INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

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

for Green Plains Mount Vernon LLC in Posey County

Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050

The Indiana Department of Environmental Management (IDEM) has received an application from Green Plains Mount Vernon LLC, located at 8999 West Franklin Road, Mount Vernon, Indiana 47620, for a significant modification of its Part 70 Operating Permit issued on September 20, 2017. If approved by IDEM's Office of Air Quality (OAQ), this proposed modification would allow Green Plains Mount Vernon LLC to make certain changes at its existing source. Green Plains Mount Vernon LLC has applied to modify the fermentation process from continuous to batch processing and modify the distillation process by construction of a new beer column and conversion of an existing beer column to a stripping column.

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 have been sent to:

Alexandrian Public Library
301 S. 9th St.
Mount Vernon, IN 47620

and

IDEM Southwest Regional Office
114 South 7th Street
P.O. Box 128
Petersburg, IN 47567-0128

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

A copy of the application and preliminary findings is also available via IDEM's Virtual File Cabinet (VFC). To access VFC, please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

How can you participate in this process?

The date that this notice is posted on IDEM's website (https://www.in.gov/idem/5474.htm) 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 129-43193-00050 and SPM 129-43205-00050 in all correspondence.

Comments should be sent to:

Doug Logan
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for Doug Logan or (317) 234-5328
Or dial directly: (317) 234-5328
Fax: (317) 232-6749 attn: Doug Logan
E-mail: dlogan@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 Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.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 and will also be sent to the local library indicated above, the IDEM

Regional Office 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 Doug Logan of my staff at the above address.

Brian Williams, Section Chief
Permits Branch
Office of Air Quality

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DRAFT

Mr. Dan Labhart
Green Plains Mount Vernon, LLC
8999 West Franklin Road
Mount Vernon, Indiana 47620

Re: 129-43205-00050
Significant Permit Modification

Dear Mr. Labhart:

Green Plains Mount Vernon, LLC was issued Part 70 Operating Permit Renewal No. T129-38638-00050 on September 20, 2017 for a stationary ethanol production plant located at 8999 West Franklin Road, Mount Vernon, Indiana 47620. An application requesting changes to this permit was received on August 25, 2020. 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. 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 B-	40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
Attachment C-	40 CFR 60, 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
Attachment D-	40 CFR 60, 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
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 Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
Attachment G-	40 CFR 63, Subpart CCCCCC, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

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

Previously issued approvals for this source are also available via IDEM's Virtual File Cabinet (VFC). To access VFC, please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

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.

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A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. A copy of the application and permit is also available via IDEM's Virtual File Cabinet (VFC). To access VFC, please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.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 regarding this matter, please contact Doug Logan, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-5328 or (800) 451-6027, and ask for Doug Logan or (317) 234-5328.

Sincerely,

Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document

cc: File - Posey County
Posey County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
IDEM Southwest Regional Office

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Commissioner

DRAFT

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Green Plains Mount Vernon, LLC
8999 West Franklin Road
Mount Vernon, Indiana 47620

(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.: T129-38638-00050 Agency Interest ID No.: 100098	
Issued by: Jenny Acker, Section Chief, Permits Branch Office of Air Quality	Issuance Date: September 20, 2017 Expiration Date: September 20, 2022

Administrative Amendment No.: 129-39465-00050, issued on January 25, 2018
Administrative Amendment No.: 129-40227-00050, issued on August 7, 2018

Significant Permit Modification No.: T129-43205-00050	
Issued by: Brian Williams, Section Chief, Permits Branch Office of Air Quality	 Issuance Date: Expiration Date: September 20, 2022

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(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:	8999 West Franklin Road, Mount Vernon, Indiana 47620
General Source Phone Number:	(812) 985-7480
SIC Code:	2869 (Industrial Organic Chemicals, Not Elsewhere Classified)
County Location:	Posey
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 Nested Source 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 area, constructed in 2009, and consisting of the following:

(1) One (1) truck/rail receiving pit, identified as EU-1101, with a rated capacity of 1,680 tons of corn per hour, controlled by baghouse CE-1101, and exhausting through stack SV-1101.

(2) One (1) grain transfer drag conveyor, identified as EU-1101A, with a rated capacity of 1,680 tons of corn per hour, controlled by baghouse CE-1101, and exhausting through stack SV-1101.

(3) One (1) truck receiving pit, identified as EU-1102, with a rated capacity of 1,120 tons of corn per hour, controlled by baghouse CE-1102, and exhausting through stack SV-1102;

(4) One (1) grain transfer drag conveyor, identified as EU-1102A, with a rated capacity of 1,120 tons of corn per hour, controlled by baghouse CE-1102, and exhausting through stack SV-1102.

(5) Two (2) grain storage silos, identified as EU-2001 and EU-2002, with a maximum capacity of 16,760 m^3 (470,146 bushels), each, and a maximum throughput of 1,680 tons of corn per hour, controlled by baghouses CE-2003A, CE-2003B, CE-2004A, and CE-2004B, and exhausting through stacks SV-2003A, SV-2003B, SV-2004A, and SV-2004B, respectively.

(b) One (1) corn scalper, identified as EU-1200, constructed in 2009, with a maximum capacity of 150 tons of corn per hour, controlled by baghouse CE-1200, and exhausting through stack SV-1200.

(c) Four (4) hammermill surge bins, identified as EU-1201, EU-1202, EU-1203, and EU-1204, constructed in 2009, with a maximum capacity of 117.6 tons of corn per hour, each, controlled by baghouse CE-1200, and exhausting through stack SV-1200.

(d) Four (4) hammermills, identified as EU-1205, EU-1206, EU-1207, and EU-1208, constructed in 2009, with a rated capacity of 117.6 tons of corn per hour, each, controlled by baghouses CE-1205, CE-1206, CE-1207, and CE-1208, respectively, and exhausting through stacks SV-1205, SV-1206, SV-1207, and SV-1208, respectively.

(e) One (1) DDGS unloading and loading area, constructed in 2009, and consisting of the following:

(1) One (1) DDGS truck loadout operation, identified as EU-2201, with a rated capacity of 200 tons per hour, controlled by high efficiency dustless spout filter system CE-2201, and exhausting through stack SV-2201; and

(2) Three (3) DDGS rail loadout operations, identified as EU-2202A, EU-2202B, and EU-2202C, with a rated capacity of 200 tons per hour, each, controlled by high efficiency dustless spout filter systems CE-2202A, CE-2202B, and CE-2202C, respectively, and exhausting through stacks SV-2202A, SV-2202B, and SV-2202C, respectively.

(f) One (1) fermentation process, constructed in 2009, approved in 2020 for modification, with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1401, except as noted, and chemical additive injection for VOC and HAP control, exhausting through stack SV-1401, consisting of the following major equipment:

(1) One (1) tank, identified as EU-1400.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 operates as a prefermenter tank, using wet scrubber CE-1400 and chemical additive injection for VOC and HAP control, exhausting through stack SV-1400.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 will operate as beer well #2.

(2) Six (6) main fermenters, identified as EU-1401 though EU-1406.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 operate as a continuous fermentation system.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 will operate as batch fermenters.

(3) One (1) beer well #1, identified as EU-1407.

(4) One (1) tank, identified as EU-1408.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 operates as a flash vessel.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 will operate as a yeast propagation tank.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(g) One (1) distillation process, constructed in 2009, approved in 2020 for modification, with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1504 and chemical additive injection for VOC and HAP control, exhausting through stack SV-1504, and consisting of the following major equipment:

(1) One (1) column identified as EU-1510.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 operates as a beer column.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 will operate as a stripping column.

(2) One (1) stripping column identified as EU-1520. When the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1520 will be permanently decommissioned in place.

(3) One (1) rectifying column identified as EU-1530.

(4) One (1) four-bottle molecular sieve unit, with associated heat exchangers and pumps.

(5) One (1) degas column identified as EU-1500.

(6) One (1) beer column, identified as EU-1550, approved in 2020 for construction.

(7) One (1) evaporator, identified as Evaporator #4 (EU-1573), approved in 2020 for construction.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(h) Four (4) natural gas fired boilers, identified as EU-5001, EU-5002, EU-5003, and EU-5004, constructed in 2009, with a maximum heat input rate of 92.4 MMBtu/hr, each, and exhausting through stacks SV-5001, SV-5002, SV-5003, and SV-5004, respectively.

Under 40 CFR 60, Subpart Dc, the boilers are considered affected facilities.

(i) Two (2) natural gas fired Swiss Combi "Eco-Dry" Dryer Systems, identified as EU-1801A and EU-1801B, constructed in 2009, with a maximum heat input rate of 76.7MMBtu/hr and a design throughput rate of 20 tons per hour of DDGS, each, with emissions exhausting through stacks SV-1802A and SV-1802B.

Note: The basis of the Swiss Combi Dryer System is an indirect heat drying process using a closed steam loop with thermal oxidation. The DDGS cooler is also integrated into the Eco-Dry system.

Under 40 CFR 60, Subpart Dc, the Swiss Combi Dryer Systems are considered affected facilities.

(j) One (1) ethanol loading rack for trucks and railcars, identified as EU-2101D, constructed in 2009, with rated throughput of 4,200 gallons per minute for trucks and railcars and a maximum operating capacity of 180,600 gallons per hour for trucks and railcars, controlled by a carbon adsorption/absorption hydrocarbon vapor recovery system, identified as CE-2101, and exhausting through stack SV-2101.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

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) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons, as follows:

(1) One (1) gasoline tank, constructed in 2009, with a maximum capacity of 500 gallons and an estimated monthly throughput of 140 gallons.

Under NESHAP, Subpart CCCCCC this is considered a new affected unit.

(b) Activities associated with emergencies as follows:

(1) Emergency generators, as follows:

(A) One (1) emergency diesel generator, identified as EU-7000, constructed in 2009, with a maximum power output rate of 1,495 horsepower, and exhausting through stack SV-7000.

Under 40 CFR 60, Subpart IIII, the emergency diesel generator is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, the emergency diesel generator is considered a new stationary compression ignition internal combustion engine.

(2) Stationary fire pump engines, as follows:

(A) One (1) diesel fired stationary fire pump, identified as EU-7075B, constructed in 2009, with a maximum power output rate of 460 horsepower, and exhausting through stack SV-7075B.

Under 40 CFR 60, Subpart IIII, the fire pump is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, the fire pump is considered a new stationary compression ignition internal combustion engine.

(c) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(1) One (1) denaturant storage tank, identified as T-2104, with a maximum capacity of 128,800 gallons equipped with an internal floating roof for VOC emissions control.

Under 40 CFR 60, Subpart Kb, T-2104 is considered an affected facility.

(2) Three (3) tanks for storage of denatured fuel ethanol, identified as T-2102, T-2103, and T-2105 each with a maximum capacity of 1,015,164 gallons, and each equipped with an internal floating roof for VOC emissions control.

Under 40 CFR 60, Subpart Kb, T-2102, T-2103, and T-2105 are considered affected facilities.

(3) One (1) corn oil separation process, approved in 2012 for construction, with a maximum throughput of 3,500,000 gallons per year, and consisting of the following:

(A) Two (2) tricanter centrifuges, uncontrolled, and exhausting inside.

(B) Four (4) storage tanks, storing corn oil, identified as TF-8901, TF-8902, TF-8903, and TF-8904, each with a maximum capacity of 9,500 gallons, and controlled by the distillation scrubber (CE-1504).

(C) Seven (7) process tanks, uncontrolled, exhausting inside, and consisting of the following:

(i) One (1) 560 gallon aqueous soluble phase receiver tank, identified as TP-6852;

(ii) One (1) 270 gallon emulsion concentrate receiver tank #2, identified as TP-6854;

(iii) One (1) 3,759 gallon centrifuge feed tank, identified as TS-6860;

(iv) One (1) 1,000 gallon emulsion flash mix tank, identified as TP-6901;

(v) One (1) 450 gallon emulsion settling tank, identified as TP-6930;

(vi) One (1) 400 gallon bio oil product tank, identified as TP-6931; and

(vii) One (1) 205 gallon emulsion concentrate receiver tank #1, identified as TS-6853.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

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, as defined in 326 IAC 2-7-1(21):

(a) A laboratory as defined in 326 IAC 2-7-1(21)(G).

(c) A petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less, as follows:

(1) One (1) diesel fuel tank, constructed in 2009, with a maximum capacity of 500 gallons and an estimated monthly throughput of 1,100 gallons.

(2) One (1) diesel fuel tank, permitted in 2017, with a maximum capacity of 1,000 gallons.

(d) Water based activities, including the following:

(1) Noncontact cooling tower systems with:

(A) Forced and induced draft cooling tower systems not regulated under a NESHAP, as follows:

(i) One (1) induced draft cooling tower, identified as CT-4001, constructed in 2009, with a maximum water circulation rate of 44,850 gallons per minute.

(e) Repair activities, including the following:

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

(f) Paved and unpaved roads and parking lots with public access.

(g) Blowdown for the following:

(1) Sight glass.
(2) Boiler.
(3) Cooling tower.
(4) Compressors.
(5) Pumps.

(i) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(1) One (1) fixed-roof anhydrous ethanol off-spec storage tank, identified as T-2101, with a maximum capacity of 39,500 gallons, equipped with an internal floating roof for VOC emissions control.

(2) Cook area process equipment, including: one (1) slurry tank (T-1301), one (1) mash cooker (V-1302), two (2) conversion tanks (T-1304 and T-1305), one (1) hot water tank (T-1330), one (1) saccharification flash vessel (V-1306), three (3) mash coolers (E-1311 through E-1313), three (3) mash trim coolers (E-1515 through E-1517), one (1) urea tank (T-1421), one (1) waste caustic tank (T-1903), one (1) 50% caustic tank (T1900), one (1) gluco-amylase tank (T-1310), one (1) alpha-amylase tank (T-1902), one (1) rinse water tank (T-1901), and one (1) yeast prep tank (T-1420).

(3) Equipment for handling spent grain from the fermentation process, including: one (1) triple effect light evaporation system, one (1) final concentrator, one (1) whole stillage tank (T-1701), one (1) thin stillage tank (T-1600), one (1) intermediate stillage tank (T-1702), one (1) syrup tank (T-1650), and four (4) stillage decanters (SP-1701 through SP-1704).

(4) One (1) corrosion inhibitor storage tank (V-2101).

(5) One (1) sulfuric acid tank (T-1911).

(6) One (1) aqueous ammonia tank (T-1910).

(7) One (1) phosphoric acid tank (T-1912).

(8) One (1) clean-in-place (CIP) system.

(9) One (1) aerobic waste treatment tank (T-7551).

(10) Compressed air and dry air systems.

(11) Two (2) fixed-roof anhydrous ethanol process tanks (shift tanks), identified as T-2110 and T-2111, each with a maximum capacity of 250,000 gallons and each equipped with an internal floating roof for VOC emissions control.

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, T129-38638-00050, 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. All 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) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, 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.

(c) 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).

(d) 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 or Southwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304.

(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 T129-38638-00050 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. 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(c).

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

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)] [40 CFR 64] [326 IAC 3-8]

(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) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

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 maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) 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 [40 CFR 64] [326 IAC 3-8] [326 IAC 2-7-5] [326 IAC 2-7-6]

(I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, 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.

