	10.48	0.21	0.92	0.07	0.31	97%
Formaldehyde	0.26	1.15	0.26	1.15	0.01	0.03	97%
Methanol ***	8.01	35.09	1.75	7.67	0.24	1.05	97%
Combustion HAPs	0.28	1.22	0.28	1.22	0.28	1.22	n/a
TOTAL HAPs*	51.90	227.30	3.73	**15.40**	1.83	8.00	97%

HAP Speciation as a % of VOC
Test Data
Big Stone, SD
September 2008
6.18%
0.37%
0.04%
1.24%
7.83%

* PTE (tpy) based on 8260 hrs per year, as the emissions during the allowed 500 hrs of bypass are higher.
** Acrolein limit based on 90% control efficiency.
*** Methanol limit based on 76% control efficiency.

Appendix A: Emission Calculations
HAP Combustion Emissions from the Dryers and RTO

Company Name:	**POET Biorefining - North Manchester, LLC**
Address City IN Zip:	**868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.:	**169-37113-00068**
Significant Permit Modification No.:	**169-37123-00068**
Reviewer:	**Thomas Olmstead**
Date:	**August, 2016**

1. Process Description:

POET Biorefining - North Manchester operates two DDGS dryers. Each dryer is 60 MMBtu/hr and be fired on natural gas. There is no back-up fuel. The dryer exhaust is directed to the RTO at all times the dryers are operating. The RTO has an estimated HAP control efficiency of 97%.

2. Potential to Emit (PTE) Combustion HAPs from the dryers:

HAP Pollutant	Emission Factor [1] (lb/MMSCF)	Potential to Emit Emissions (Uncontrolled) (lb/hr)	Potential to Emit Emissions (Uncontrolled) (ton/yr)	Potential to Emit Emissions (Controlled) (lb/hr)	Potential to Emit Emissions (Controlled) (ton/yr)
Benzene	2.10E-03	2.47E-04	1.08E-03	7.41E-06	3.25E-05
Formaldehyde	7.50E-02	8.82E-03	3.86E-02	2.65E-04	1.16E-03
Hexane	1.80	2.12E-01	0.93	6.35E-03	2.78E-02
Naphthalene	6.10E-04	7.18E-05	3.14E-04	2.15E-06	9.43E-06
Toluene	3.40E-03	4.00E-04	1.75E-03	1.20E-05	5.26E-05
Arsenic	2.00E-04	2.35E-05	1.03E-04	2.35E-05	1.03E-04
Beryllium	1.20E-05	1.41E-06	6.18E-06	1.41E-06	6.18E-06
Cadmium	1.10E-03	1.29E-04	5.67E-04	1.29E-04	5.67E-04
Chromium	1.40E-03	1.65E-04	7.21E-04	1.65E-04	7.21E-04
Cobalt	8.40E-05	9.88E-06	4.33E-05	9.88E-06	4.33E-05
Lead	5.00E-04	5.88E-05	2.58E-04	5.88E-05	2.58E-04
Manganese	3.80E-04	4.47E-05	1.96E-04	4.47E-05	1.96E-04
Mercury	2.60E-04	3.06E-05	1.34E-04	3.06E-05	1.34E-04
Nickel	2.10E-03	2.47E-04	1.08E-03	2.47E-04	1.08E-03
Selenium	2.40E-05	2.82E-06	1.24E-05	2.82E-06	1.24E-05
		0.22	**0.97**	**0.01**	**0.03**

1 - Emission factor is from AP-42, 5th Edition, Section 1.4, 7/98

1. Process Description:

POET Biorefining - North Manchester operates an RTO to control emissions from the DDGS dryers. The RTO is equipped with five natural gas fired burners rated at 6 MMBtu/hr each for a total of 30 MMBTU/hr. The RTO burners are not equipped with burners to combust any fuel other than natural gas.

Appendix A: Emission Calculations
HAP Combustion Emissions from the Dryers and RTO

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**
Date: **August, 2016**

2. Potential to Emit (PTE) Combustion HAPs from the RTO:

HAP Pollutant	Emission Factor [1] (lb/MMSCF)	Potential to Emit Emissions (Uncontrolled) (lb/hr)	(ton/yr)
Benzene	2.10E-03	6.18E-05	2.71E-04
Formaldehyde	7.50E-02	2.21E-03	9.66E-03
Hexane	1.80	5.29E-02	0.23
Naphthalene	6.10E-04	1.79E-05	7.86E-05
Toluene	3.40E-03	1.00E-04	4.38E-04
Arsenic	2.00E-04	5.88E-06	2.58E-05
Beryllium	1.20E-05	3.53E-07	1.55E-06
Cadmium	1.10E-03	3.24E-05	1.42E-04
Chromium	1.40E-03	4.12E-05	1.80E-04
Cobalt	8.40E-05	2.47E-06	1.08E-05
Lead	5.00E-04	1.47E-05	6.44E-05
Manganese	3.80E-04	1.12E-05	4.90E-05
Mercury	2.60E-04	7.65E-06	3.35E-05
Nickel	2.10E-03	6.18E-05	2.71E-04
Selenium	2.40E-05	7.06E-07	3.09E-06
		0.06	**0.24**

1 - Emission factor is from AP-42, 5th Edition, Section 1.4, 7/98

3. Total Combustion HAPs from Dryers and RTO

HAP Pollutant	CAS	Potential to Emit Emissions (Uncontrolled) (lb/hr)	(ton/yr)
Benzene	71-43-2	3.09E-04	1.35E-03
Formaldehyde	50-00-0	1.10E-02	4.83E-02
Hexane	110-54-3	0.26	1.16
Naphthalene	91-20-3	8.97E-05	3.93E-04
Toluene	108-88-3	5.00E-04	2.19E-03
Arsenic	7440-38-2	2.94E-05	1.29E-04
Beryllium	7440-41-7	1.76E-06	7.73E-06
Cadmium	7440-43-7	1.62E-04	7.09E-04
Chromium	7440-47-3	2.06E-04	9.02E-04
Cobalt	7440-48-4	1.24E-05	5.41E-05
Lead	NA	7.35E-05	3.22E-04
Manganese	7439-96-5	5.59E-05	2.45E-04
Mercury	7439-97-6	3.82E-05	1.67E-04
Nickel	7440-02-0	3.09E-04	1.35E-03
Selenium	7782-49-2	3.53E-06	1.55E-05
		0.28	**1.22**

Methodology
Potential Emission (lbs/hr) = Throughput (MMBtu/hr) x Emission Factor (lb/MMCF) x 1 MMCF/1,020 MMBtu
Potential Emission (tons/yr) = Throughput (MMBtu/hr) x Emission Factor (lb/MMCF) x 1 MMCF/1,020 MMBtu/2,000 lb/ton x 8,760 hrs/yr