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of

the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a Quality Improvement Plan (QIP). The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(c) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(c) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

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]

Pursuant to 326 IAC 2-6-3(b)(3), starting in 2006 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] [40 CFR 64] [326 IAC 3-8]

(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.

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

(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) 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

Emission Unit Description– Grain and DDGS Handling Processes:

(a) One (1) grain receiving area, constructed in 2009, and consisting of the following:

(1) One (1) truck/rail receiving pit, identified as EU-1101, with a rated capacity of 1,680 tons of corn per hour, controlled by baghouse CE-1101, and exhausting through stack SV-1101.

(2) One (1) grain transfer drag conveyor, identified as EU-1101A, with a rated capacity of 1,680 tons of corn per hour, controlled by baghouse CE-1101, and exhausting through stack SV-1101.

(3) One (1) truck receiving pit, identified as EU-1102, with a rated capacity of 1,120 tons of corn per hour, controlled by baghouse CE-1102, and exhausting through stack SV-1102;

(4) One (1) grain transfer drag conveyor, identified as EU-1102A, with a rated capacity of 1,120 tons of corn per hour, controlled by baghouse CE-1102, and exhausting through stack SV-1102.

(5) Two (2) grain storage silos, identified as EU-2001 and EU-2002, with a maximum capacity of 16,760 m^3 (470,146 bushels), each, and a maximum throughput of 1,680 tons of corn per hour, controlled by baghouses CE-2003A, CE-2003B, CE-2004A, and CE-2004B, and exhausting through stacks SV-2003A, SV-2003B, SV-2004A, and SV-2004B, respectively.

(b) One (1) corn scalper, identified as EU-1200, constructed in 2009, with a maximum capacity of 150 tons of corn per hour, controlled by baghouse CE-1200, and exhausting through stack SV-1200.

(c) Four (4) hammermill surge bins, identified as EU-1201, EU-1202, EU-1203, and EU-1204, constructed in 2009, with a maximum capacity of 117.6 tons of corn per hour, each, controlled by baghouse CE-1200, and exhausting through stack SV-1200.

(d) Four (4) hammermills, identified as EU-1205, EU-1206, EU-1207, and EU-1208, constructed in 2009, with a rated capacity of 117.6 tons of corn per hour, each, controlled by baghouses CE-1205, CE-1206, CE-1207, and CE-1208, respectively, and exhausting through stacks SV-1205, SV-1206, SV-1207, and SV-1208, respectively.

(e) One (1) DDGS unloading and loading area, constructed in 2009, and consisting of the following:

(1) One (1) DDGS truck loadout operation, identified as EU-2201, with a rated capacity of 200 tons per hour, controlled by high efficiency dustless spout filter system CE-2201, and exhausting through stack SV-2201; and

(2) Three (3) DDGS rail loadout operations, identified as EU-2202A, EU-2202B, and EU-2202C, with a rated capacity of 200 tons per hour, each, controlled by high efficiency dustless spout filter systems CE-2202A, CE-2202B, and CE-2202C, respectively, and exhausting through stacks SV-2202A, SV-2202B, and SV-2202C, respectively.

(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 PM, PM10, and PM2.5 Emissions [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) PM, PM10, and PM2.5 emissions from the units named in the table below shall not exceed the values shown in the table:

Unit Description	Control Device ID	PM Emission Limit (lbs/hr)	PM10 Emission Limit (lbs/hr)	PM2.5 Emission Limit (lbs/hr)
Truck/Rail Receiving Pit and Grain Conveyor (EU-1101 and EU-1101A)	CE-1101	3.09	3.09	3.09
Truck Receiving Pit and Grain Conveyor (EU-1102 and EU-1102A)	CE-1102	1.29	1.29	1.29
Grain Storage Silo (EU-2001)	CE-2003A	0.13	0.13	0.13
Grain Storage Silo (EU-2001)	CE-2003B	0.13	0.13	0.13
Grain Storage Silo (EU-2002)	CE-2004A	0.13	0.13	0.13
Grain Storage Silo (EU-2002)	CE-2004B	0.13	0.13	0.13
Corn Scalper and Hammer Mill Surge Bins (EU-1200 and EU-1201 through EU-1204)	CE-1200	0.13	0.13	0.13
Hammermill (EU-1205)	CE-1205	0.77	0.77	0.77
Hammermill (EU-1206)	CE-1206	0.77	0.77	0.77
Hammermill (EU-1207)	CE-1207	0.77	0.77	0.77
Hammermill (EU-1208)	CE-1208	0.77	0.77	0.77
DDGS Truck Loadout (EU-2201)	CE-2201	0.18	0.18	0.18
DDGS Rail Loadout (EU-2202A)	CE-2202A	0.18	0.18	0.18
DDGS Rail Loadout (EU-2202B)	CE-2202B	0.18	0.18	0.18
DDGS Rail Loadout (EU-2202C)	CE-2202C	0.18	0.18	0.18

Compliance with these limits, combined with the potential to emit PM, PM10, and PM2.5 from all other emission units at the source, shall limit the source-wide total potential to emit of PM, PM10, and PM2.5 to less than 250 tons per twelve (12) consecutive month period, each, and shall render the requirements 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions rate from the following operations shall not exceed the pound per hour limit (E) when operating at the associated process weight rate as listed in the table below:

Process Description	Process Weight Rate (ton/hr)	E 326 IAC 6-3-2 Limit (lb/hr)
Truck/rail receiving pit EU-1101 & drag conveyor EU-1101A	1,680.00	84.49
Truck receiving pit EU-1102 & drag conveyor EU-1102A	1,120.00	79.06
Grain storage silo EU-2001	1,680.00	84.49
Grain storage silo EU-2002	1,680.00	84.49
Corn scalper EU-1200 & surge bins EU-1201 through EU-1204	150.00	55.44
Hammermill EU-1205	117.60	52.92
Hammermill EU-1206	117.60	52.92
Hammermill EU-1207	117.60	52.92
Hammermill EU-1208	117.60	52.92
DDGS truck loadout EU-2201	200.00	58.51
DDGS rail loadout EU-2202A	200.00	58.51
DDGS rail loadout EU-2202B	200.00	58.51
DDGS rail loadout EU-2202C	200.00	58.51

(b) 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

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

Unit Description	Control Device ID
Truck/Rail Receiving Pit and Grain Conveyor (EU-1101 and EU-1101A)	CE-1101
Truck Receiving Pit and Grain Conveyor (EU-1102 and EU-1102A)	CE-1102
Grain Storage Silo (EU-2001)	CE-2003A CE-2003B

Unit Description	Control Device ID
Grain Storage Silo (EU-2002)	CE-2004A CE-2004B
Corn Scalper and Hammer Mill Surge Bins (EU-1200 and EU-1201 through EU-1204)	CE-1200
Hammermill (EU-1205)	CE-1205
Hammermill (EU-1206)	CE-1206
Hammermill (EU-1207)	CE-1207
Hammermill (EU-1208)	CE-1208
DDGS Truck Loadout (EU-2201)	CE-2201
DDGS Rail Loadout (EU-2202A)	CE-2202A
DDGS Rail Loadout (EU-2202B)	CE-2202B
DDGS Rail Loadout (EU-2202C)	CE-2202C

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

(a) In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM10, and PM2.5 testing of the Truck/Rail Receiving Pit and Grain Conveyor (EU-1101 and EU-1101A, controlled by baghouse CE-1101) utilizing methods as approved by the Commissioner 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. PM10 and PM2.5 includes filterable and condensable PM.

(b) In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM10, and PM2.5 testing of the Truck Receiving Pit and Grain Conveyor (EU-1102 and EU-1102A, controlled by baghouse CE-1102) utilizing methods as approved by the Commissioner 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. PM10 and PM2.5 includes filterable and condensable PM.

(c) Not later than 180 days after the issuance of this permit, Significant Source Modification No. 129-38153-00050, in order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM10, and PM2.5 testing of one of the Grain Storage Silos (EU-2001 and EU-2002, controlled by CE-2003A and CE-2003B and CE-2004A and CE-2004B, respectively) 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 most recent valid compliance demonstration. The source will test the control device within each group for which the longest period of time has passed since the last valid compliance test. 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. PM10 and PM2.5 includes filterable and condensable PM.

(d) In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM10, and PM2.5 testing of the Corn Scalper and Hammermill Surge Bins (EU-1200 through EU-1204, controlled by CE-1200) utilizing methods as approved by the Commissioner 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. PM10 and PM2.5 includes filterable and condensable PM.

(e) In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM10, and PM2.5 testing of one of the Hammermills (EU-1205 through EU-1208, controlled by CE-1205 through CE-1208, respectively) 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 most recent valid compliance demonstration. The source will test the control device within each group for which the longest period of time has passed since the last valid compliance test. 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. PM10 and PM2.5 includes filterable and condensable PM.

(f) In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM10, and PM2.5 testing of one of the DDGS Loadout operations (EU-2201, and EU-2202A through EU-2202C, controlled by CE-2201 and CE-2202A through CE-2202C, respectively) 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 most recent valid compliance demonstration. The source will test the control device within each group for which the longest period of time has passed since the last valid compliance test. 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. PM10 and PM2.5 includes filterable and condensable PM.

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

D.1.6 Parametric Monitoring [40 CFR 64]

The Permittee shall record the pressure drop across the control devices shown in the table below at least once per day when the associated emissions unit is in operation. When, for any one reading, the pressure drop across a control device is outside the normal range, the Permittee shall take a reasonable response. The normal range for these units is the pressure drop listed in the table below unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions and 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. Failure to take response steps shall be considered a deviation from this permit.

Emissions Units	Control Devices	Normal Parameters
Grain receiving and handling EU-1101, EU-1102, EU-1101A, and EU-1102A	Baghouses CE-1101 and CE-1102	Pressure drop 1 inch to 6 inches of water
Hammermills EU-1205 through EU-1208	Baghouses CE-1205, CE-1206, CE-1207, and CE-1208	Pressure drop 1 inch to 11 inches of water

The instruments 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.1.7 Parametric Monitoring

The Permittee shall record the pressure drop across the control devices shown in the table below at least once per day when the associated emissions unit is in operation. When, for any one reading, the pressure drop across a control is outside the normal range, the Permittee shall take a reasonable response. The normal range for these units is the pressure drop listed in the table below unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions and 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. Failure to take response steps shall be considered a deviation from this permit.

Emissions Units	Control Devices	Normal Parameters
Grain receiving and handling EU-2001, and EU-2002	Baghouses CE-2003A, CE-2003B, CE-2004A, and CE-2004B	Pressure drop 1 inch to 6 inches of water
Corn scalper and hammermill surge bins EU-1200 and EU-1201 through EU-1204	Baghouse CE-1200	
DDGS Loadout operation EU-2201, and EU-2202A through EU-2202C	Dustless spout filter systems CE-2201, CE-2202A, CE-2202B, and CE-2202C	Pressure drop 0.25 inch to 6 inches of water

The instruments 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

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

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

D.1.9 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.6 and D.1.7, the Permittee shall maintain daily records of pressure drop for baghouses and dustless spout filter systems during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g., the process did not operate that day).

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description - Fermentation and Distillation:

(f) One (1) fermentation process, constructed in 2009, approved in 2020 for modification, with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1401, except as noted, and chemical additive injection for VOC and HAP control, exhausting through stack SV-1401, consisting of the following major equipment:

(1) One (1) tank, identified as EU-1400.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 operates as a prefermenter tank, using wet scrubber CE-1400 and chemical additive injection for VOC and HAP control, exhausting through stack SV-1400.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 will operate as beer well #2.

(2) Six (6) main fermenters, identified as EU-1401 though EU-1406.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 operate as a continuous fermentation system.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 will operate as batch fermenters.

(3) One (1) beer well #1, identified as EU-1407.

(4) One (1) tank, identified as EU-1408.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 operates as a flash vessel.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 will operate as a yeast propagation tank.

(g) One (1) distillation process, constructed in 2009, approved in 2020 for modification, with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1504 and chemical additive injection for VOC and HAP control, exhausting through stack SV-1504, and consisting of the following major equipment:

(1) One (1) column identified as EU-1510.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 operates as a beer column.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 will operate as a stripping column.

(2) One (1) stripping column identified as EU-1520. When the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1520 will be permanently decommissioned in place.

(3) One (1) rectifying column identified as EU-1530.

(4) One (1) four-bottle molecular sieve unit, with associated heat exchangers and pumps.

(5) One (1) degas column identified as EU-1500.

(6) One (1) beer column, identified as EU-1550, approved in 2020 for construction.

(7) One (1) evaporator, identified as Evaporator #4 (EU-1573), approved in 2020 for construction.

Under 40 CFR 60, 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.2.1 PSD Minor Limits - VOC [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) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, the VOC emissions from the units named in the table below shall not exceed the values shown in the table:

Process /Control Device ID	VOC Limit (lb/hr)
Pre-Fermentation Scrubber (CE-1400)	4.50
Fermentation Scrubber (CE-1401)	20.00
Distillation Scrubber (CE-1504)	2.50

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, the VOC emissions from the units named in the table below shall not exceed the values shown in the table:

Process /Control Device ID	VOC Limit (lb/hr)
Fermentation Scrubber (CE-1401)	24.50
Distillation Scrubber (CE-1504)	2.50

Compliance with these limits, combined with the potential to emit VOC from all other emission units at the source, shall limit the source-wide total potential to emit of VOC to less than 250 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.2.2 VOC Emissions [326 IAC 8-5-6]

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

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050,

(1) The VOC emissions from the fermentation and distillation processes shall be controlled by wet scrubbers, identified as CE-1400, CE-1401, and CE-1504.

(2) The overall efficiency for each of the wet scrubbers CE-1400, CE-1401, and CE-1504 (including the capture efficiency and absorption efficiency), shall be at least 98%, or the VOC outlet concentration shall not exceed 20 ppmv at 100% capture.

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050,

(1) The VOC emissions from the fermentation and distillation processes shall be controlled by wet scrubbers, identified as CE-1401 and CE-1504.

(2) The overall efficiency for each of the wet scrubbers CE-1401 and CE-1504 (including the capture efficiency and absorption efficiency), shall be at least 98%, or the VOC outlet concentration shall not exceed 20 ppmv at 100% capture.

D.2.3 HAP Minor Limits [326 IAC 2-4.1] [40 CFR 63]

In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, HAP emissions from the units named in the table below shall not exceed the values shown in the table:

Process /Control Device ID	Acetaldehyde Limit (lb/hr)
Pre-Fermentation Scrubber (CE-1400)	0.30
Fermentation Scrubber (CE-1401)	0.45
Distillation Scrubber (CE-1504)	0.20

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, HAP emissions from the units named in the table below shall not exceed the values shown in the table:

HAP Limit	Fermentation Scrubber (CE-1401)	Distillation Scrubber (CE-1504)
Acetaldehyde (lb/hr)	0.75	0.20
Acrolein (lb/hr)	0.15	Not limited
Methanol (lb/hr)	0.15	0.10

Compliance with the above limits, combined with the potential to emit HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than

twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, and this source is an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

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

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, in order to assure compliance with Conditions D.2.1, D.2.2, and D.2.3, the scrubbers (CE-1400, CE-1401, and CE-1504) shall be in operation and control emissions from the fermentation and distillation processes at all times that these units are in operation.

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050,

(1) In order to assure compliance with Conditions D.2.1, D.2.2, and D.2.3, the scrubber (CE-1401) shall be in operation and control emissions from the fermentation processes at all times that these units are in operation.

(2) In order to assure compliance with Conditions D.2.1, D.2.2, and D.2.3, the scrubber (CE-1504) shall be in operation and control emissions from the distillation processes at all times that these units are in operation.

D.2.6 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 8-5-6]

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050,

(1) In order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, the Permittee shall perform VOC and acetaldehyde testing (including emission rate, overall destruction efficiency and overall capture efficiency), on the wet scrubber stacks (SV-1400, SV-1401, and SV-1504) utilizing methods as approved by the Commissioner 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.

(2) In order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, not later than 180 days after the use of a chemical additive at CE-1400, CE-1401, and CE-1504 for which a valid compliance demonstration had not been conducted during the previous five (5) years), the Permittee shall perform VOC and acetaldehyde testing (including emission rate, overall destruction efficiency and overall capture efficiency) on the wet scrubber stacks (SV-1400, SV-1401, and SV-1504) utilizing methods approved by the commissioner. 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.

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, in order to demonstrate compliance with Conditions D.2.1, D.2.2, and

D.2.3, not later than 180 days after operation of the modified fermentation and distillation processes commences or issuance of Significant Permit Modification No. 129-43205-00050, whichever is later, the Permittee shall perform testing for the pollutants listed below (including emission rate, overall destruction efficiency and overall capture efficiency), on the wet scrubber stacks (SV-1401 and SV-1504) utilizing methods as approved by the Commissioner 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.

VOC
Acetaldehyde
Acrolein
Formaldehyde
Methanol

Testing described in this paragraph shall be conducted with the chemical additive injection systems operating as described in Condition D.2.10 – Chemical Additive Injection System.

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

D.2.7 Scrubber Flow Rate [40 CFR 64] [326 IAC 8-5-6]

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall monitor and record the flow rate of the scrubbers (CE-1400, CE-1401, and CE-1504) at least once per day when the associated processes are in operation.

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall monitor and record the flow rate of the scrubbers (CE-1401 and CE-1504) at least once per day when the associated processes are in operation.

(c) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with limits in Conditions, D.2.1, D.2.2, and D.2.3.

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

(e) When for any one reading, the 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.

D.2.8 Parametric Monitoring [40 CFR 64] [326 IAC 8-5-6]

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall monitor and record the pressure drop across the scrubbers (CE-1400, CE-1401, and CE-1504) at least once per day when the associated processes are in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal ranges for these units is shown in the table below 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.

Control Devices	Normal Parameters
Scrubber CE-1400	Pressure drop 1 inch to 12 inches of water
Scrubber CE-1401	
Scrubber CE-1504	Pressure drop 1 inch to 6 inches of water

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall monitor and record the pressure drop across the scrubbers (CE-1401 and CE-1504) at least once per day when the associated processes are in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal ranges for these units is shown in the table below 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.

Control Devices	Normal Parameters
Scrubber CE-1401	Pressure drop 1 inch to 12 inches of water
Scrubber CE-1504	Pressure drop 1 inch to 6 inches of water

(c) 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.2.9 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

Failed units and the associated processes will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps 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.

D.2.10 Chemical Additive Injection System

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050,

(1) A continuous monitoring system shall be calibrated, maintained, and operated on the fermentation scrubbers (CE-1400 and CE-1401) and distillation scrubber

(CE-1504) for measuring the chemical additive injection rate. 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 a one-hour average.

(2) The Permittee shall determine the one-hour average injection rates from the most recent valid stack test that demonstrates compliance with limits in Condition D.2.1(a).

(3) On and after the date the stack test results are available, the Permittee shall inject the chemical additive at or above the one-hour average injection rates as observed during the compliant stack test.

(4) When the one-hour injection rate falls below the above mentioned one-hour injection rate, the Permittee shall take a response step. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A one-hour average that is outside the appropriate injection rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050,

(1) A continuous monitoring system shall be calibrated, maintained, and operated on the fermentation scrubber (CE-1401) and distillation scrubber (CE-1504) for measuring the chemical additive injection rate. 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 a one-hour average.

(2) The Permittee shall determine the one-hour average injection rates from the most recent valid stack test that demonstrates compliance with limits in Conditions D.2.1(b) and D.2.3(b).

(3) On and after the date the stack test results are available, the Permittee shall inject the chemical additive at or above the one-hour average injection rates as observed during the compliant stack test.

(4) When the one-hour injection rate falls below the above mentioned one-hour injection rate, the Permittee shall take a response step. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A one-hour average that is outside the appropriate injection rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.2.11 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.7,

(1) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall maintain records of once per day flow rate measurements of the scrubbers (CE-1400, CE-1401, and CE-1504).

(2) After completion of the modifications described in Significant Source Modification No. 129-43193-00050,the Permittee shall maintain records of once per day flow rate measurements of the scrubbers (CE-1401 and CE-1504).

The Permittee shall include in its daily record when a flow rate measurement is not taken and the reason for the lack of flow rate measurement (e.g., the process did not operate that day).

(b) To document the compliance status with Condition D.2.8,

(1) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall maintain daily records of pressure drop for the scrubbers (CE-1400, CE-1401, and CE-1504) during normal operation.

(2) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall maintain daily records of pressure drop for the scrubbers (CE-1401 and CE-1504) during normal operation.

The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g., the process did not operate that day).

(c) To document the compliance status with Condition D.2.10,

(1) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall maintain records of the one-hour average chemical additive injection rates of scrubbers CE-1400, CE-1401, and CE-1504.

(2) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall maintain records of the one-hour average chemical additive injection rates of scrubbers CE-1401 and CE-1504.

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

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description – Boilers:

(h) Four (4) natural gas fired boilers, identified as EU-5001, EU-5002, EU-5003, and EU-5004, constructed in 2009, with a maximum heat input rate of 92.4 MMBtu/hr, each, and exhausting through stacks SV-5001, SV-5002, SV-5003, and SV-5004, respectively.

Under 40 CFR 60, Subpart Dc, the boilers are considered affected facilities.

(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) The input of natural gas to the boilers shall be limited to 3174.2 MMCF per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) NOx emissions shall not exceed 51.0 pounds per MMCF.

(c) CO emissions shall not exceed 51.0 pounds per MMCF.

Compliance with the above limits, combined with the potential to emit NOx and CO from all other emission units at this source, shall limit the source-wide total potential to emit of NOx and CO to less than 250 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Compliance with the above limits, shall limit the potential to emit of NOx and CO from the boilers to less than 100 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) 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 following units shall be limited to Pt pounds per MMBtu heat input, as follows:

Emission Unit	Unit ID	Pt (lb/MMBtu)
Boiler	EU-5001	0.21
Boiler	EU-5002	0.21
Boiler	EU-5003	0.21
Boiler	EU-5004	0.21

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 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.3.1, the Permittee shall perform NOx and CO testing for one of the boilers (BL-5001, BL-5002, BL-5003, and BL-5004) utilizing methods as approved by the Commissioner. These tests shall be repeated on a different boiler at least once every five (5) years from the date of the most recent valid compliance demonstration. The source will test the boiler for which the longest period of time has passed since the last valid compliance test. 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.3.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.1, the Permittee shall maintain daily records of the amount of natural gas combusted in the boilers.

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

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description – Dryer and Cooling System:

(i) Two (2) natural gas fired Swiss Combi "Eco-Dry" Dryer Systems, identified as EU-1801A and EU-1801B, constructed in 2009, with a maximum heat input rate of 76.7MMBtu/hr and a design throughput rate of 20 tons per hour of DDGS, each, with emissions exhausting through stacks SV-1802A and SV-1802B.

Note: The basis of the Swiss Combi Dryer System is an indirect heat drying process using a closed steam loop with thermal oxidation. The DDGS cooler is also integrated into the Eco-Dry system.

Under 40 CFR 60, Subpart Dc, the Swiss Combi Dryer Systems are considered affected facilities.

(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 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) The Swiss Combi Dryer Systems (EU-1801A and EU-1801B) shall only burn natural gas.

(b) The throughput of DDGS to the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) shall be limited to 330,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) PM emissions shall not exceed 0.54 lb/ton for each stack (SV-1802A and SV-1802B).

(d) PM10 emissions shall not exceed 0.54 lb/ton for each stack (SV-1802A and SV-1802B).

(e) PM2.5 emissions shall not exceed 0.54 lb/ton for each stack (SV-1802A and SV-1802B).

(f) SO2 emissions shall not exceed 0.0106 lb/MMBtu for each stack (SV-1802A and SV-1802B).

(g) NOx emissions shall not exceed 0.21 lb/MMBtu for each stack (SV-1802A and SV-1802B).

(h) VOC emissions shall not exceed 0.41 lb/ton for each stack (SV-1802A and SV-1802B).

(i) CO emissions shall not exceed 0.95 lb/ton for each stack (SV-1802A and SV-1802B).

Compliance with the above limits, combined with the potential to emit PM, PM10, PM2.5, SO2, NOx, VOC, and HAPs from all other emission units at the source, shall limit the source-wide total potential to emit of PM, PM10, PM2.5, SO2, NOx, and VOC to less than 250 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.4.2 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) The VOC emissions from the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) shall be controlled by thermal oxidation.

(b) The overall efficiency for the Swiss Combi Dryer Systems, identified as EU-1801A and EU-1801B, (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 10 ppmv at 100% capture.

D.4.3 HAP Minor Limits [326 IAC 2-4.1] [40 CFR 63]

In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) Acetaldehyde emissions shall not exceed 0.57 lb/hr for each stack (SV-1802A and SV-1802B).

(b) Acrolein emissions shall not exceed 0.43 lb/hr for each stack (SV-1802A and SV-1802B).

(c) Formaldehyde emissions shall not exceed 0.27 lb/hr for each stack (SV-1802A and SV-1802B).

(d) Methanol emissions shall not exceed 0.10 lb/hr for each stack (SV-1802A and SV-1802B).

Compliance with the above limits, combined with the potential to emit HAPs from all other emission units at this source, shall limit the source-wide potential to emit of any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable, and this source is an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

D.4.4 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 following units shall be limited to Pt pounds per MMBtu heat input, as follows:

Emission Unit	Unit ID	Pt (lb/MMBtu)
Swiss Combi Dryer	EU-1801A	0.21
Swiss Combi Dryer	EU-1801B	0.21

D.4.5 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions rate from the following operations shall not exceed the pound per hour limit (E) when operating at the associated process weight rate as listed in the table below:

Process Description	Process Weight Rate (ton/hr)	E 326 IAC 6-3-2 Limit (lb/hr)
Swiss Combi dryer EU-1801A	20.00	30.51
Swiss Combi dryer EU-1801B	20.00	30.51

D.4.6 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.4.7 Particulate Control

In order to assure compliance with Conditions D.4.1 and D.4.5, the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) shall be in operation and control particulate emissions from the DDGS dryers and coolers at all times that these units are in operation.

D.4.8 VOC and HAP Control

In order to assure compliance with Conditions D.4.2 and D.4.3, the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) shall be in operation and control VOC and HAP emissions from the DDGS dryers and coolers at all times that these units are in operation.

D.4.9 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 8-5-6]

(a) In order to demonstrate compliance with Conditions D.4.1(c), (d), and (e) and D.4.4, the Permittee shall perform PM, PM10, PM2.5 testing for each of the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) utilizing methods as approved by the Commissioner 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. PM10 and PM2.5 includes filterable and condensable PM.

(b) In order to demonstrate compliance with Conditions D.4.1(g), the Permittee shall perform NOx testing for each of the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) utilizing methods as approved by the Commissioner 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.

(c) In order to demonstrate compliance with Conditions D.4.1(h) and D.4.2, the Permittee shall perform VOC (including emission rate, destruction efficiency, and capture efficiency) testing for each of the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) utilizing methods as approved by the Commissioner 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 Conditions D.4.1(i), the Permittee shall perform CO testing for each of the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) utilizing methods as approved by the Commissioner 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.

(e) In order to demonstrate compliance with Conditions D.4.3(a), the Permittee shall perform acetaldehyde testing for each of the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) utilizing methods as approved by the Commissioner 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.

(f) Not later than 180 days after issuance of this permit, Significant Source Modification No. 129-38153-00050 in order to demonstrate compliance with Conditions D.4.3(b), the Permittee shall perform acrolein testing for each of the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) utilizing methods as approved by the Commissioner 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.

(g) Not later than 180 days after issuance of this permit, Significant Source Modification No. 129-38153-00050 in order to demonstrate compliance with Conditions D.4.3(c), the Permittee shall perform formaldehyde testing for each of for each of the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) utilizing methods as approved by the Commissioner 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.

(h) Not later than 180 days after issuance of this permit, Significant Source Modification No. 129-38153-00050 in order to demonstrate compliance with Conditions D.4.3(d), the Permittee shall perform methanol testing for each of for each of the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) utilizing methods as approved by the Commissioner 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.

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

D.4.10 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the stack exhaust from the thermal oxidizers (stacks SV-1802A and SV-1802B) 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.4.11 Thermal Oxidation Temperature [40 CFR 64] [326 IAC 8-5-6]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) 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) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.4.1 and D.4.2.

(c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature as observed during the compliant stack test. If the 3-hour average temperature falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(d) 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.4.12 Parametric Monitoring [326 IAC 8-5-6]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the Swiss Combi Dryer Systems (EU-1801A and EU-1801B) 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. From the date of startup until the stack test results are available, the Permittee shall maintain the 3-hour average duct pressure or fan amperage within the normal range.

(b) 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.4.1 and D.4.2.

(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 mentioned 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.

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

D.4.13 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.1, the Permittee shall maintain daily records of the amount of natural gas combusted in the Swiss Combi Dryer Systems (EU-1801A and EU-1801B).

(b) To document the compliance status with Condition D.4.10, the Permittee shall maintain records of once per day visible emission notations of stacks SV-1802A and SV-1802B. 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.4.11, the Permittee shall maintain continuous temperature records for the thermal oxidizers and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(d) To document the compliance status with Condition D.4.12, the Permittee shall maintain continuous duct pressure or fan amperage records for the thermal oxidizers and the 3-hour average duct pressure or fan amperage used to demonstrate compliance during the most recent compliant stack test.

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

D.4.14 Reporting Requirements

A quarterly summary of the information to document compliance status with Condition D.4.1 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(35).

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description – Loading Racks:

(j) One (1) ethanol loading rack for trucks and railcars, identified as EU-2101D, constructed in 2009, with rated throughput of 4,200 gallons per minute for trucks and railcars and a maximum operating capacity of 180,600 gallons per hour for trucks and railcars, controlled by a carbon adsorption/absorption hydrocarbon vapor recovery system, identified as CE-2101, and exhausting through stack SV-2101.