Appendix A: Emission Calculations
PM/PM10/PM2.5 and VOC Emissions - From the DDGS Cooler (EU029)

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

1. Potential to Emit $PM/PM_{10}/PM_{2.5}$:

Baghouse ID	Process Description	Control Device	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	PTE of PM after Control *		PTE of PM_{10} after Control *		PTE of $PM_{2.5}$ after Control **		Control Efficiency (%)	PTE of PM before Control		PTE of PM_{10} before Control		PTE of $PM_{2.5}$ before Control		Uncontrolled PTE of PM (200 hr/yr) (*) (***)		Uncontrolled PTE of PM_{10} (200 hrs/yr) (*) (***)		Uncontrolled PTE of $PM_{2.5}$ (200 hrs/yr) (**) (***)	
					lb/hr	*ton/yr*	*lb/hr*	*ton/yr*	*lb/hr*	*ton/yr*	*%*	*lb/hr*	*ton/yr*	*lb/hr*	*ton/yr*	*lb/hr*	*ton/yr*	*lb/hr*	*ton/yr*	*lb/hr*	*ton/yr*	*lb/hr*	*ton/yr*
CE010	DDGS Cooler	Baghouse CE010	0.004	23,800	0.816	3.57	0.816	3.57	0.14	0.61	99%	81.60	357.41	81.60	357.41	13.87	60.76	81.60	8.16	81.60	8.16	13.87	1.39

*Assume all PM emissions equal PM_{10} emissions.

** Assume controlled $PM_{2.5}$ emissions equal 17% PM/PM_{10} emissions (AP-42 Table 9.9.1-1 Reference 40).

***Alternate Operating Scenario: All emissions are exhausted as uncontrolled through the DDGS Cooler stack. This Scenario is limited to 200 hours of operation. For the other 8560 hr/yr, exhaust must be routed through the dryers and RTO.

Methodology
PTE after Control (lbs/hr) = Outlet Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7000 lb/gr
PTE after Control (tons/yr) = Outlet Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7000 lb/gr x 200 hr/yr x 1 ton/2000 lbs
PTE of before Control (tons/yr) = PTE of after Control (tons/yr) / (1-Control Efficiency)

2. Potential to Emit VOC:

	Unrestricted[2]		Actual Emissions from stack test[1]	Actual Emissions projected[3]	Controlled[2]
	8760 hrs/yr	**200 hrs/yr**	**8760 hrs/yr**	**8760 hrs/yr**	**8760 hrs/yr**
Process Throughput (DDGS) =			26.0 *ton/hr*	26.9 *ton/hr*	
Air Flow Rate (as carbon) =			26,475 *SCFM*	27,380.2 *SCFM*	
VOC Emission Rate (as ethanol) =	5.685 *lb/hr*[4]	5.685 *lb/hr*[4]	3.70 *lb/hr*	3.8 *lb/hr*	0.11 *lb/hr*
VOC Emission Rate (200 hrs/yr) (as ethanol) =	24.90 *ton/yr*	0.57 *ton/yr*	16.21 *ton/yr*	16.8 *ton/yr*	0.50 *ton/yr*

(1) from Stack test conducted at N. Manchester on 3/5/2009 at maximum throughput rate of 26 tons of DDGS produced per hour
(2) Assumes all VOCs are routed to the dryers and RTO (98%) except for 200 hrs per year. Alternate Operating Scenario: All emissions are exhausted as uncontrolled through the DDGS Cooler stack. This Scenario is limited to 200 hours of operation. For the other 8560 hr/yr, exhaust must be routed through the dryers and RTO.
(3) Actual VOC emissions from the DDGS Cooler (EU029) are expected to increase by 3.42% because of the added throughput due to the additional fermenter (EU047) SSM169-37113-00068.
Acutal projected emissions = actual from stack test x (1+project increase)
(4) Pursuant to SSM169-37113-00068, in order to maintain that the DDGS Cooler (EU029) is not subject to 326 IAC 8-1-6, the source choose a 5.685 lb/hr limit as a safety factor for demonstrating potential emissions will remain below twenty-five (25) tons/yr. The source verified from a stack test conducted at N. Manchester on 3/5/2009, that the DDGS Cooler (EU029) is below the limit of 5.685 lb/hr

	Pollutant				
	Acetaldehyde	**Methanol**	**Formal-dehyde**	**Acrolein**	**Total**
Tested Emission Rate (lbs/hr)	*1.07*	*0.08*	*0.07*	*0.06*	*1.28*
Permitted Emission Rate (lbs/hr)	1.61	0.24	0.20	0.18	2.22
Uncontrolled PTE in tons/yr	7.03	1.05	0.86	0.79	9.73
Limited PTE in tons/yr (200 hrs)	**0.16**	**0.02**	**0.02**	**0.02**	**0.22**

HAP emission rates were originally provided by the source based on stack test results (October 16, 2008 for a similar source at POET Biorefining - Alexandria) and multiplied by a 1.4 safety factor. Testing at N. Manchester determined that the emission rate of acetaldehyde is 2.326 times more than the rate tested at Alexandria. Therefore, the methanol, formaldehyde, and acrolein emissions will be calculated using the Alexandria emission rates and a safety factor of 3.0 and the acetaldehyde emissions will be calculated using the emission rate from the N. Manchester test with a safety factor of 1.5.

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
VOC Emission Calculations - Ethanol/E85 Load-out Racks (EU036) and Flare (CE015)

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**
Date: **August, 2016**

Emission Factors: AP-42, Section 5.2, June 2008

Denatured ethanol (95% to 98% ethanol) and E85 (70% to 85% ethanol) will be shipped by either truck loading rack or railcar loading rack. Railcars will be dedicated fleets, but the trucks may be used to carry gasoline prior to filling with ethanol. Both railcars and trucks will be filled by submerged loading process. Both loadout operations will be controlled by a flare (CE015), which has a control efficiency of 98% for VOC and HAPs.

According to AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids (06/08), the VOC emission factors for the truck and rail loading racks can be estimated from the following equation:

$$L = 12.46 \times (S \times P \times M) / T$$

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 (dedicated vapor balance)	1.0	4.0226	66	507	6.52
Gasoline (clean cargo)	0.5	4.0226	66	507	3.26
E-85 Ethanol (dedicated normal)	0.6	1.73	56.75	507	1.45
E-85 Ethanol (clean cargo)	0.5	1.73	56.75	507	1.21
Denatured Ethanol (dedicated normal)	0.6	0.55	49.7	507	0.40
Denatured Ethanol (clean cargo)	0.5	0.55	49.7	507	0.34

Source-Specific Emission Factors

		(lbs/kgal)
The emission factor for loading denatured ethanol to rail which previously contained denatured ethanol = L (Denatured ethanol, normal) =	Denatured Ethanol to Rail	0.40
The emission factor for loading E-85 to rail which previously contained denatured ethanol or E-85 = L (Denatured ethanol, normal) =	E-85 to Rail	1.45
The emission factor for loading denatured ethanol to trucks which stored gasoline previously = L (gasoline, dedicated vapor balance) - L (gasoline, clean cargo) + L (denatured ethanol, clean cargo) =	Denatured Ethanol to Truck	3.60
The emission factor for loading E-85 to trucks which previously contained denatured ethanol or E-85 = L (gasoline, dedicated vapor balance) - L (gasoline, clean cargo) + L (E-85, clean cargo) =	E-85 to Truck	4.47

1. Throughputs:

Truck and Rail Combined (MMgal/yr)	
Ethanol (anticipated)	75.94
E-85 (anticipated)	10.06
Ethanol (for PTE)	86.00
E-85 (for PTE)	10.06
Ethanol and E85 Combined	86.00

Ethanol Loading Capacity

Truck (gal/hr)	Rail (gal/hr)	Total (MMgal/yr)
39,000	144,000	1,603

2. Hourly Potential to Emit (Annual Unlimited):

	Maximum Loading Capacity kgal/hr	**Uncontrolled Emission Factor** lb/kgal	**Emissions Uncontrolled** lb/hr	**Emissions Uncontrolled** ton/yr	**Control Efficiency** %	**Emissions Controlled** lb/hr	**Emissions Controlled** ton/yr
Ethanol loaded out via truck:	39	3.60	140.33	614.65	98%	2.81	12.29
Ethanol loaded out via rail:	144	0.40	58.04	254.22	98%	1.16	5.08
E85 loaded out via truck:	39	4.47	174.29	763.39	98%	3.49	15.27
E85 loaded out via rail:	144	1.45	208.51	913.26	98%	4.17	18.27
Worst case scenario =			**208.51**	**913.26**		**4.17**	**18.27**

Emissions Uncontrolled (lb/hr) = Throughput (kgal/hr) x Emission Factor (lb/kgal)
Emissions Controlled (lb/hr) = Emissions Uncontrolled (lb/hr) x (1 - Control Efficiency)

Appendix A: Emission Calculations
VOC Emission Calculations - Ethanol/E85 Load-out Racks (EU036) and Flare (CE015)

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**
Date: **August, 2016**

3. Limited Annual Potential to Emit:

	Limited* Throughput kgal/yr	Uncontrolled Emission Factor lbs/kgal	Limited* Emissions Uncontrolled ton/yr	Control Efficiency %	Limited* Emissions Controlled ton/yr
All ethanol loaded out via truck:	86,000	3.60	154.72	98%	3.09
All ethanol loaded out via rail:	86,000	0.40	17.33	98%	0.35
All E85 loaded out via truck:	10,060	4.47	22.48	98%	0.45
All E85 loaded out via Rail:	10,060	1.45	7.28	98%	0.15
Worst case scenario =			**154.72**		**3.09**

* Total throughput is limited in order for HAP emission to be less than major source levels.
Emissions Uncontrolled (ton/yr) = Throughput (kgal/yr) x Emission Factor (lb/kgal) / 2000 lb/ton
Emissions Controlled (ton/yr) = Emissions Uncontrolled (ton/yr) x (1 - Control Efficiency)

Flare Control Efficiency = 98%

4. Potential to Emit HAPs:

HAP	HAP Fraction*	Unrestricted PTE of HAP (tpy)	Controlled PTE of HAP (tpy)	PTE of HAP Limited (throughput) before Control (tons/yr)	Limited (throughput) PTE of HAP after Control (tons/yr)
Benzene	2.60E-03	2.37	0.01	0.40	0.01
Hexane	9.61E-02	87.76	0.40	14.87	0.30
Toluene	1.80E-03	1.64	0.01	0.28	0.01
Total	**0.10**	91.78	0.42	15.55	0.31

Permit Limited Hexane =	**0.79**	**lb/hr**	**3.46**	**tpy**
Permit Limited Total HAPs =	**1.00**	**lb/hr**	**4.38**	**tpy**

* Based on the weight fraction of denaturant (October 2007 laboratory analysis of natural gasoline/denaturant)

Methodology
HAP emissions are based on worst-case VOC emission scenario.
PTE of HAP before Control (tons/yr) = PTE of VOC before Control (tons/yr) x HAP Fraction
Limited PTE of HAP after Control (tons/yr) = Limited PTE of VOC after Control (tons/yr) x HAP Fraction
Average Limited PTE of HAP after Control (lbs/hr) = Limited PTE of HAP after Control (tons/yr) / 8760 hr/yr x 2000 lb/ton

5. Flare Emissions from Combustion of VOCs from the Ethanol Loading Rack	**Heat Input Capacity** MMBtu/hr	**Max Hourly Rate (Rail)** kgal/hr	**Annual Production Limit** kgal/yr
	0.055	144.0	86,000

	Pollutant	
	CO**	**NOx****
Emission Factor (lb/kgal)	0.084	0.0334
Potential to Emit in lbs/hr	12.10	4.81
UNRESTRICTED Potential to Emit (TPY)	52.98	21.07
LIMITED Potential to Emit in tons/yr	**3.61**	**1.44**

Emission factors for NO_x and CO are based on the information provided by the flare manufacturer (John Zink Company).

PM, PM_{10}, $PM_{2.5}$, and SO_2 emission factors are negligible due to the smokeless design and minimal H_2S levels in the fuel. Potential emissions from natural gas for the pilot flame are estimated on the following page.
VOC emission calculations can be found above in loading rack calculations.

Appendix A: Emission Calculations
Flare Pilot Flame - Natural Gas Combustion < 100 MMBtu/hr

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**
Date: **August, 2016**

Max. Heat Input Capacity	Potential Throughput
MMBtu/hr	MMCF/yr
0.054	0.4638

	Pollutant						
	PM*	PM_{10}*	$PM_{2.5}$*	SO_2	NO_X**	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100	5.5	84
Potential Emission in tons/yr	4.41E-04	1.76E-03	1.76E-03	1.39E-04	2.32E-02	1.28E-03	1.95E-02

*PM emission factor is filterable PM only. PM_{10} emission factor is condensable and filterable PM_{10} combined. $PM_{2.5}$ emission factor is equal to PM_{10}.