Under 40 CFR 60, 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.5.1 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) The total denatured ethanol load-out rate shall not exceed 135,714,290 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The VOC emissions from the ethanol loading rack for trucks and railcars, identified as EU-2101D, shall not exceed 0.2946 lbs/kgal.

(c) The Permittee shall use a carbon adsorption/absorption hydrocarbon vapor recovery system identified as CE-2101 to control the emissions from ethanol loading to trucks and railcars (EU-2101D).

(d) The ethanol loading racks shall utilize submerged loading methods.

(e) The railcar and truck loading operations shall not use vapor balance services.

Compliance with the above limits, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide total potential to emit of VOC to less than 250 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.5.2 VOC Emissions [Commissioner's Order and Variance]

Pursuant to Commissioner's Order #2015-01, issued September 8, 2015 and Variance issued on November 12, 2015, in lieu of the requirement to control VOC emissions from the ethanol loading racks as specified in 326 IAC 8-5-6, the Permittee shall comply with the following:

(a) The Permittee shall use a carbon adsorption/absorption hydrocarbon vapor recovery system, identified as CE-2101 to control the emissions from ethanol loading to trucks and railcars (EU-2101D).

(b) The carbon adsorption/absorption hydrocarbon vapor recovery system (CE-2101) shall be in operation and control emissions from the ethanol loading system (EU-2101D) at all times when the unit is in operation.

(c) The overall efficiency for the carbon adsorption/absorption hydrocarbon vapor recovery system (CE-2101), including the capture efficiency and adsorption/absorption efficiency, shall be at least 98%. The Permittee shall demonstrate compliance using methods approved by the department. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures) at least once every five (5) years from the date of the most recent valid compliance demonstration.

(d) The Permittee shall certify and maintain a continuous emissions monitoring system (CEMS) for each carbon bed within 180 days after the effective date of Commissioner's Order #2015-01. The CEMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 8 and is subject to monitor system certification requirements pursuant to 326 IAC 3-5.

(e) The continuous VOC monitoring system shall be calibrated and operated to measure the outlet VOC concentration of the carbon adsorption/absorption hydrocarbon vapor recovery system serving the ethanol loading systems. The continuous VOC monitoring system shall be in operation at all times the ethanol loading systems are in operation, except during periods the monitoring system is undergoing quality assurance/quality control checks, repairs, replacement or maintenance or is malfunctioning. "Continuous" shall mean the collection of at least one measurement of the carbon adsorption/absorption hydrocarbon vapor recovery system outlet VOC concentration for each 15-minute block period.

(f) The VOC CEMS is to be used as parametric monitoring to indicate breakthrough of VOC emissions and a spike in emissions. The VOC concentration indicating breakthrough shall be determined by an engineering analysis and shall be available for inspection, if requested by the department. If the carbon bed outlet VOC concentration exceeds the level determined to be breakthrough, then the Permittee shall take reasonable steps to restore operation of the control device to its normal or usual manner of operation as expeditiously as possible in accordance with good air pollution control practices for minimizing excess emissions. Failure to take response steps shall be considered a deviation.

(g) The permittee shall maintain records of the readings of the continuous VOC monitoring system.

D.5.3 HAP Minor Limits [326 IAC 2-4.1] [40 CFR 63]

In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) The total denatured ethanol load-out rate shall not exceed 135,714,290 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Benzene emissions from SV-2101 shall not exceed 2.07E-03 lb/kgal when loading trucks.

(c) Cumene emissions from SV-2101 shall not exceed 2.31E-04 lb/kgal when loading trucks.

(d) Ethylbenzene emissions from SV-2101 shall not exceed 2.31E-04 lb/kgal when loading trucks.

(e) n-Hexane emissions from SV-2101 shall not exceed 3.69E-03 lb/kgal when loading trucks.

(f) Naphthalene emissions from SV-2101 shall not exceed 1.15E-03 lb/kgal when loading trucks.

(g) Toluene emissions from SV-2101 shall not exceed 3.00E-03 lb/kgal when loading trucks.

(h) 2,2,4-Trimethylpentane emissions from SV-2101 shall not exceed 1.84E-03 lb/kgal when loading trucks.

(i) Xylenes emissions from SV-2101 shall not exceed 1.15E-03 lb/kgal when loading trucks.

Compliance with the above limits, combined with the potential to emit HAPs from all other emission units at this source, shall limit the source-wide potential to emit of any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable, and this source is an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

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 [326 IAC 2-7-5(1)]

D.5.5 VOC Control

In order to assure compliance with Conditions D.5.1 and D.5.2, the carbon adsorption/absorption vapor recovery systems (CE-2101) shall be in operation and control emissions from the ethanol loading system (EU-2101D) at all times when the unit is in operation.

D.5.6 Testing Requirements [326 IAC 2-1.1-11]]

(a) In order to demonstrate compliance with Conditions D.5.1 and D.5.2, the Permittee shall perform VOC (including emission rate, adsorption/adsorption efficiency, and capture efficiency) testing for the carbon adsorption/absorption vapor recovery system (CE-2101), utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) Not later than 180 days after issuance of this permit, Significant Source Modification No. 129-38153-00050 in order to demonstrate compliance with Condition D.5.3, the Permittee shall perform testing for the HAPs listed in the table below for the carbon adsorption/absorption vapor recovery system (CE-2101) when loading trucks, utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration

HAP
Benzene
Cumene
Ethylbenzene
n-Hexane
Naphthalene
Toluene
2,2,4-Trimethylpentane
Xylenes

(c) 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.5.7 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-7-6(1),(6)]

(a) Pursuant to Commissioner's Order #2015-01, issued September 8, 2015, Variance issued November 12, 2015, and 326 IAC 3-5 (Continuous Monitoring of Emissions) a continuous emission monitoring system for the carbon adsorption/absorption hydrocarbon vapor recovery system (CE-2101) shall be calibrated, maintained, and operated for measuring VOC, which meet all applicable performance specifications of 326 IAC 3-5-2.

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

(c) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to Commissioner's Order #2015-01, issued September 8, 2015 and 326 IAC 3-5.

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

D.5.9 VOC Continuous Emissions Monitoring (CEMS) Equipment Downtime

(a) In the event that a breakdown of a VOC continuous emissions monitoring system (CEMS) occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.

(b) Whenever a VOC continuous emissions monitoring system (CEMS) is malfunctioning or is down for maintenance or repairs for a period of twenty-four (24) hours or more and a backup VOC CEMS is not online within twenty-four (24) hours of shutdown or malfunction of the primary VOC CEMS, the Permittee shall comply with the following:

(1) The Permittee shall monitor and record the carbon bed regeneration pressure for the carbon adsorption/absorption hydrocarbon vapor recovery system (CE-2101) when the ethanol loading system (EU-2101D) is in operation. The carbon bed regeneration pressure for the carbon adsorption/absorption hydrocarbon vapor recovery system (CE-2101) shall achieve a minimum 3 inches Hg during the regeneration cycle of the carbon beds.

(2) The Permittee shall monitor and record the high adsorber bed temperature for the carbon adsorption/absorption hydrocarbon vapor recovery system (CE-2101) when the ethanol loading system (EU-2101D) is in operation. The high adsorber bed temperature for the carbon adsorption/absorption hydrocarbon vapor recovery system (CE-2101) shall be maintained at a temperature below 200°F.

(c) Parametric monitoring shall begin not more than twenty-four (24) hours after the start of the malfunction or down time at least twice per day during normal operations, with at least four (4) hours between each set of readings, until a VOC CEMS is online.

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

D.5.10 Record Keeping Requirements

(a) To document the compliance status with Condition D.5.1(a), the Permittee shall maintain monthly records of the total amount of denatured ethanol loaded out from the ethanol loading racks.

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

D.5.11 Record Keeping Requirements for CEMS [326 IAC 2-7-5(3)(A)(iii)] [326 IAC 3-5]

(a) The Permittee shall record the output of the continuous monitoring system(s) in parts per million by weight (ppmw) and shall perform the required record keeping pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

(b) In the event that a breakdown of the VOC continuous emission monitoring systems (CEMS) occurs, the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.

(c) To document the compliance status with Condition D.5.9(b)(1), the Permittee shall maintain records of the carbon bed regeneration pressure for the carbon adsorption/absorption hydrocarbon vapor recovery system (CE-2101). The Permittee shall include in its daily records when a pressure reading is not taken and the reason for the lack of pressure reading (e.g., the process did not operate that day).

(d) To document the compliance status with Condition D.5.9(b)(2), the Permittee shall maintain records of the high adsorber bed temperature for the carbon adsorption/absorption hydrocarbon vapor recovery system (CE-2101). The Permittee shall include in its daily records when a temperature reading is not taken and the reason for the lack of temperature reading (e.g., the process did not operate that day).

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

D.5.12 Reporting Requirements

A quarterly summary of the information to document compliance status with Condition D.5.1(a) 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(35).

D.5.13 Reporting Requirements for CEMS [326 IAC 2-7-5(3)(A)(iii)] [326 IAC 3-5]

The Permittee shall prepare and submit to IDEM, OAQ a written report of the results of the calibration gas audits and relative accuracy test audits for each calendar quarter within thirty (30) calendar days after the end of each quarter. The report must contain the information required by 326 IAC 3-5-5(f). 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.6 EMISSIONS UNIT OPERATION CONDITIONS

Emission unit Description:

Insignificant Activities

(c) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(1) One (1) denaturant storage tank, identified as T-2104, with a maximum capacity of 128,800 gallons equipped with an internal floating roof for VOC emissions control.

Under 40 CFR 60, Subpart Kb, T-2104 is considered 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.6.1 Volatile Organic Compounds (VOC) [326 IAC 8-4-3]

(a) Pursuant to 326 IAC 8-4-3(b)(1)(B), the denaturant storage tank (T-2104) shall be maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials.

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

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

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

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

(c) Pursuant to 326 IAC 8-4-3(d), the Permittee shall maintain the following records for a period of two (2) years for the denaturant storage tank (T-2104):

(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 vessel.

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

D.6.2 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.

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

D.6.3 Record Keeping Requirements

(a) To document the compliance status with Condition D.6.1, the Permittee shall maintain the following records for T-2104:

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

SECTION E.1 NSPS

Emission Unit Description:

(h) Four (4) natural gas fired boilers, identified as EU-5001, EU-5002, EU-5003, and EU-5004, constructed in 2009, with a maximum heat input rate of 92.4 MMBtu/hr, each, and exhausting through stacks SV-5001, SV-5002, SV-5003, and SV-5004, respectively.

Under 40 CFR 60, Subpart Dc, the boilers are considered affected facilities.

(i) Two (2) natural gas fired Swiss Combi "Eco-Dry" Dryer Systems, identified as EU-1801A and EU-1801B, constructed in 2009, with a maximum heat input rate of 76.7MMBtu/hr and a design throughput rate of 20 tons per hour of DDGS, each, with emissions exhausting through stacks SV-1802A and SV-1802B.

Note: The basis of the Swiss Combi Dryer System is an indirect heat drying process using a closed steam loop with thermal oxidation. The DDGS cooler is also integrated into the Eco-Dry system.

Under 40 CFR 60, Subpart Dc, the Swiss Combi Dryer Systems are considered affected facilities.

(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 Dc.

(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 New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12] [40 CFR Part 60, Subpart Dc]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Dc (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 60.40c
(2) 40 CFR 60.41c
(3) 40 CFR 60.48c(a)
(4) 40 CFR 60.48c(g)(2)
(5) 40 CFR 60.48c(i)
(6) 40 CFR 60.48c(j)

SECTION E.2 NSPS

Emission Unit Description:

Insignificant Activities

(c) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(1) One (1) denaturant storage tank, identified as T-2104, with a maximum capacity of 128,800 gallons equipped with an internal floating roof for VOC emissions control.

Under 40 CFR 60, Subpart Kb, T-2104 is considered an affected facility.

(2) Three (3) tanks for storage of denatured fuel ethanol, identified as T-2102, T-2103, and T-2105 each with a maximum capacity of 1,015,164 gallons, and each equipped with an internal floating roof for VOC emissions control.

Under 40 CFR 60, Subpart Kb, T-2102, T-2103, and T-2105 are considered affected facilities.

(3) Two (2) fixed-roof anhydrous ethanol storage tanks (shift tanks), identified as T-2110 and T-2111, each with a maximum capacity of 250,000 gallons and each equipped with an internal floating roof for VOC emissions control.

Under 40 CFR 60, Subpart Kb, T-2110 and T-2111 are considered affected facilities.

(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 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.2.2 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 [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 C to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.110b
(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)
(7) 40 CFR 60.116b(b)
(8) 40 CFR 60.116b(c)
(9) 40 CFR 60.116b(d)
(10) 40 CFR 60.116b(e)
(11) 40 CFR 60.117b

SECTION E.3 **NSPS**

Emission Unit Description:

(f) One (1) fermentation process, constructed in 2009, approved in 2020 for modification, with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1401, except as noted, and chemical additive injection for VOC and HAP control, exhausting through stack SV-1401, consisting of the following major equipment:

(1) One (1) tank, identified as EU-1400.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 operates as a prefermenter tank, using wet scrubber CE-1400 and chemical additive injection for VOC and HAP control, exhausting through stack SV-1400.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 will operate as beer well #2.

(2) Six (6) main fermenters, identified as EU-1401 though EU-1406.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 operate as a continuous fermentation system.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 will operate as batch fermenters.

(3) One (1) beer well #1, identified as EU-1407.

(4) One (1) tank, identified as EU-1408.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 operates as a flash vessel.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 will operate as a yeast propagation tank.

(g) One (1) distillation process, constructed in 2009, approved in 2020 for modification, with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1504 and chemical additive injection for VOC and HAP control, exhausting through stack SV-1504, and consisting of the following major equipment:

(1) One (1) column identified as EU-1510.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 operates as a beer column.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 will operate as a stripping column.

(2) One (1) stripping column identified as EU-1520. When the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1520 will be permanently decommissioned in place.

(3) One (1) rectifying column identified as EU-1530.

(4) One (1) four-bottle molecular sieve unit, with associated heat exchangers and pumps.

(5) One (1) degas column identified as EU-1500.

(6) One (1) beer column, identified as EU-1550, approved in 2020 for construction.

(7) One (1) evaporator, identified as Evaporator #4 (EU-1573), approved in 2020 for construction.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(j) One (1) ethanol loading rack for trucks and railcars, identified as EU-2101D, constructed in 2009, with rated throughput of 4,200 gallons per minute for trucks and railcars and a maximum operating capacity of 180,600 gallons per hour for trucks and railcars, controlled by a carbon adsorption/absorption hydrocarbon vapor recovery system, identified as CE-2101, and exhausting through stack SV-2101.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

Insignificant Activities

(c) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(4) One (1) corn oil separation process, approved in 2012 for construction, with a maximum throughput of 3,500,000 gallons per year, and consisting of the following:

(A) Two (2) tricanter centrifuges, uncontrolled, and exhausting inside.

(B) Four (4) storage tanks, storing corn oil, each with a maximum capacity of 9,500 gallons, and controlled by the distillation scrubber (CE-1504).