**The Emission Factor for NOx is from AP-42 Chapter 1 Table 1-4.1 for natural gas combustion for uncontrolled emissions from small boilers rated less than 100 MMBtu/hr.

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAP emissions calculations	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.80	3.4E-03
Potential Emission in tons/yr	4.87E-07	2.78E-07	1.74E-05	4.17E-04	7.88E-07

	HAPs - Metals					Total
	Lead	Cadmium	Chromium	Manganese	Nickel	HAP
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.16E-07	2.55E-07	3.25E-07	8.81E-08	4.87E-07	4.38E-04

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

Appendix A: Emission Calculations
Boilers - Natural Gas Combustion > 100 MMBtu/hr

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**
Date: **August, 2016**

Individual Heat Input Capacity for Boiler #1 & Boiler #2	Combined Heat Input Capacity for Boiler #1 &	Potential Throughput
MMBtu/hr	MMBtu/hr	MMCF/yr
143	286	2,456

Particulate Emission Limitations for Sources of Indirect Heating:
Emission Limitations for facilities specified in 326 IAC 6-2-1(d)

$Pt = 1.09 / Q^{0.26}$ = 0.25 lb/MMBtu

	Pollutant						
	PM*	PM_{10}*	$PM_{2.5}$*	SO_2	NO_X**	VOC	CO***
Emission Factor in lb/MMCF (AP-42)	1.9	7.6	7.6	0.6		5.5	
Emission Factor in lb/MMCF (test data)					30		20
Potential Emission in tons/yr	2.33	9.33	9.33	0.74	36.84	6.75	24.56

*PM emission factor is filterable PM only. PM_{10} emission factor is condensable and filterable PM_{10} combined. $PM_{2.5}$ emission factor is condensable and filterable $PM_{2.5}$ combined.

**The Emission Factor for NOx from AP-42 Chapter 1 Table 1-4.1 (for natural gas combustion for low NOx burners) is 140 lb/MMCF. The source used manufacturer's certified emission factors for the low NOx burners in a previous FESOP permit. The manufacturer's emission factors are less than the AP-42 values (30 lb of NOx/MMCF) and have been verified by performance testing.

***The Emission Factor for CO is from AP-42 Chapter 1 Table 1-4.1 for natural gas combustion. The source used manufacturer's certified emission factors in a previous FESOP permit. The manufacturer's emission factors are less than the AP-42 values (20 lb of CO/MMCF) and have been verified by performance testing.

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAP emissions calculations

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.80	3.4E-03
Potential Emission in tons/yr	2.58E-03	1.47E-03	9.21E-02	2.21	4.18E-03

	HAPs - Metals					Total
	Lead	Cadmium	Chromium	Manganese	Nickel	HAP
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	6.14E-04	1.35E-03	1.72E-03	4.67E-04	2.58E-03	2.32

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

Appendix A: Emission Calculations
Diesel Generator (for Electricity)

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**
Date: **August, 2016**

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	2640.0	
Unlimited Hours of Operation per Year	500	Emergency Use only
Unlimited Potential Throughput (hp-hr/yr)	1,320,000	
Limited Hours of Operation per Year	500	
Limited Potential Throughput (hp-hr/yr)	1,320,000	
Sulfur Content (S) of Fuel (% by weight)	0.500	

	Pollutant						
	PM*	**PM10***	**PM2.5***	**SO2**	**NOx**	**VOC**	**CO**
Emission Factor in lb/hp-hr	7.00E-04	4.01E-04	4.01E-04	4.05E-03 *(.00809S)*	1.30E-02 **see below	7.05E-04	5.50E-03
Unlimited Potential Emissions in tons/yr	0.46	0.26	0.26	2.67	8.58	0.47	3.63
Limited Potential Emission in tons/yr	**0.46**	**0.26**	**0.26**	**2.67**	**8.58**	**0.47**	**3.63**

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	**Toluene**	**Xylene**	**Formal-dehyde**	**Acetal-dehyde**	**Acrolein**	**Total PAH HAPs*** **
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Unlimited Potential Emission in tons/yr	3.59E-03	1.30E-03	8.92E-04	3.65E-04	1.16E-04	3.64E-05	9.79E-04
Limited Potential Emission in tons/yr	**3.59E-03**	**1.30E-03**	**8.92E-04**	**3.65E-04**	**1.16E-04**	**3.64E-05**	**9.79E-04**

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Unlimited Potential Emissions of Total HAPs (ton/yr)	7.27E-03
Limited Potential Emission of Total HAPs (tons/yr)	**7.27E-03**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Limited Hours of Operation per Year]
Limited Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A: Emission Calculations
Greenhouse Gas Emissions

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**
Date: **August, 2016**

1. Green House Gas from Combustion

	Greenhouse Gas			
	CO2	**CH4**	**N2O**	**CO2e**
Emission Factors for Natural Gas Combustion lb/MMcf	120,000	2.3	2.2 Low NOx 0.64	

	MMBtu/hr	MMCF/yr*	tons/yr	tons/yr	tons/yr	tons/yr
Boiler #1	143.0	1,228	73,687	1.41	0.39	73,839
Boiler #2	143.0	1,228	73,687	1.41	0.39	73,839
Dryer #1	60	515	30,918	0.59	0.57	31,106
Dryer #2	60	515	30,918	0.59	0.57	31,106
RTO	30	258	15,459	0.30	0.08	15,491
Flare	0.055	0	28.34	0.0005	0.0005	28.51
Potential Emission (tons/yr)	436.1	3,745	**224,697**	**4.3**	**2.0**	225,408
Emission Factors for Diesel Sources		lb/HP- hr	1.15	0.00247	0.000021	
	kW	HP	tons/yr	tons/yr	tons/yr	tons/yr
Diesel Generator	2000	2640	**151.80**	**0.326**	**0.003**	159.51
Summed Potential Emissions in tons/yr				**224,855**		
			CO2e Total in tons/yr	**225,567**		

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
*Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors for Natural Gas Combustion are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Emission Factors for Diesel Generator are from AP 42, Table 3.3-1 SCC #2-02-001-02, 2-03-001-01.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emission Calculations
Greenhouse Gas Emissions

Company Name:	**POET Biorefining - North Manchester, LLC**
Address City IN Zip:	**868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.:	**169-37113-00068**
Significant Permit Modification No.:	**169-37123-00068**
Reviewer:	**Thomas Olmstead**
Date:	**August, 2016**

2. Green House Gas from Fermentation (Biogenic)

Fermentation Process

Given:
79,185,000 gallons of undenatured (200-proof) EtOH / year
46.06844 [g/mol] mole weight of EtOH
0.789 [g/cm^3] density of liquid EtOH
44.0095 [g/mol] mole weight of CO2

and: $C_6H_{12}O_6$ + yeast = 2 CH_3CH_2OH + 2 CO_2
sugar + yeast = ethanol + carbon dioxide