(C) Seven (7) process tanks, uncontrolled, exhausting inside, and consisting of the following:

(i) One (1) 560 gallon tank;

(ii) One (1) 270 gallon tank;

(iii) One (1) 3,759 gallon tank;

(iv) One (1) 1,000 gallon tank;

(v) One (1) 450 gallon tank;

(vi) One (1) 400 gallon tank; and

(vii) One (1) 205 gallon tank.

Under 40 CFR 60, 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 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.3.2 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 [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 D to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.480a
(2) 40 CFR 60.481a
(3) 40 CFR 60.482-1a

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

SECTION E.4 **NSPS**

Emission Unit Description:

Insignificant Activities

(b) Activities associated with emergencies as follows:

(1) Emergency generators, as follows:

(A) One (1) emergency diesel generator, identified as EU-7000, constructed in 2009, with a maximum power output rate of 1,495 horsepower, and exhausting through stack SV-7000.

Under 40 CFR 60, Subpart IIII, the emergency diesel generator is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, the emergency diesel generator is considered a new stationary compression ignition internal combustion engine.

(2) Stationary fire pump engines, as follows:

(A) One (1) diesel fired stationary fire pump, identified as EU-7075B, constructed in 2009, with a maximum power output rate of 460 horsepower, and exhausting through stack SV-7075B.

Under 40 CFR 60, Subpart IIII, the fire pump is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, the fire pump is considered a new stationary compression ignition internal combustion engine.

(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 [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)
(2) 40 CFR 60.4200(a)(2)(ii)
(3) 40 CFR 60.4205(b)
(4) 40 CFR 60.4205(c)
(5) 40 CFR 60.4206
(6) 40 CFR 60.4207(b)
(7) 40 CFR 60.4208
(8) 40 CFR 60.4209(a)
(9) 40 CFR 60.4211(a)
(10) 40 CFR 60.4211(c)
(11) 40 CFR 60.4211(f)(1)
(12) 40 CFR 60.4211(f)(2)(i)
(13) 40 CFR 60.4211(f)(3)
(14) 40 CFR 60.4214(b)
(15) 40 CFR 60.4218
(16) 40 CFR 60.4219
(17) Table 4 to Subpart IIII of Part 60
(18) Table 5 to Subpart IIII of Part 60
(19) Table 8 to Subpart IIII of Part 60

SECTION E.5 NESHAP

Emission Unit Description:

Insignificant Activities

(b) Activities associated with emergencies as follows:

(1) Emergency generators, as follows:

(A) One (1) emergency diesel generator, identified as EU-7000, constructed in 2009, with a maximum power output rate of 1,495 horsepower, and exhausting through stack SV-7000.

Under 40 CFR 60, Subpart IIII, the emergency diesel generator is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, the emergency diesel generator is considered a new stationary compression ignition internal combustion engine.

(2) Stationary fire pump engines, as follows:

(A) One (1) diesel fired stationary fire pump, identified as EU-7075B, constructed in 2009, with a maximum power output rate of 460 horsepower, and exhausting through stack SV-7075B.

Under 40 CFR 60, Subpart IIII, the fire pump is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, the fire pump is considered a new stationary compression ignition internal combustion engine.

(The information describing the process contained in this emissions unit 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.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 [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
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
(4) 40 CFR 63.6595(a)(7)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675

SECTION E.6 NESHAP

Emissions Unit Description:

Insignificant Activities

(a) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons, as follows:

(1) One (1) gasoline tank, constructed in 2009, with a maximum capacity of 500 gallons and an estimated monthly throughput of 140 gallons.

Under NESHAP, Subpart CCCCCC this is considered a new affected unit.

(The information describing the process contained in this emissions unit 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 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 [40 CFR Part 63, Subpart CCCCCC]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart CCCCCC (included as Attachment G 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), (k)
(3) 40 CFR 63.11112(a) and (b)
(4) 40 CFR 63.11113(a)(2)
(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 Subpart CCCCCC of Part 63

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

Source Name: Green Plains Mount Vernon, LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-38638-00050

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: Green Plains Mount Vernon, LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-38638-00050

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: Green Plains Mount Vernon, LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-38638-00050
Facility: Swiss Combi Dryer Systems (EU-1801A and EU-1801B)
Parameter: DDGS Throughput
Limit: 330,000 tons of DDGS per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER : _____ YEAR: _____

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

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

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: Green Plains Mount Vernon, LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-38638-00050
Facility: Ethanol Loading Racks
Parameter: Total denatured ethanol load-out
Limit: 135,714,290 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER : _____ YEAR: _____

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

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

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: Green Plains Mount Vernon, LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-38638-00050

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: _____

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:	**Green Plains Mount Vernon, LLC**
Source Location:	**8999 West Franklin Road, Mount Vernon, Indiana 47620**
County:	**Posey**
SIC Code:	**2869 (Industrial Organic Chemicals, Not Elsewhere Classified)**
Operation Permit No.:	**T 129-38638-00050**
Operation Permit Issuance Date:	**September 20, 2017**
Significant Source Modification No.:	**129-43193-00050**
Significant Permit Modification No.:	**129-43205-00050**
Permit Reviewer:	**Doug Logan**

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. 129-38638-00050 on September 20, 2017. The source has since received the following approvals:

Permit Type	Permit Number	Issuance Date
Administrative Amendment	129-39465-00050	January 25, 2018
Administrative Amendment	129-40227-00050	August 7, 2018

County Attainment Status

The source is located in Posey County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard.
$PM_{2.5}$	Unclassifiable or attainment effective April 15, 2015, for the 2012 annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Unclassifiable or attainment effective January 29, 2012, for the 2010 NO_2 standard.
Pb	Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.

(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. Posey 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) $PM_{2.5}$
Posey 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
Posey County has been classified as attainment or unclassifiable in Indiana for all the 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 grain elevator, an ethanol production operation, and natural gas fired boilers which support 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, their fugitive emissions, are no longer counted toward determination of PSD applicability.

(2) The fugitive emissions from equipment leaks are not counted toward PSD applicability, because the applicable NSPS, 40 CFR 60, Subpart VVa was in effect after August 7, 1980.

(3) The fugitive emissions from the grain storage silos are not counted toward PSD applicability, because the grain storage silos are not part of the source category regulated under the applicable NSPS that was in effect on August 7, 1980. The grain storage silos are not a grain terminal elevator with a permanent storage capacity of more than 88,100 m^3 (ca. 2.5 million U.S. bushels). The total permanent storage capacity of the source is 33,140 m^3 (940,292 bu).

(4) The four (4) natural gas-fired 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 applicability.

The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit applicability and source status under Section 112 of the Clean Air Act (CAA).

Greenhouse Gas (GHG) Emissions

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 GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

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. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

	Source-Wide Emissions Prior to Modification (ton/year)								
	PM[1]	**PM_{10}[1]**	**$PM_{2.5}$[1, 2]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[3]**	**Combined HAPs**
Total PTE of Entire Source Excluding Fugitives*	213.12	189.81	175.22	23.38	234.57	217.79	240.52	9.51	24.83
Fugitives from NSPS/NESHAP Source Category (nested boilers)	0	0	0	0	0	0	0	0	0
Total PTE of Entire Source	**213.12**	**189.81**	**175.22**	**23.38**	**234.57**	**217.79**	**240.52**	**9.51**	**24.83**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	--	--

[1]Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."

[2]$PM_{2.5}$ listed is direct $PM_{2.5}$.

[3]Single highest source-wide HAP, acetaldehyde

*Fugitive HAP emissions are always included in the source-wide emissions.=

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant 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) This existing source is not a major source of HAP, as defined in 40 CFR 63.2, because HAP 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.

(c) These emissions are based on the TSD of Administrative Amendment No. 129-40227-00050, issued on August 7, 2018.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by Green Plains Mount Vernon, LLC on August 25, 2020, relating to modification of the fermentation process from continuous to batch processing and modification of the distillation process by construction of a new beer column and conversion of an existing beer column to a stripping column.

The following is a list of the new and modified emission units:

- One (1) fermentation process, constructed in 2009, approved in 2020 for modification, with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1401 and chemical additive injection for VOC control, exhausting through stack SV-1401, consisting of the following major equipment:
    - One (1) yeast propagator tank, identified as EU-1408, approved in 2020 for modification from

a flash vessel.

- Six (6) main fermenters, identified as EU-1401 though EU-1406, approved in 2020 for modification from continuous to batch fermentation.

- One (1) beer well #1, identified as EU-1407.

- One (1) beer well #2, identified as EU-1400, approved in 2020 for modification from a prefermenter tank.

- One (1) distillation process, constructed in 2009, approved in 2020 for modification, with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1504 and chemical additive injection for VOC control, exhausting through stack SV-1504, and consisting of the following major equipment:

  - One (1) beer column, identified as EU-1550, approved in 2020 for construction.

  - One (1) stripping column, identified as EU-1510, approved in 2020 for modification from a beer column.

  - One (1) four-bottle molecular sieve unit, with associated heat exchangers and pumps.

  - One (1) degas column identified as EU-1500.

  - One (1) evaporator, identified as Evaporator #4 (EU-1573), approved in 2020 for construction.

  NOTE: In Administrative Amendment No. 129-39465-00050, issued on January 25, 2018, the description of the molecular sieve unit was changed from four (4) to six (6) bottles. The source reports that the planned modification of the molecular sieve unit was not made and will not be pursued. Therefore, the present action restores the original description. There is no change to the potential to emit or method of operation associated with this change to the description.

The following units will be removed from the source:

- One (1) prefermenter scrubber, identified as CE-1400.

- One (1) stripping column, identified as EU-1520.

  The stripping column, EU-1520, will be decommissioned in place. The column will not operate again without being added to the source and permit in accordance with 326 IAC 2-7-10.5 and 326 IAC 2-7-12.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(12), 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. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

	PTE Increase of the Modified Emission Unit(s)/Process(es) (ton/year)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$[1]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[2]**	**Combined HAPs**
PTE Before Modification (Fermentation)	-	-	-	-	-	3,689.71	-	12.05	13.48
PTE After Modification (Fermentation)	-	-	-	-	-	3,313.86	-	53.44	141.39
PTE After Modification (Fermentation)	-	-	-	-	-	*0*	-	*41.39*	*127.91*
PTE Before Modification (Distillation)	-	-	-	-	-	342.08	-	2.93	3.21
PTE After Modification (Distillation)	-	-	-	-	-	250.76	-	7.84	18.99
PTE Increase (Distillation)	-	-	-	-	-	*0*	-	*4.91*	*15.78*
PTE Before Modification (Fugitive)	-	-	-	-	-	7.29	-	1.46E-03	0.42
PTE After Modification (Fugitive)	-	-	-	-	-	18.25	-	3.65E-03	1.06
PTE Increase (Fugitive)	-	-	-	-	-	*10.95*	-	*2.19E-03*	*0.64*
Total PTE Increase of the Modified Emission Unit(s)/Process	**-**	**-**	**-**	**-**	**-**	**10.95**	**-**	**46.30**	**144.32**

[1]$PM_{2.5}$ listed is direct $PM_{2.5}$.
[2]Single highest HAP, acetaldehyde.

(a) Approval to Construct

Pursuant to 326 IAC 2-7-10.5(g)(6), a Significant Source Modification is required because this modification has a potential to emit equal to or greater than ten (10) tons per year of a single HAP and twenty-five (25) tons per year of any combination of HAPs.

(b) Approval to Operate

Pursuant to 326 IAC 2-7-12(d)(1), this change to the permit is being made through a Significant Permit Modification because this modification does not qualify as a Minor Permit Modification or as an Administrative Amendment. This modification requires changes to case-by-case determinations of limits.

Permit Level Determination – PSD

The table below summarizes the potential to emit of the modification, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of the Part 70 source and permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

	Project Emissions (ton/year)						
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$[1]**	**SO_2**	**NO_X**	**VOC**	**CO**
Fermentation	-	-	-	-	-	0	-
Distillation	-	-	-	-	-	0	-
Total for Modification	**-**	**-**	**-**	**-**	**-**	**0**	**-**
PSD Major Source Thresholds	250	250	250	250	250	250	250

[1]$PM_{2.5}$ listed is direct $PM_{2.5}$.

(a) This modification to an existing minor PSD stationary source is not major because the emissions increase of each PSD regulated pollutant is less than the PSD major source threshold. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

PTE of the Entire Source After Issuance of the Part 70 Modification

The table below summarizes the after issuance source-wide potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of the Part 70 source and permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

	Source-Wide Emissions After Issuance (ton/year)								
	PM[1]	**PM_{10}[1]**	**$PM_{2.5}$[1, 2]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[3]**	**Combined HAPs**
Total PTE of Entire Source Excluding Fugitives*	213.12	189.81	175.22	23.38	234.57	217.79	240.52	9.51	24.33
Fugitives from NSPS/NESHAP Source Category (nested boilers)	0	0	0	0	0	0	0	0	0
Total PTE of Entire Source	**213.12**	**189.81**	**175.22**	**23.38**	**234.57**	**217.79**	**240.52**	**9.51**	**24.33**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	--	--

[1]Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."

[2]$PM_{2.5}$ listed is direct $PM_{2.5}$.

[3]Single highest source-wide HAP, acetaldehyde

*Fugitive HAP emissions are always included in the source-wide emissions.=

The source opted to take limit(s) in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to this source and to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA). See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-2 (PSD) and 326 IAC 20 (Hazardous Air Pollutants) for more information regarding the limit(s).

(a) This existing minor PSD stationary source will continue to be minor under 326 IAC 2-2 because the emissions of each PSD regulated pollutant will continue to be less than the PSD major source thresholds.

(b) This existing area source of HAP will continue to be an area source of HAP, as defined in 40 CFR 63.2, because HAP emissions will continue to be 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).

Federal Rule Applicability Determination

Due to the modification at this source, federal rule applicability has been reviewed as follows:

New Source Performance Standards (NSPS):

(a) Upon further review, the requirements of the 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 , 40 CFR 60, Subpart Kb and 326 IAC 12, are not applicable to the anhydrous alcohol shift tanks, T-2110 and T-2111, because the units are process tanks as defined at 40 CFR 60.111b. Process tanks are excluded from the definition of storage vessel at 40 CFR 60.111b.

(b) The modified fermentation and distillation processes are subject to the 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 and 326 IAC 12, because the operations produce a chemical listed in 40 CFR 60.489 as a final product. The units subject to this rule include the following:

- One (1) fermentation process, constructed in 2009, approved in 2020 for modification, with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1401 and chemical additive injection for VOC control, exhausting through stack SV-1401, consisting of the following major equipment:
    - One (1) yeast propagator tank, identified as EU-1408, approved in 2020 for modification from a flash vessel.
    - Six (6) main fermenters, identified as EU-1401 though EU-1406, approved in 2020 for modification from continuous to batch fermentation.
    - One (1) beer well #1, identified as EU-1407.
    - One (1) beer well #2, identified as EU-1400, approved in 2020 for modification from a prefermenter tank.
- One (1) distillation process, constructed in 2009, approved in 2020 for modification, with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1504 and chemical additive injection for VOC control, exhausting through stack SV-1504, and consisting of the following major equipment:
    - One (1) beer column, identified as EU-1550, approved in 2020 for construction.
    - One (1) stripping column, identified as EU-1510, approved in 2020 for modification from a beer column.
    - One (1) six-bottle molecular sieve unit, with associated heat exchangers and pumps.
    - One (1) degas column identified as EU-1500.
    - One (1) evaporator, identified as Evaporator #4 (EU-1573), approved in 2020 for construction.