Therefore:

$$\frac{79{,}185{,}000 \text{ gal 200-proof EtOH}}{\text{year}} \times \frac{0.789 \text{ g EtOH}}{1 \text{ cm}^3} \times \frac{3{,}785.41 \text{ cm}^3}{1 \text{ gal}}$$

$$= \frac{2.37\text{E+}11 \text{ g EtOH}}{\text{year}} \times \frac{1 \text{ mol EtOH}}{46.06844 \text{ g EtOH}}$$

$$= \frac{5{,}133{,}686{,}491 \text{ mol EtOH}}{\text{year}} \times \frac{2 \text{ mol } CO_2}{2 \text{ mol EtOH}}$$

$$= \frac{5{,}133{,}686{,}491 \text{ mol } CO_2}{\text{year}} \times \frac{44.0095 \text{ g } CO_2}{1 \text{ mol } CO_2} \times \frac{1 \text{ ton}}{907{,}184.74 \text{ g}}$$

= 249,046 tons CO_2 / year

= **249,046** CO2e Total in tons/yr

Total CO2e tons/year for entire source = 474,614 tons/year (Biogenic and Combustion sources combined)

Appendix A: Emission Calculations
VOC Emission Calculations - Storage Tanks and Centrifuges

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

Emissions were calculated using the TANKS 4.0 Program.

VOC Emission Calculations - Storage Tanks T001 - T005, T009

Tank	Contents [1]	Annual Throughput (gal)	Capacity (gal)	Avg. Capacity (gal/min)	No. of Turn Overs	Emissions		
						lb/year	lb/hr	Ton/year
T001	190 Proof Ethanol	79,185,000	250,000	151	316.7	707.80	0.08	0.35
T002	Denaturant	4,520,430	250,000	9	18.1	2,817	0.32	1.41
T003	200-Proof Ethanol	86,000,000	2,000,000	164	43.0	618.88	0.07	0.31
T004	200-Proof Ethanol	86,000,000	2,000,000	164	43.0	618.88	0.07	0.31
T005	Denaturant	2,294,570	126,900	4	18.1	1,683	0.19	0.84
T009	Gasoline	2,200	265	0.00	8.3	345	0.04	0.17
	Total					**6,791**	**0.78**	**3.40**

* Emissions were calculated using Tanks 4.0.9d software and submitted by the source for the SSM 168-37113-00068.

[1] Assume:

	Estimated Denaturant Usage	Estimated E85 Production
190-Proof Ethanol is 100% ethyl alcohol in TANKS calculations.	6,815,000 gal/yr	10,060,000 gal/yr
Denaturant is 100% gasoline (RVP 15) in TANKS calculations.	18,671 gal/day	27,562 gal/day
200-Proof Ethanol is 100% ethyl alcohol in TANKS calculations.		
Total amount meeting definition of "gasoline" under 40 CFR 63.11100:		46,233 gal/day

VOC Emission Calculations - Tanks EU040 - EU046

Tank	Contents	Annual Throughput (gal)	Capacity (gal)	Avg. Capacity (gal/min)	No. of Turn Overs	Emissions		
						lb/year	lb/hr	Ton/year
EU040	corn oil / defatted syrup	70,956,000	1,000	135	70,956	10.19	1.16E-03	5.10E-03
EU041	corn oil / defatted syrup	42,048,000	1,000	80	42,048	6.05	6.91E-04	3.03E-03
EU042	corn oil / defatted syrup	26,280,000	500	50	52,560	3.78	4.32E-04	1.89E-03
EU043	corn oil / defatted syrup	15,768,500	2,350	30	6,710	2.59	2.96E-04	1.30E-03
EU044	corn oil / defatted syrup	7,884,000	200	15	39,420	1.13	1.29E-04	5.65E-04
EU045	corn oil / defatted syrup	2,628,000	30,000	15	263	0.34	3.88E-05	1.70E-04
EU046	corn oil / defatted syrup	2,628,000	30,000	15	263	0.34	3.88E-05	1.70E-04
	Total					**24.42**	**2.79E-03**	**1.22E-02**

VOC Emission Calculations - Centrifuges EU038 - EU039

Unit	Contents	Annual Throughput (gal)	Avg. Capacity (gal/min)	Avg. Capacity (gal/min)	No. of Turn Overs	Emissions		
						lb/year	lb/hr	Ton/year
EU038	corn "syrup"	70,956,000	135	135	NA	10.17	1.16E-03	5.09E-03
EU039	corn "syrup"	42,048,000	80	80	NA	6.02	6.87E-04	3.01E-03
	Total					**16.19**	**1.85E-03**	**8.10E-03**

Appendix A: Emission Calculations
Centrifuges (EU024)

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead

Whole stillage is pumped to the centrifuges where the solids (wet cake) is separated from the liquid (thin stillage). A fraction of the residual VOC and HAP contained in the whole stillage is emitted from the centrifuges during the separation process.
Emission data from a performance test completed on May 29th, 2003 for the centrifuge stack at POET Research Center (aka Broin Enterprises Ethanol) was used to calculate the potential to emit from North Manchester. Speciated compounds with non-detect results were assumed to be emitted at the listed detection limit.

The centrifuges (EU024) are normally vented to the RTO. It has been determined that during RTO downtime, the centrifuges are not required to be controlled. During RTO downtime, emissions are vented to stack SV017. See TSD for 169-37113-00068.

1. Speciated VOC data from POET Research Center, Scotland, SD on May 29th, 2003:

Test Results	Run 1	Run 2	Run 3	Average	*Max - Ratioed for North Manchester
	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Ethanol	0.0073	0.0064	0.0142	0.0093	0.019
Acetic Acid	0.0475	0.0438	0.0342	0.0418	0.084
Lactic Acid	0.0021	0.0022	0.0022	0.0022	0.004
Ethyl Acetate	0.0002	0.0002	0.0002	0.0002	0.000
2-Furaldehyde	0.0002	0.0002	0.0002	0.0002	0.000
Formic Acid	0.0042	0.0044	0.0045	0.0044	0.009
Glycerol	0.0401	0.0419	0.0423	0.0414	0.083
Formaldehyde	0.0002	0.0002	0.0002	0.0002	0.000
Methanol	0.0004	0.0004	0.0004	0.0004	0.001
Acetaldehyde	0.0028	0.0023	0.0015	0.0022	0.004
Acrolein	0.0002	0.0002	0.0002	0.0002	0.000
Total VOC				**0.103**	**0.205**
Total HAP				**0.003**	**0.006**

*Emissions were radioed due to the average ethanol content of the whole stillage (0.05 wt% at PRC used during testing) vs. the maximum whole stillage content at POET-North Manchester (0.1 wt%)

Process Rates =	Run 1	Run 2	Run 3	Average
	gpm	gpm	gpm	gpm
PRC 601 Centrifuge	42.33	42.66	42.39	42.46
PRC 603 Centrifuge	42.17	42.63	42.56	42.5
Total				84.91

Appendix A: Emission Calculations
Centrifuges (EU024)

Company Name:	**POET Biorefining - North Manchester, LLC**
Address City IN Zip:	**868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.:	**169-37113-00068**
Significant Permit Modification No.:	**169-37123-00068**
Reviewer:	**Thomas Olmstead**

2. Potential to Emit for POET - North Manchester, LLC:

1,000 gallons liquid per minute through centrifuges
500 Limited RTO Bypass Condition hours per year

VOC Uncontrolled PTE	**2.41**	**lb/hr**
VOC Uncontrolled PTE	**10.57**	**ton/year**
VOC Controlled*	**0.05**	**lb/hr**
VOC Controlled*	**0.21**	**ton/year**
VOC during RTO downtime**	**0.60**	**ton/year**

Based on higher flow rate at North Manchester

Uncontrolled rate (lb/hr) = Max (ratioed for North Manchester) (lb/hr) x Avg. Flow - North Manchester (gal/min) / Avg. Flow - PRC (gal/min)
Uncontrolled rate (ton/yr) = Uncontrolled PTE (lb/hr) x 1 ton / 2000 lb x 8760 hr/yr
*Controlled VOC during operation when RTO is operating. This value is already included in the RTO stack emissions.
**Based on uncontrolled emissions during limited hours of operation for RTO down time.

	Uncontrolled Rate		Limited Rate	
HAPs	**lb/hr**	**tpy**	**lb/hr**	**tpy**
Formaldehyde	4.71E-03	0.02	3.77E-03	9.42E-04
Methanol	9.42E-03	0.04	7.54E-03	1.88E-03
Acetaldehyde	5.18E-02	0.23	4.15E-02	1.04E-02
Acrolein	4.71E-03	0.02	3.77E-03	9.42E-04
Total HAP	**0.07**	**0.25**	**0.06**	**1.41E-02**

Uncontrolled rate (lb/hr) = Max (ratioed for North Manchester) (lb/hr) x Avg. Flow - North Manchester (gal/min) / Avg. Flow - PRC (gal/min)
Uncontrolled rate (ton/yr) = Uncontrolled PTE (lb/hr) x 1 ton / 2000 lb x 8760 hr/yr

3. Change in PTE (due to using stack test results from PRC instead of engineering estimate):

Previous calculated PTE*	6.6	**ton/year**
PTE after change in calculation method	10.57	**ton/year**
Increase in PTE	3.97	**ton/year**

*From Appendix A to TSD 169-31191-00068

Appendix A: Emission Calculations
PM, PM10 and PM2.5 Emissions - Paved Road Traffic

Company Name: **POET Biorefining - North Manchester, LLC**
Address City IN Zip: **868 East 800 North, North Manchester, IN 46962**
Significant Source Modification No.: **169-37113-00068**
Significant Permit Modification No.: **169-37123-00068**
Reviewer: **Thomas Olmstead**
Date: **August, 2016**

All trucks are assumed to have an empty weight of 15 tons and a full weight of 40 tons. Actual ethanol and denaturant trucks have a capacity of 8,000 gallons and DDGS trucks have a capacity of 25 tons.

Assume for the limited potential to emit calculations that 100% of the ethanol and DDGS are trucked off-site. Also assume that 100% of the denaturant and grain is received by truck. Actual operations will result in some of the ethanol and DGGS being shipped off-site by rail.

Equation from AP-42 Section 13.2.1 Paved Roads, January 2011

$E = k(sL)^{0.91} \times (W)^{1.02} \times (1-P/4N)$ Equation 2 *(Used for annual uncontrolled emissions, but adjusted for precipitation.)*

Formula Variables

Description	Variable	Value	
Emission Factor (lb/VMT)	E		
Value used for lb/VMT PM2.5	k	0.00054	
Value used for lb/VMT PM10	k	0.0022	
Value used for lb/VMT PM	k	0.011	
Surface material silt content (g/m^2)	sL	1.1	*(From AP-42, Table 13.2-1-3, Corn Wet Mills.)*
Mean vehicle weight (tons)	W	27.5	
Number of Days in a year with at least 0.01" of precipitation	P	120.00	
Number of days in the averaging period	N	365	

Vehicle Information

Vehicle Type	Annual Limited Amount Trucked		Quantity Transported per Truck		Max No. of Trucks Annually	Truck Empty Wt. (ton)	Truck Full Wt. (ton)	Truck Average Wt. (ton)	Total distance (mile)	Annual VMT
DDGS Haul Out	270,989	ton	25	ton	10,840	15	40	27.5	0.75	8,130
Ethanol Haul Out	86,000,000	gal	8,000	gal	10,750	15	40	27.5	0.75	8,063
Denaturant Delivery	6,815,000	gal	8,000	gal	852	15	40	27.5	0.75	639
Grain Delivery	821,178	ton	25	ton	32,847	15	40	27.5	0.75	24,635
Fleet Totals					**55,289**					**41,466**
Fleet Averages (weighted)						**15.0**	**40.0**	**27.5**		

Annual Limited Amounts and Quantity Transported per Truck values are linked to Project Parameters tab.

Fleet Emissions

Annual Uncontrolled $E_{(lb/VMT)}$	Annual Uncontrolled $E_{(lb/VMT)}$	Average Hourly Uncontrolled (lb/hr)	Annual Uncontrolled (ton/yr)
PM2.5	0.0159	0.08	0.33
PM10	0.0647	0.31	1.34
PM	0.3235	1.53	6.71

Annual Uncontrolled E (lb/VMT) calculated from Equation 2 above.
Average Hourly Uncontrolled (lb/hr) = Annual Uncontrolled (ton/yr) / 8760 hr/yr x 2000 lb/ton
Annual Uncontrolled (ton/yr) = Annual Uncontrolled E x Annual VMT / 2000 lb/ton