The units are subject to the following portions of Subpart VVa.

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

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the units except as otherwise specified in 40 CFR 60, Subpart VVa.

(c) The requirements of the Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, 40 CFR 60, Subpart NNN and 326 IAC 12, are not included in the permit for the ethanol distillation operations because according to the EPA memo from Mr. George T. Czerniak dated December 6, 2002, creation of ethanol by fermentation process (biological synthesis) is excluded from the scope of NSPS, Subpart NNN.

(d) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included in the permit for this proposed modification.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

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

Compliance Assurance Monitoring (CAM):

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the regulated pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant (or a surrogate thereof); and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

(b) Pursuant to 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act are exempt from the requirements of CAM. Therefore, an evaluation was not conducted for any emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act.

The following table is used to identify the applicability of CAM to new and modified emission unit and each emission limitation or standard for a specified pollutant based on the criteria specified under 40 CFR 64.2:

Emission Unit/Pollutant	Control Device	Applicable Emission Limitation	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Fermentation (EU-1400 - EU-1408) / VOC	WS (CE-1401)	326 IAC 2-2	>100	<100	Y	N
Fermentation (EU-1400 - EU-1408) / VOC	WS (CE-1401)	326 IAC 8-5-6	>100	<100	Y	N
Fermentation (EU-1400 - EU-1408) / acetaldehyde	WS (CE-1401)	326 IAC 2-4.1	>10	<10	Y	N
Fermentation (EU-1400 - EU-1408) / acrolein	WS (CE-1401)	326 IAC 2-4.1	>10	<10	Y	N
Fermentation (EU-1400 - EU-1408) / formaldehyde	WS (CE-1401)	326 IAC 2-4.1	<10	<10	N [1]	N
Fermentation (EU-1400 - EU-1408) / methanol	WS (CE-1401)	326 IAC 2-4.1	>10	<10	Y	N
Fermentation (EU-1400 - EU-1408) / combined HAP	WS (CE-1401)	326 IAC 2-4.1	>25	<25	Y	N
Distillation (EU-1500 - EU-1550) / VOC	WS (CE-1504)	326 IAC 2-2	>100	<100	Y	N
Distillation (EU-1500 - EU-1550) / VOC	WS (CE-1401)	326 IAC 8-5-6	>100	<100	Y	N
Distillation (EU-1500 - EU-1550) / acetaldehyde	WS (CE-1504)	326 IAC 2-4.1	<10	<10	N [1]	N
Distillation (EU-1500 - EU-1550) / acrolein	WS (CE-1504)	326 IAC 2-4.1	<10	<10	N [1]	N
Distillation (EU-1500 - EU-1550) / formaldehyde	WS (CE-1504)	326 IAC 2-4.1	<10	<10	N [1]	N
Distillation (EU-1500 - EU-1550) / methanol	WS (CE-1504)	326 IAC 2-4.1	>10	<10	Y	N
Distillation (EU-1500 - EU-1550) / combined HAP	WS (CE-1504)	326 IAC 2-4.1	<25	<25	N [1]	N

Under the Part 70 Permit program (40 CFR 70), PM is not a regulated air pollutant.

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for regulated air pollutants (PM10, PM2.5, SO2, NOx, VOC and CO) is 100 tpy, for a single HAP ten (10) tpy, and for total HAPs twenty-five (25) tpy.

N [1] CAM does not apply for the pollutant because the uncontrolled PTE of this pollutant is less than the major source threshold.

Emission Unit/Pollutant	Control Device	Applicable Emission Limitation	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Controls: BH = Baghouse, C = Cyclone, DC = Dust Collection System, RTO = Regenerative or Recuperative Thermal Oxidizer, WS = Wet Scrubber, ESP = Electrostatic Preciptator						
Emission units without air pollution controls are not subject to CAM. Therefore, they are not listed.						

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are still applicable to the units listed below for the pollutants named. A CAM plan was submitted as part of a previous permit application and the Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements.

Unit	Pollutant
Fermentation	VOC
	Acetaldehyde
Distillation	VOC

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are applicable to the units listed below, which is each considered as an "other unit," for the pollutants listed upon issuance of the Part 70 Permit Renewal. A CAM plan must be submitted as part of the Part 70 Operating Permit Renewal application.

Unit	Pollutant
Fermentation	Acrolein
	Methanol
	Combined HAP
Distillation	Methanol

State Rule Applicability - Entire Source

Due to this modification, state rule applicability has been reviewed as follows:

326 IAC 2-2 (PSD)
PSD applicability is discussed under the Permit Level Determination – PSD section of this document.

PSD Minor Source Limits

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

(a) VOC emissions from the units named in the table below shall not exceed the values shown in the table:

Process /Control Device ID	VOC Limit (lb/hr)
Fermentation Scrubber (CE-1401)	24.50
Distillation Scrubber (CE-1504)	2.50

Compliance with these limits, combined with the potential to emit VOC from all other emission units at the source, shall limit the source-wide total potential to emit of VOC to less than 250 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The provisions of 326 IAC 2-4.1 apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.41, after July 27, 1997, unless the

major source has been specifically regulated under or exempted from regulation under a NESHAP that was issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act (CAA) and incorporated under 40 CFR 63. On and after June 29, 1998, 326 IAC 2-4.1 is intended to implement the requirements of Section 112(g)(2)(B) of the Clean Air Act (CAA).

326 IAC 20 (Hazardous Air Pollutants)
In order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(a) HAP emissions from the units named in the table below shall not exceed the values shown in the table:

HAP Limit	Fermentation Scrubber (CE-1401)	Distillation Scrubber (CE-1504)
Acetaldehyde (lb/hr)	0.75	0.20
Acrolein (lb/hr)	0.15	Not limited
Methanol (lb/hr)	0.15	0.10

Compliance with the above limits, combined with the potential to emit HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, and this source is an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

State Rule Applicability – Individual Facilities

Due to this modification, state rule applicability has been reviewed as follows:

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The new and modified units listed below are not subject to the requirements of 326 IAC 8-1-6 because it is regulated by other rules in 326 IAC 8. The fermentation and distillation processes are subject to the requirements of 326 IAC 8-5-6.

- Yeast propagator tank, identified as EU-1408
- Beer well #2, identified as EU-1400
- Beer column, identified as EU-1550
- Stripping column identified as EU-1510
- Evaporator, identified as Evaporator #4 (EU-1573)

326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)
This ethanol production plant was constructed after April 1, 2007; is a dry mill; uses fermentation, distillation, and dehydration to produce ethanol and distillers dried grains and solubles (DDGS); and has combined potential VOC emissions from the fermentation process, distillation process, DDGS dryers, and ethanol load-out operation greater than 25 tons per year.

(a) Pursuant to 326 IAC 8-5-6(c), the Permittee has chosen to control the VOC emissions from the fermentation and distillation processes with wet scrubbers. Therefore, the following conditions apply:

(1) The VOC emissions from the fermentation and distillation processes shall be controlled by wet scrubbers, identified as CE-1401 and CE-1504.

(2) The overall efficiency for each of the wet scrubbers CE-1401 and CE-1504 (including the capture efficiency and absorption efficiency), shall be at least 98%, or the VOC outlet concentration shall not exceed 20 ppmv.

(3) Pursuant to 326 IAC 8-5-6(d), the Permittee shall determine initial compliance with the control efficiency requirements within sixty (60) days after achieving maximum production levels but no later than one hundred and eighty (180) days after startup.

(4) Pursuant to 326 IAC 8-5-6(e), the Permittee shall ensure and verify initial and continuing compliance with the control efficiency requirements by doing the following:

(A) The Permittee shall meet the following requirements for the wet scrubbers CE-1401 and CE-1504:

(i) The pressure drop across the scrubber must be within the normal range established during the latest stack test. The pressure drop of the scrubber must be monitored at least once per day when the associated emission unit is in operation to ensure that the pressure drop across the scrubber is within the normal range established during the latest stack test.

(ii) The scrubber flow rate must be greater than the minimum flow rate for the scrubber during normal operation. The scrubber flow rate must be monitored at least once per day when the associated emission unit is in operation to ensure that the flow rate of the scrubber is greater than the minimum flow rate established during the latest stack test.

(iii) Maintain daily records of pressure drop and flow rate for the scrubber during normal operation. The new and modified units listed below are not subject to the requirements of 326 IAC 8-1-6 because it is regulated by other rules in 326 IAC 8. The fermentation and distillation processes are subject to the requirements of 326 IAC 8-5-6.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to assure 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.

(a) The Compliance Determination Requirements applicable to this modification are as follows:

(1) The scrubber (CE-1401) shall be in operation and control emissions from the fermentation processes at all times that these units are in operation.

(2) The scrubber (CE-1504) shall be in operation and control emissions from the distillation processes at all times that these units are in operation.

Testing Requirements:

Summary of Testing Requirements					
Emission Unit	**Control Device**	**Timeframe for Testing**	**Pollutant/ Parameter**	**Frequency of Testing**	**Authority**
EU-1400 – EU-1408	CE-1401	180 days[1]	VOC	Every 5 years	326 IAC 2-2
			Overall VOC control efficiency	Every 5 years	326 IAC 8-5-6
			Acetaldehyde	Every 5 years	326 IAC 2-4.1
			Acrolein	Every 5 years	326 IAC 2-4.1
			Formaldehyde	Every 5 years	326 IAC 2-4.1
			Methanol	Every 5 years	326 IAC 2-4.1
EU-1500 – EU-1550	CE-1504	180 days[1]	VOC	Every 5 years	326 IAC 2-2
			Overall VOC control efficiency	Every 5 years	326 IAC 8-5-6
			Acetaldehyde	Every 5 years	326 IAC 2-4.1
			Acrolein	Every 5 years	326 IAC 2-4.1
			Formaldehyde	Every 5 years	326 IAC 2-4.1
			Methanol	Every 5 years	326 IAC 2-4.1

Notes:
1. *180 days means 180 days after issuance of SPM No. 129-43205-00050 or the start of operation of the modified fermentation and distillation processes, whichever is later.*

(b) There are no new or modified Compliance Monitoring Requirements included with modification.

Proposed Changes

As part of this permit approval, the permit may contain new or different permit conditions and some conditions from previously issued permits/approvals may have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes.

The following changes listed below are due to the proposed modification. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text (these changes may include Title I changes):

(1) IDEM, OAQ corrected a typographical error in paragraph A.2(d) and paragraph (d) of the Section D.1 emissions unit description, as follows:

… 117.6 tons ~~per~~ of corn **per** hour …

(2) IDEM, OAQ revised paragraphs A.3(f) and (g), and corresponding paragraphs in the Section D.2 and Section E.3 emissions unit description boxes to incorporate new and modified equipment.

(3) IDEM, OAQ deleted the shift tanks, T-2110 and T-2111, subparagraph (3), from paragraph (c) OF Condition A.3 - Specifically Regulated Insignificant Activities and paragraph (c) of the Section E.2 emissions unit description because the units are process tanks excluded from the definition of

storage vessels in 40 CFR 60.111b. Subsequent entries are re-numbered. T-2110 and T-2111 are added to paragraph (i) of Condition A.4 – Insignificant Activities.

(4) At the request of the source, IDEM, OAQ revised paragraph D.1.5(d) to to remove the initial testing language referencing SSM No. 129-38153-00050 because testing of the modified units showing compliance with Condition D.1.1 - PM, PM10, and PM2.5 Emissions was performed on December 13, 2018.

(5) IDEM, OAQ added a new paragraph D.2.1(b) incorporating the following changes related to SSM No. 129-43193-00050:
- The removed pre-fermentation scrubber, CE-1400, was deleted.
- The limit on fermentation scrubber CE-1401 was revised to accommodate processes that formerly discharged to CE-1400.

(6) IDEM, OAQ revised Condition D.2.2 – VOC Emissions incorporating the following changes related to SSM No. 129-43193-00050:
- Existing requirements were revised into paragraph (a)
- Requirements for the modified source were added as paragraph (b)

(7) IDEM, OAQ revised Condition D.2.3 – HAP Minor Limits incorporating the following changes related to SSM No. 129-43193-00050:
- Existing requirements were revised into paragraph (a)
- Requirements for the modified source were added as paragraph (b)

(8) IDEM, OAQ revised Condition D.2.5 – VOC and HAP Control incorporating the following changes related to SSM No. 129-43193-00050:
- Existing requirements were revised into paragraph (a)
- Requirements for the modified source were added as paragraph (b)

(9) IDEM, OAQ revised Condition D.2.6 – Testing Requirements incorporating the following changes related to SSM No. 129-43193-00050:
- Existing requirements were revised into paragraph (a)
- Requirements for the modified source were added as paragraphs (b) and (c)

(10) IDEM, OAQ revised Condition D.2.7 - Scrubber Flow Rate incorporating the following changes related to SSM No. 129-43193-00050:
- Existing requirements were revised into paragraph (a)
- Requirements for the modified source were added as paragraph (b)
- Subsequent paragraphs were re-lettered

(11) IDEM, OAQ revised Condition D.2.8 - Parametric Monitoring incorporating the following changes related to SSM No. 129-43193-00050:
- Existing requirements were revised into paragraph (a)
- Requirements for the modified source were added as paragraph (b)
- Common requirements about instruments were designated paragraph (c)

(12) IDEM, OAQ revised Condition D.2.10 - Chemical Additive Injection System incorporating the following changes related to SSM No. 129-43193-00050:
- Existing requirements were revised into paragraph (a)
- Requirements for the modified source were added as paragraph (b)

(13) IDEM, OAQ revised Condition D.2.11 – Record Keeping Requirements incorporating the following changes related to SSM No. 129-43193-00050:
- Existing requirements for scrubber flow rate record keeping were revised into paragraph (a)(1)
- Scrubber flow rate record keeping requirements for the modified source were added as

paragraph (a)(2)
- Existing requirements for pressure drop record keeping were revised into paragraph (b)(1)
- Pressure drop record keeping requirements for the modified source were added as paragraph (b)(2)
- Existing requirements for chemical injection rate record keeping were revised into paragraph (c)(1)
- Chemical injection rate record keeping record keeping requirements for the modified source were added as paragraph (c)(2)

Additional Changes

IDEM, OAQ made additional changes to the permit as described below in order to update the language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions.

(1) Effective June 8, 2019, the requirements of 326 IAC 14-10 (Emission Standards for Asbestos Demolition and Renovation Operations) were amended. Based on the amended rule, Section C.8 - Asbestos Abatement Projects of the permit has been revised.

The entire permit has been revised as follows:

SECTION A SOURCE SUMMARY

…

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) …

(f) One (1) fermentation process, constructed in 2009, **approved in 2020 for modification,** with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, **using wet scrubber CE-1401, except as noted, and chemical additive injection for VOC and HAP control, exhausting through stack SV-1401,** consisting of the following major equipment:

(1) One (1) ~~prefermenter~~ tank, identified as EU-1400.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 operates as a prefermenter tank, using wet scrubber CE-1400 and chemical additive injection for VOC **and HAP** control, exhausting through stack SV-1400.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 will operate as beer well #2.