Appendix A: Emission Calculations
VOC and HAP Emissions From Equipment Leaks

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

1. Fugitive VOC Emissions:

Process Stream	Equipment Component Source	Product	Component Count	Emission Factor (lb/comp.-hr)	Uncontrolled Rate (lb/hr)	Uncontrolled Rate (ton/yr)	Subpart VVa Control Effectiveness	Controlled Rate (lb/hr)	TOC Weight (%)	Emitted Water (lb/hr)	Controlled TOC (lb/hr)	Controlled TOC (ton/yr)
EU011 - EU023 Distillation	Valves	Gas/Vapor	33	0.013134	0.43	1.90	92%	0.03	100%	0	0.035	0.152
	Valves	Light Liquid	271	0.0089	2.41	10.56	88%	0.29	100%	0	0.289	1.268
	Pump Seals	Light Liquid	7	0.04378	0.31	1.34	75%	0.08	100%	0	0.077	0.336
	Compressors	Gas/Vapor	0	0.5016	0	0		0	100%	0	0	0
	Relief Valves	Gas/Vapor	10	0.2288	2.29	10.02	92%	0.18	100%	0	0.183	0.802
	Sampling Connections	All	0	0.033	0	0		0	100%	0	0	0
	Open Ended Lines	All	0	0.00374	0	0		0	100%	0	0	0
	Connectors	All	1194	0.004026	4.81	21.05	93%	0.34	100%	0	0.336	1.474
EU011 - EU023 Fermentation	Valves	Gas/Vapor	1	0.013134	0.01	0.06	92%	0.00	15%	0.001	0.000	0.001
	Valves	Light Liquid	137	0.0089	1.22	5.34	88%	0.15	15%	0.124	0.022	0.096
	Pump Seals	Light Liquid	7	0.04378	0.31	1.34	75%	0.08	15%	0.065	0.011	0.050
	Compressors	Gas/Vapor	0	0.5016	0	0		0	15%	0	0	0
	Relief Valves	Gas/Vapor	0	0.2288	0	0	92%	0	15%	0	0	0
	Sampling Connections	All	0	0.033	0	0		0	15%	0	0	0
	Open Ended Lines	All	0	0.00374	0	0		0	15%	0	0	0
	Connectors	All	443	0.004026	1.78	7.81	93%	0.12	15%	0.106	0.019	0.082
T002 , T005 Denaturant Tanks	Valves	Gas/Vapor	0	0.013134	0.00	0.00	92%	0.00	100%	0	0.000	0.000
	Valves	Light Liquid	40	0.0089	0.36	1.56	88%	0.04	100%	0	0.043	0.187
	Pump Seals	Light Liquid	2	0.04378	0.09	0.38	75%	0.02	100%	0	0.022	0.096
	Compressors	Gas/Vapor	0	0.5016	0	0		0	100%	0	0	0
	Relief Valves	Gas/Vapor	1	0.2288	0.23	1.00	92%	0.02	100%	0	0.018	0.080
	Sampling Connections	All	0	0.033	0	0		0	100%	0	0	0
	Open Ended Lines	All	0	0.00374	0	0		0	100%	0	0	0
	Connectors	All	151	0.004026	0.61	2.66	93%	0.04	100%	0	0.043	0.186
T001, T003 - T004 Non-denaturant tanks (200-Proof Tanks)	Valves	Gas/Vapor	0	0.013134	0.00	0.00	92%	0.00	100%	0	0.000	0.000
	Valves	Light Liquid	160	0.0089	1.42	6.24	88%	0.17	100%	0	0.171	0.748
	Pump Seals	Light Liquid	5	0.04378	0.22	0.96	75%	0.05	100%	0	0.055	0.240
	Compressors	Gas/Vapor	0	0.5016	0	0		0	100%	0	0	0
	Relief Valves	Gas/Vapor	4	0.2288	0.92	4.01	92%	0.07	100%	0	0.073	0.321
	Sampling Connections	All	0	0.033	0	0		0	100%	0	0	0
	Open Ended Lines	All	0	0.00374	0	0		0	100%	0	0	0
	Connectors	All	769	0.004026	3.10	13.56	93%	0.22	100%	0	0.217	0.949
Totals					**20.50**	**89.81**		**1.91**		**0.30**	**1.61**	**7.07**

Methodology
* Component count provided initially by source for initial permit. Source performed audit and updated component count SSM 168-37113-00068.
** Emission factors are from Protocol for Equipment leak Emission Estimates, EPA-453/R-95-017. Table 2-1 and Table 5-2

2. Fugitive HAP Emissions:

Fugitive HAP Emissions (tons/yr) = Controlled TOC (tons/yr) x HAP Fraction

HAP	HAP Fraction*	Fugitive HAP Emissions (lb/hr)	Fugitive HAP Emissions (tons/yr)
Acetaldehyde **	2.00E-04	3.23E-04	1.41E-03
Benzene	2.50E-03	4.03E-03	1.77E-02
Carbon Disulfide	2.00E-05	3.23E-05	1.41E-04
Cumene	1.00E-03	1.61E-03	7.07E-03
Ethylbenzene	5.00E-05	8.07E-05	3.53E-04
n-Hexane	5.00E-02	8.07E-02	3.53E-01
Methanol	2.00E-04	3.23E-04	1.41E-03
Toluene	5.00E-03	8.07E-03	3.53E-02
Xylenes	5.00E-04	8.07E-04	3.53E-03
Total		**0.10**	**0.42**

Appendix A: Emission Calculations
PM, PM10, and PM2.5 Emissions from Cooling Tower

Company Name:	**POET Biorefining - North Manchester, LLC**
Address City IN Zip:	**868 East 800 North, North Manchester, IN 46962**
cant Source Modification No.:	**169-37113-00068**
icant Permit Modification No.:	**169-37123-00068**
Reviewer:	**Thomas Olmstead**
Date:	**August, 2016**

Water circulation flow =	30,000	gallons per minute
Water circulation flow =	113,562	liters per minute
Drift loss =	0.005%	
Drift loss =	5.7	liters per minute
Total Dissolved Solids in cooling tower =	2500	mg/l
Total Dissolved Solids in cooling tower =	2.5	g/l
PM-10 = Drift loss (l/min) x TDS (g/l)	14.2	grams/minute
g/min x 60 =	851.7	grams/hr
1 pound =	453.6	grams
Fugitive emissions=	1.9	lbs/hr
Fugitive emissions=	**8.22**	**TPY**

Appendix A: Emission Calculations
326 IAC 6-3-2 Particulate Emission Limitations for Manufacturing Processes

Company Name: POET Biorefining - North Manchester, LLC
Address City IN Zip: 868 East 800 North, North Manchester, IN 46962
Significant Source Modification No.: 169-37113-00068
Significant Permit Modification No.: 169-37123-00068
Reviewer: Thomas Olmstead
Date: August, 2016