(2) Six (6) main fermenters, identified as EU-1401 though EU-1406~~, using wet scrubber CE-1401, and chemical additive injection for VOC control, exhausting through stack SV-1401~~.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 operate as a continuous fermentation system.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 will operate as batch fermenters.

(3) One (1) beer well **#1**, identified as EU-1407~~, using wet scrubber CE-1401 and chemical additive injection for VOC control, exhausting through stack SV-1401~~.

(4) One (1) tank, identified as EU-1408.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 operates as a flash vessel.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 will operate as a yeast propagation tank.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(g) One (1) distillation process, constructed in 2009, **approved in 2020 for modification,** with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1504 and chemical additive injection for VOC **and HAP** control, exhausting through stack SV-1504, and consisting of the following major equipment:

(1) One (1) ~~beer~~ column identified as EU-1510.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 operates as a beer column.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 will operate as a stripping column.

(2) One (1) stripping column identified as EU-1520. **When the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1520 will be permanently decommissioned in place.**

(3) ...

(4) One (1) ~~six~~**four**-bottle molecular sieve unit, with associated heat exchangers and pumps.

(5) ...

(6) One (1) beer column, identified as EU-1550, approved in 2020 for construction.

(7) One (1) evaporator, identified as Evaporator #4 (EU-1573), approved in 2020 for construction.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(h) ...

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) …

(c) ...

~~(3) Two (2) fixed-roof anhydrous ethanol storage tanks (shift tanks), identified as T-2110 and T-2111, each with a maximum capacity of 250,000 gallons and each equipped with an internal floating roof for VOC emissions control.~~

~~Under 40 CFR 60, Subpart Kb, T-2110 and T-2111 are considered affected facilities.~~

(4**3**) …

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, as defined in 326 IAC 2-7-1(21):

(a) …

(i) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(1) ...

(11) Two (2) fixed-roof anhydrous ethanol process tanks (shift tanks), identified as T-2110 and T-2111, each with a maximum capacity of 250,000 gallons and each equipped with an internal floating roof for VOC emissions control.

…

SECTION C SOURCE OPERATION CONDITIONS

…

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

(a) ...

(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~~**c**).

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

…

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

…

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

(a) ...

(d) ~~Not later than 180 days after the issuance of this permit, Significant Source Modification No. 129-38153-00050, in~~ **In** order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM10, and PM2.5 testing of the Corn Scalper and Hammermill Surge Bins (EU-1200 through EU-1204, controlled by CE-1200) utilizing methods as approved by the Commissioner 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. PM10 and PM2.5 includes filterable and condensable PM.

(e) …

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description - Fermentation and Distillation:

(f) One (1) fermentation process, constructed in 2009, **approved in 2020 for modification,** with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, **using wet scrubber CE-1401, except as noted, and chemical additive injection for VOC and HAP control, exhausting through stack SV-1401,** consisting of the following major equipment:

(1) One (1) ~~prefermenter~~ tank, identified as EU-1400.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 operates as a prefermenter tank, using wet scrubber CE-1400 and chemical additive injection for VOC **and HAP** control, exhausting through stack SV-1400.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 will operate as beer well #2.

(2) Six (6) main fermenters, identified as EU-1401 though EU-1406~~, using wet scrubber CE-1401, and chemical additive injection for VOC control, exhausting through stack SV-1401~~.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 operate as a continuous fermentation system.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 will operate as batch fermenters.

(3) One (1) beer well **#1**, identified as EU-1407~~, using wet scrubber CE-1401 and chemical additive injection for VOC control, exhausting through stack SV-1401~~.

(4) One (1) tank, identified as EU-1408.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 operates as a flash vessel.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 will operate as a yeast propagation tank.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(g) One (1) distillation process, constructed in 2009, **approved in 2020 for modification,** with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1504 and chemical additive injection for VOC **and HAP** control, exhausting through stack SV-1504, and consisting of the following major equipment:

(1) One (1) ~~beer~~ column identified as EU-1510.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 operates as a beer column.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 will operate as a stripping column.

(2) One (1) stripping column identified as EU-1520. **When the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1520 will be permanently decommissioned in place.**

(3) ...

(4) One (1) ~~six~~**four**-bottle molecular sieve unit, with associated heat exchangers and pumps.

(5) ...

(6) One (1) beer column, identified as EU-1550, approved in 2020 for construction.

(7) One (1) evaporator, identified as Evaporator #4 (EU-1573), approved in 2020 for construction.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

…

D.2.1 PSD Minor Limits - VOC [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) **Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, the** VOC emissions from the units named in the table below shall not exceed the values shown in the table:

Process /Control Device ID	VOC Limit (lb/hr)
Pre-Fermentation Scrubber (CE-1400)	4.50
Fermentation Scrubber (CE-1401)	20.00
Distillation Scrubber (CE-1504)	2.50

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, the VOC emissions from the units named in the table below shall not exceed the values shown in the table:

Process /Control Device ID	**VOC Limit (lb/hr)**
Fermentation Scrubber (CE-1401)	**24.50**
Distillation Scrubber (CE-1504)	**2.50**

Compliance with these limits, combined with the potential to emit VOC from all other emission units at the source, shall limit the source-wide total potential to emit of VOC to less than 250 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.2.2 VOC Emissions [326 IAC 8-5-6]

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

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050,

(~~a~~**1**) The VOC emissions from the fermentation and distillation processes shall be controlled by wet scrubbers, identified as CE-1400, CE-1401, and CE-1504.

(~~b~~**2**) The overall efficiency for each of the wet scrubbers CE-1400, CE-1401, and CE-1504 (including the capture efficiency and absorption efficiency), shall be at least 98%, or the VOC outlet concentration shall not exceed 20 ppmv at 100% capture.

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050,

(1) The VOC emissions from the fermentation and distillation processes shall be controlled by wet scrubbers, identified as CE-1401 and CE-1504.

(2) The overall efficiency for each of the wet scrubbers CE-1401 and CE-1504 (including the capture efficiency and absorption efficiency), shall be at

least 98%, or the VOC outlet concentration shall not exceed 20 ppmv at 100% capture.

D.2.3 HAP Minor Limits [326 IAC 2-4.1][40 CFR 63]

In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) **Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050,** HAP emissions from the units named in the table below shall not exceed the values shown in the table:

Process /Control Device ID	Acetaldehyde Limit (lb/hr)
Pre-Fermentation Scrubber (CE-1400)	0.30
Fermentation Scrubber (CE-1401)	0.45
Distillation Scrubber (CE-1504)	0.20

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, HAP emissions from the units named in the table below shall not exceed the values shown in the table:

HAP Limit	Fermentation Scrubber (CE-1401)	Distillation Scrubber (CE-1504)
Acetaldehyde (lb/hr)	**0.75**	**0.20**
Acrolein (lb/hr)	**0.15**	**Not limited**
Methanol (lb/hr)	**0.15**	**0.10**

...

D.2.5 VOC and HAP Control

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, in ~~In~~ order to assure compliance with Conditions D.2.1, D.2.2, and D.2.3, the scrubbers (CE-1400, CE-1401, and CE-1504) shall be in operation and control emissions from the fermentation and distillation processes at all times that these units are in operation.

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050,

(1) In order to assure compliance with Conditions D.2.1, D.2.2, and D.2.3, the scrubber (CE-1401) shall be in operation and control emissions from the fermentation processes at all times that these units are in operation.

(2) In order to assure compliance with Conditions D.2.1, D.2.2, and D.2.3, the scrubber (CE-1504) shall be in operation and control emissions from the distillation processes at all times that these units are in operation.

D.2.6 Testing Requirements [326 IAC 2-1.1-11][326 IAC 8-5-6]

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050,

(~~a~~**1**) In order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, the Permittee shall perform VOC and acetaldehyde testing (including emission rate, overall destruction efficiency and overall capture efficiency), on the wet scrubber

stacks (SV-1400, SV-1401, and SV-1504) utilizing methods as approved by the Commissioner 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.

(~~b~~**2**) In order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, not later than 180 days after the use of a chemical additive at CE-1400, CE-1401, and CE-1504 for which a valid compliance demonstration had not been conducted during the previous five (5) years~~)~~, the Permittee shall perform VOC and acetaldehyde testing (including emission rate, overall destruction efficiency and overall capture efficiency) on the wet scrubber stacks (SV-1400, SV-1401, and SV-1504) utilizing methods approved by the commissioner. 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.

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, in order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, not later than 180 days after operation of the modified fermentation and distillation processes commences or issuance of Significant Permit Modification No. 129-43205-00050, whichever is later, the Permittee shall perform testing for the pollutants listed below (including emission rate, overall destruction efficiency and overall capture efficiency), on the wet scrubber stacks (SV-1401 and SV-1504) utilizing methods as approved by the Commissioner 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.

VOC
Acetaldehyde
Acrolein
Formaldehyde
Methanol

Testing described in this paragraph shall be conducted with the chemical additive injection systems operating as described in Condition D.2.10 – Chemical Additive Injection System.

(c) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, in order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, not later than 180 days after commencing operation of a scrubber using a chemical additive for which a valid compliance demonstration had not been conducted during the previous five (5) years, the Permittee shall perform testing for the pollutants listed below (including emission rate, overall destruction efficiency and overall capture efficiency), on the wet scrubber stacks (SV-1401 and SV-1504) using the new chemical additive and utilizing methods as approved by the Commissioner 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.

VOC

Acetaldehyde
Acrolein
Formaldehyde
Methanol

Testing described in this paragraph shall be conducted with the chemical additive injection systems operating as described in Condition D.2.10 – Chemical Additive Injection System.

D.2.7 Scrubber Flow Rate [40 CFR 64] [326 IAC 8-5-6]

(**a**) **Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, the** ~~The~~ Permittee shall monitor and record the flow rate of the scrubbers (CE-1400, CE-1401, and CE-1504) at least once per day when the associated processes are in operation.

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall monitor and record the flow rate of the scrubbers (CE-1401 and CE-1504) at least once per day when the associated processes are in operation.

(~~b~~**c**) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with limits in Conditions, D.2.1, D.2.2, and D.2.3.

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

(~~d~~**e**) When for any one reading, the 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.

D.2.8 Parametric Monitoring [40 CFR 64] [326 IAC 8-5-6]

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, the ~~The~~ Permittee shall monitor and record the pressure drop across the scrubbers (CE-1400, CE-1401, and CE-1504) at least once per day when the associated processes are in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal ranges for these units is shown in the table below 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.

Control Devices	Normal Parameters
Scrubber CE-1400	Pressure drop 1 inch to 12 inches of water
Scrubber CE-1401	
Scrubber CE-1504	Pressure drop 1 inch to 6 inches of water

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall monitor and record the pressure drop across the scrubbers (CE-1401 and CE-1504) at least once per day when the associated processes are in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal ranges for these units is shown in the table below 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.

Control Devices	Normal Parameters
Scrubber CE-1401	**Pressure drop 1 inch to 12 inches of water**
Scrubber CE-1504	**Pressure drop 1 inch to 6 inches of water**

(c) 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.2.10 Chemical Additive Injection System

(a) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050,

(~~a~~**1**) A continuous monitoring system shall be calibrated, maintained, and operated on the fermentation scrubbers (CE-1400 and CE-1401) and distillation scrubber (CE-1504) for measuring the chemical additive injection rate. 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 a one-hour average.

(~~b~~**2**) The Permittee shall determine the one-hour average injection rates from the most recent valid stack test that demonstrates compliance with limits in Condition D.2.1**(a)**.

(~~c~~**3**) On and after the date the stack test results are available, the Permittee shall inject the chemical additive at or above the one-hour average injection rates as observed during the compliant stack test.

(~~d~~**4**) When the one-hour injection rate falls below the above mentioned one-hour injection rate, the Permittee shall take a response step. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A one-hour average that is outside the appropriate injection rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) After completion of the modifications described in Significant Source Modification No. 129-43193-00050,

(1) A continuous monitoring system shall be calibrated, maintained, and operated on the fermentation scrubber (CE-1401) and distillation scrubber

(CE-1504) for measuring the chemical additive injection rate. 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 a one-hour average.

(2) The Permittee shall determine the one-hour average injection rates from the most recent valid stack test that demonstrates compliance with limits in Conditions D.2.1(b) and D.2.3(b).

(3) On and after the date the stack test results are available, the Permittee shall inject the chemical additive at or above the one-hour average injection rates as observed during the compliant stack test.

(4) When the one-hour injection rate falls below the above mentioned one-hour injection rate, the Permittee shall take a response step. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A one-hour average that is outside the appropriate injection rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.2.11 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.7,

(**1**) **Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050,** the Permittee shall maintain records of once per day flow rate measurements of the scrubbers (CE-1400, CE-1401, and CE-1504). The Permittee shall include in its daily record when a flow rate measurement is not taken and the reason for the lack of flow rate measurement (e.g., the process did not operate that day).

(2) After completion of the modifications described in Significant Source Modification No. 129-43193-00050,the Permittee shall maintain records of once per day flow rate measurements of the scrubbers (CE-1401 and CE-1504).

(b) To document the compliance status with Condition D.2.8,

(1) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall maintain daily records of pressure drop for the scrubbers (CE-1400, CE-1401, and CE-1504) during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g., the process did not operate that day).

(2) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall maintain daily records of pressure drop for the scrubbers (CE-1401 and CE-1504) during normal operation.

(c) To document the compliance status with Condition D.2.10,

(1) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-

00050, the Permittee shall maintain records of the one-hour average chemical additive injection rates of scrubbers CE-1400, CE-1401, and CE-1504.

(2) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, the Permittee shall maintain records of the one-hour average chemical additive injection rates of scrubbers CE-1401 and CE-1504.

(d) …

SECTION E.2 NSPS

Emission Unit Description:

Insignificant Activities

(c) ...

~~(3) Two (2) fixed-roof anhydrous ethanol storage tanks (shift tanks), identified as T-2110 and T-2111, each with a maximum capacity of 250,000 gallons and each equipped with an internal floating roof for VOC emissions control.~~

~~Under 40 CFR 60, Subpart Kb, T-2110 and T-2111 are considered affected facilities.~~

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

…

SECTION E.3 NSPS

Emission Unit Description:

(f) One (1) fermentation process, constructed in 2009, **approved in 2020 for modification,** with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, **using wet scrubber CE-1401, except as noted, and chemical additive injection for VOC and HAP control, exhausting through stack SV-1401,** consisting of the following major equipment:

(1) One (1) ~~prefermenter~~ tank, identified as EU-1400.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 operates as a prefermenter tank, using wet scrubber CE-1400 and chemical additive injection for VOC **and HAP** control, exhausting through stack SV-1400.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1400 will operate as beer well #2.

(2) Six (6) main fermenters, identified as EU-1401 though EU-1406~~, using wet scrubber CE-1401, and chemical additive injection for VOC control, exhausting through stack SV-1401~~.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-

43193-00050, EU-1401 through EU-1406 operate as a continuous fermentation system.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1401 through EU-1406 will operate as batch fermenters.