		Process Weight, P		P<=60,000 lb/hr	P>60,000 lb/hr	PTE	PTE
		each unit	each unit	$E = 4.10\ P^{0.67}$	$E = 55\ P^{0.11} - 40$	Uncontrolled	Controlled
PM Control Device	Process	P (lb/hr)	P (ton/hr)	E (lb/hr)	E (lb/hr)	(lb/hr)	(lb/hr)
CE001	Grain Receiving (EU001), Conveyors (EU002), and Grain Storage Bins (EU003)	1,680,000	840	-	75.4	136.11	1.36
CE002	Corn Transfer Conveyor / Scalper (EU004, Surge Bin (EU005)	280,000	140	-	54.7	10.29	0.10
CE003	Hammermill #1 (EU006)	40,000	20	30.5	-	41.14	0.41
CE004	Hammermill #2 (EU007)	40,000	20	30.5	-	41.14	0.41
CE005	Hammermill #3 (EU008)	40,000	20	30.5	-	41.14	0.41
CE006	Hammermill #4 (EU009)	40,000	20	30.5	-	41.14	0.41
CE007	Hammermill #5 (EU010)	40,000	20	30.5	-	41.14	0.41
CE009	DDGS Dryer (EU025)	156,000	78.0	-	48.8	85.71	8.57
CE009	DDGS Dryer (EU026)	156,000	78.0	-	48.8	85.71	8.57
CE010	Fluidized DDGS Cooler (EU029)	58,000	29.0	39.1	-	81.60	0.816
CE011	DDGS Silo Loading (EU030)	58,000	29.0	39.1	-	13.71	0.14
CE012	DDGS Silo Bypass (EU031)	58,000	29.0	39.1	-	15.43	0.15
CE016	DDGS storage building (EU032)	58,000	29.0	39.1	-	34.29	0.34
	DDGS conveyor (EU033)	440,000	220	-	59.5	34.29	0.34
	DDGS truck loadout spout (EU034)	440,000	220	-	59.5	34.29	0.34
	DDGS rail loadout spout (EU035)	440,000	220	-	59.5	34.29	0.34

(c) This rule shall not apply if a particulate matter limitation established in:
(1) 326 IAC 2-2-3, concerning prevention of significant deterioration (PSD) best available control technology (BACT) determinations contained in a permit;
(2) 326 IAC 2-3-3, concerning lowest achievable emission rate (LAER) determinations contained in a permit;
(3) 326 IAC 6.5 and 326 IAC 6.8, concerning particulate matter emissions;
(4) 326 IAC 11, concerning existing emission limitations for specific operations;
(5) 326 IAC 12, concerning new source performance standards; or
(6) 326 IAC 20, concerning national emission standards for hazardous air pollutants.

Indiana Department of Environmental Management
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Michael R. Pence
Governor

Carol S. Comer
Commissioner

August 22, 2016

Mr. Keith Caudill
Plant Engineer
POET Biorefining – North Manchester, LLC
868 East 800 North
North Manchester, Indiana 46962

Re: Public Notice
POET Biorefining – North Manchester, LLC
Permit Level: Significant Source Modification
Permit Number: 169-37113-00069
Permit Level: Significant Permit Modification
Permit Number: 169-37123-00069

Dear Mr. Caudill:

Enclosed is a copy of your draft Significant Source Modification and Significant Permit Modification, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that the Wabash Plain Dealer in Wabash, Indiana publish the abbreviated version of the public notice no later than August 23, 2016. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the N. Manchester Public Library, 405 N. Market Street in North Manchester, Indiana. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Thomas Olmstead, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 3-9664 or dial (317) 233-9664.

Sincerely,

Vicki Biddle

Vicki Biddle
Permits Branch
Office of Air Quality

Enclosures PN Applicant Cover letter 2/17/2016

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Carol S. Comer
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

August 22, 2016

Wabash Plain Dealer
123 W. Canal Street
Wabash, Indiana 46992

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for POET Biorefining – North Manchester, LLC, Wabash County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than August 23, 2016.

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

To ensure proper payment, please reference account # 100174737.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Vicki Biddle at 800-451-6027 and ask for extension 3-6867 or dial 317-233-6867.

Sincerely,

Vicki Biddle

Vicki Biddle
Permit Branch
Office of Air Quality

Permit Level: Significant Source Modification
Permit Number: 169-37113-00069
Permit Level: Significant Permit Modification
Permit Number: 169-37123-00069

Enclosure

PN Newspaper.dot 2/17/2016

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Commissioner

August 22, 2016

To: North Manchester Public Library

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

Subject: **Important Information to Display Regarding a Public Notice for an Air Permits**

Permit Level: Significant Source Modification
Permit Number: 169-37113-00069
Permit Level: Significant Permit Modification
Permit Number: 169-37123-00069

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

If you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library.dot 2/16/2016

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Commissioner

Notice of Public Comment

August 22, 2016
Permit Level: Significant Source Modification
Permit Number: 169-37113-00069
Permit Level: Significant Permit Modification
Permit Number: 169-37123-00069

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover.dot 2/17/2016

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Carol S. Comer
Commissioner

AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

August 22, 2016

A 30-day public comment period has been initiated for:

Permit Numbers: **169-37113-00068 and 169-37123-00068**
Applicant Name: **POET Biorefining – North Manchester, LLC**
Location: **North Manchester, Wabash County, Indiana**

The public notice, draft permit and technical support documents can be accessed via the **IDEM Air Permits Online** site at:
http://www.in.gov/ai/appfiles/idem-caats/

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
100 North Senate Avenue
Indianapolis, IN 46204

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.

Mail Code 61-53

IDEM Staff	VBIDDLE 8/22/2016 POET Biorefining North Manchester LLC	169-37113-00068 169-37123-00068	DRAFT	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

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1		Keith Caudill POET Biorefining North Manchester LLC 868 E 800 N North Manchester IN 46962 (Source CAATS)									
2		Steve Pittman GM POET Biorefining North Manchester LLC 868 E 800 N North Manchester IN 46962 *(RO CAATS)*									
3		North Manchester Public Library 405 N. Market St North Manchester IN 46962 *(Library)*									
4		Wabash County Commissioners 1 West Hill Street Wabash IN 46992 *(Local Official)*									
5		Wabash County Health Department 89 W. Hill, Memorial Hall Wabash IN 46992-3184 *(Health Department)*									
6		Ted Little Wabash County Council 1076 West 900 North North Manchester IN 46962 *(Affected Party)*									
7		North Manchester Town Council and Town Manager 103 East Main Street North Manchester IN 46962 *(Local Official)*									
8		Chris White AECOM 800 LaSalle Avenue, Suite 500 Minneapolis MN 55402 *(Consultant)*									
9											
10											
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