(3) One (1) beer well **#1**, identified as EU-1407~~, using wet scrubber CE-1401 and chemical additive injection for VOC control, exhausting through stack SV-1401~~.

(4) One (1) tank, identified as EU-1408.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 operates as a flash vessel.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1408 will operate as a yeast propagation tank.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(g) One (1) distillation process, constructed in 2009, **approved in 2020 for modification,** with a maximum throughput rate of 132,300,000 gallons of anhydrous ethanol per year, using wet scrubber CE-1504 and chemical additive injection for VOC **and HAP** control, exhausting through stack SV-1504, and consisting of the following major equipment:

(1) One (1) ~~beer~~ column identified as EU-1510.

(A) Until the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 operates as a beer column.

(B) After completion of the modifications described in Significant Source Modification No. 129-43193-00050, EU-1510 will operate as a stripping column.

(2) One (1) stripping column identified as EU-1520. **When the fermentation and distillation processes are shut down for the modifications described in Significant Source Modification No. 129-43193-00050, EU-1520 will be permanently decommissioned in place.**

(3) ...

(4) One (1) ~~six~~**four**-bottle molecular sieve unit, with associated heat exchangers and pumps.

(5) ...

(6) One (1) beer column, identified as EU-1550, approved in 2020 for construction.

(7) One (1) evaporator, identified as Evaporator #4 (EU-1573), approved in 2020 for construction.

Under 40 CFR 60, Subpart VVa, equipment (as defined in 40 CFR 60.481a) within a process unit is an affected facility.

(j) …

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on August 25, 2020.

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 129-43193-00050. The operation of this proposed modification shall be subject to the conditions of the attached proposed Significant Permit Modification No. 129-43205-00050.

The staff recommends to the Commissioner that the Part 70 Significant Source Modification and Significant Permit Modification be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Doug Logan, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-5328 or (800) 451-6027, and ask for Doug Logan or (317) 234-5328.

(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 Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.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: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Unlimited Potential to Emit (tons/yr)							
Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NOx**	**VOC**	**CO**
Grain Handling	2,955.48	1,563.59	871.90	-	-	-	-
DDGS Handling	301.34	101.62	17.17	-	-	-	-
Fermentation & Distillation	-	-	-	-	-	3564.62	-
Boilers	3.02	12.06	12.06	15.87	80.94	8.73	80.94
Dryers/Swiss Combi Systems	1892	1892	1892	7.12	141.10	3591.60	166.44
Loadout	-	-	-	-	-	1,564	-
Cooling Tower	19.66	19.66	19.66	-	-	-	-
Diesel Emergency Generator	0.26	0.15	0.15	0.15	8.97	0.26	2.06
Diesel Fire Pump	0.25	0.25	0.25	0.24	3.57	0.29	0.77
Storage Tanks[2]	-	-	-	-	-	2.53	-
Corn Oil Separation[1]	-	-	-	-	-	8.33E-02	-
Wet Cake Storage[3]	-	-	-	-	-	3.42	-
Leaks[1]	-	-	-	-	-	-	-
Total	**5,172.18**	**3,589.49**	**2,813.35**	**23.38**	**234.57**	**8,732.47**	**250.21**

Fugitive Emissions[1]							
Grain Receiving	2207.52	723.58	122.64	-	-	-	-
Corn Oil Separation[1]	-	-	-	-	-	0.78	-
Leaks	-	-	-	-	-	18.25	-
Paved Roads	41.86	8.37	2.06	-	-	-	-
Unpaved Roads	0.41	0.11	1.10E-02	-	-	-	-
Total	**2249.80**	**732.06**	**124.71**	**-**	**-**	**19.03**	**-**

Appendix A: Emission Calculations
PTE Summary

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Potential to Emit After Issuance (tons/yr)							
Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NOx**	**VOC**	**CO**
Grain Handling	35.52	35.52	35.52	-	-	-	-
Grain Handling (Uncaptured/Unlimited)	47.09	24.83	14.46	-	-	-	-
DDGS Handling	3.15	3.15	3.15	-	-	-	-
DDGS Handling (Uncaptured/Unlimited)	15.07	5.08	0.86	-	-	-	-
Fermentation & Distillation	-	-	-	-	-	118.26	-
Boilers	3.02	12.06	12.06	15.87	80.94	8.73	80.94
Dryers/Swiss Combi Systems	89.10	89.10	89.10	7.12	141.10	67.65	156.75
Loadout	-	-	-	-	-	19.99	-
Cooling Tower	0.26	0.15	0.15	0.15	8.97	0.26	2.06
Diesel Emergency Generator	0.25	0.25	0.25	0.24	3.57	0.29	0.77
Diesel Fire Pump	19.66	19.66	19.66	-	-	-	-
Storage Tanks[2]	-	-	-	-	-	0.08	-
Corn Oil Separation[1]	-	-	-	-	-	2.53	-
Wet Cake Storage[3]	-	-	-	-	-	3.42	-
Leaks[1]	-	-	-	-	-	-	-
Total	**213.12**	**189.81**	**175.22**	**23.38**	**234.57**	**217.79**	**240.52**

Notes:

1. Since the source is not 1 of the 28 listed source categories fugitive PM/PM10/PM2.5 and VOC emissions do not count toward the determination of PSD, Emission Offset, and Part 70 Permit applicability. However, fugitive HAP emissions still count toward the determination of Part 70 Permit applicability.

2. Emissions from the storage tanks were calculated by the Permittee using EPA TANKS software (version 4.09d) and have been verified.

3. This plant is capable of producing both DDGS and MDGS (wetcake); however, the emissions from the DDGS production is the worst case scenario. Therefore, the PTE of VOC of the wet cake storage is not included in the PTE for the entire source.

Appendix A: Emission Calculations
HAP Summary

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Uncontrolled Potential to Emit (tons/yr)

Emission Unit	DDGS Handling	Fermentation	Distillation	Boilers	Dryer & Swiss Combi Process	Dryer & Swiss Combi Combustion	Loading	Emergency Generator	Fire Pump	Storage Tanks	Oil Extraction	Equipment Leaks	Total HAP
Organic HAPs													
Acetaldehyde	4.54E-02	53.44	7.84	--	265.09	--	0.31	6.59E-05	6.17E-04	2.52E-06	1.25E-07	3.65E-03	326.73
Acrolein	8.25E-03	15.94	0.31	--	199.98	--	--	2.06E-05	7.45E-05	--	--	--	216.24
Benzene	--	--	--	3.33E-03	--	1.38E-03	14.08	2.03E-03	7.51E-04	--	--	4.56E-02	14.13
1,3-Butadiene	--	--	--	--	--	--	--	--	3.15E-05	--	--	--	3.15E-05
Cumene	--	--	--	--	--	--	1.56	--	--	--	--	1.82E-03	1.57
Dichlorobenzene	--	--	--	1.90E-03	--	7.90E-04	--	--	--	--	--	--	2.69E-03
Ethylbenzene	--	--	--	--	--	--	1.56	--	--	--	--	9.12E-04	1.57
Formaldehyde	9.08E-02	0.35	2.19E-02	0.12	125.57	4.94E-02		2.06E-04	9.50E-04	--	--	--	126.20
n-Hexane	--	--	--	2.86	--	1.19	25.03	--	--	--	--	0.91	29.98
Methanol	1.65E-02	71.66	10.82	--	46.51	--	0.31	--	--	2.52E-06	1.25E-07	--	129.31
Naphthalene	--	--	--	--	--	--	7.82	--	--	--	--	--	7.82
Toluene	--	--	--	5.40E-03	--	2.24E-03	20.34	7.35E-04	3.29E-04	--	--	9.12E-02	20.44
Total PAH	--	--	--	--	--	--	--	5.55E-04	1.35E-04	--	--	--	6.90E-04
2,2,4-Trimethylpentane	--	--	--	--	--	--	12.51	--	--	--	--	--	12.51
Xylenes	--	--	--	--	--	--	7.82	5.05E-04	2.29E-04	--	--	9.12E-03	7.83
Inorganic HAPs													
Cadmium	--	--	--	1.75E-03	--	7.25E-04	--	--	--	--	--	--	2.47E-03
Chromium	--	--	--	2.22E-03	--	9.22E-04	--	--	--	--	--	--	3.14E-03
Lead	--	--	--	7.94E-04	--	3.29E-04	--	--	--	--	--	--	1.12E-03
Manganese	--	--	--	6.03E-04	--	2.50E-04	--	--	--	--	--	--	8.53E-04
Nickel	--	--	--	3.33E-03	--	1.38E-03	--	--	--	--	--	--	4.72E-03
Combined HAP Emissions	**0.16**	**141.39**	**18.99**	**3.00**	**637.15**	**1.24**	**90.73**	**4.12E-03**	**3.12E-03**	**5.04E-06**	**2.49E-07**	**1.06**	**894.36**

Potential to Emit After Issuance[1] (tons/yr)

Emission Unit	DDGS Handling	Fermentation	Distillation	Boilers	Dryer & Swiss Combi Process	Dryer & Swiss Combi Combustion	Loading[2]	Emergency Generator	Fire Pump	Storage Tanks	Oil Extraction	Equipment Leaks	Total HAP
Organic HAPs													
Acetaldehyde	4.54E-02	3.29	0.88	--	4.99	--	0.31	6.59E-05	6.17E-04	2.52E-06	1.25E-07	3.65E-03	9.52
Acrolein	8.25E-03	0.66	0.31	--	3.77	--	--	2.06E-05	7.45E-05	--	--	--	4.74
Benzene	--	--	--	3.33E-03	--	1.38E-03	0.14	2.03E-03	7.51E-04	--	--	4.56E-02	0.19
1,3-Butadiene	--	--	--	--	--	--	--	--	3.15E-05	--	--	--	3.15E-05
Cumene	--	--	--	--	--	--	1.57E-02	--	--	--	--	1.82E-03	1.75E-02
Dichlorobenzene	--	--	--	1.90E-03	--	7.90E-04	--	--	--	--	--	--	2.69E-03
Ethylbenzene	--	--	--	--	--	--	1.57E-02	--	--	--	--	9.12E-04	1.66E-02
Formaldehyde	9.08E-02	0.35	2.19E-02	0.12	2.37	4.94E-02	--	2.06E-04	9.50E-04	--	--	--	3.00
n-Hexane	--	--	--	2.86		1.19	0.25	--	--	--	--	0.91	5.21
Methanol	1.65E-02	0.66	0.44	--	0.88	--	0.31	--	--	2.52E-06	1.25E-07	3.65E-03	2.30
Naphthalene	--	--	--	--	--	--	7.80E-02	--	--	--	--	--	7.80E-02
Toluene	--	--	--	5.40E-03	--	2.24E-03	0.20	7.35E-04	3.29E-04	--	--	9.12E-02	0.30
Total PAH	--	--	--	--	--	--	--	5.55E-04	1.35E-04	--	--	--	6.90E-04
2,2,4-Trimethylpentane	--	--	--	--	--	--	0.12	--	--	--	--	--	0.12
Xylenes	--	--	--	--	--	--	7.80E-02	5.05E-04	2.29E-04	--	--	9.12E-03	8.79E-02
Inorganic HAPs													
Cadmium	--	--	--	1.75E-03	--	7.25E-04	--	--	--	--	--	--	2.47E-03
Chromium	--	--	--	2.22E-03	--	9.22E-04	--	--	--	--	--	--	3.14E-03
Lead	--	--	--	7.94E-04	--	3.29E-04	--	--	--	--	--	--	1.12E-03
Manganese	--	--	--	6.03E-04	--	2.50E-04	--	--	--	--	--	--	8.53E-04
Nickel	--	--	--	3.33E-03	--	1.38E-03	--	--	--	--	--	--	4.72E-03
Combined HAP Emissions	**0.16**	**4.95**	**1.64**	**3.00**	**12.00**	**1.24**	**0.91**	**4.12E-03**	**3.12E-03**	**5.04E-06**	**2.49E-07**	**1.07**	**24.97**

Notes:
1. Shaded cells indicate where limits are included in the permit.
2. Total HAPs for loading are the sum of the worst-case process, loading trucks.

Appendix A: Emission Calculations
Modification Summary

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

PTE Increase of the Modified Units (tons/yr)									
Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NOx**	**VOC**	**CO**	**Single HAP[1]**	**Combined HAP**
PTE Before Modification[2] (Fermentation)	-	-	-	-	-	3689.71	-	12.05	13.48
PTE After Modification (Fermentation)	-	-	-	-	-	3313.86	-	53.44	141.39
PTE Increase (Fermentation)	-	-	-	-	-	0	-	41.39	127.91
PTE Before Modification[2] (Distillation)	-	-	-	-	-	342.08	-	2.93	3.21
PTE After Modification (Distillation)	-	-	-	-	-	250.76	-	7.84	18.99
PTE Increase (Distillation)	-	-	-	-	-	0	-	4.91	15.78
PTE Before Modification[2] (Fugitives)	-	-	-	-	-	7.29	-	1.46E-03	0.42
PTE After Modification (Fugitives)	-	-	-	-	-	18.25	-	3.65E-03	1.06
PTE Increase (Fugitives)	-	-	-	-	-	10.95	-	2.19E-03	0.64
Total PTE Increase of the Modified Emissions Units	**-**	**-**	**-**	**-**	**-**	**10.95**	**-**	**46.30**	**144.32**

Notes:

1. *Source-wide highest single HAP, acetaldehyde*
2. *Ref.: TSD App A, Administrative Amendment No. 129-40227-00050, issued on August 7, 2018*

Appendix A: Emission Calculations
PM, PM10, and PM2.5 Emissions
From the Grain Receiving and Handling Operations

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

1. Potential to Emit PM/PM10/PM2.5 - Uncontrolled/Unlimited Emissions and Controlled Unlimited Emissions:
1) For the purposes of calculating the uncapture/uncontrolled/unlimited PTE , the hourly throughput for the headhouse/internal operations and storage is considered bottlenecked at 2,800 tph by the grain receiving operations (EU-1101 and EU-1102).

Unit ID	Unit Description	Maximum Capacity (tons/hr)	Uncontrolled Emission Factor (lb/ton)			Uncontrolled Emissions (ton/yr)			Control Device ID
			PM	PM10	PM2.5	PM	PM10	PM2.5	
Grain Handling Operations - Enclosed Headhouse and Grain Handling Vents to Baghouse									
	Total # of Internal Steps =	*2*	*Emission factor source, AP-42 Table 9.9.1-1, headhouse and grain handling, SCC 3-02-002-30*						
EU-1101 & EU-1101A	Truck/rail receiving pit and drag conveyor	2,800	0.061	0.0340	0.0058	1496.21	833.95	142.26	CE-1101
EU-1102 & EU-1102A	Truck receiving pit and drag conveyor								CE-1102
EU-1201	hammermill surge bin								CE-1200
EU-1202	hammermill surge bin								
EU-1203	hammermill surge bin								
EU-1204	hammermill surge bin								
EU-2001	grain storage silo								CE-2003A & CE-2003B
EU-2002	grain storage silo								CE-2004A & CE-2004B
Grain Cleaning Operations - Scalping									
	AP-42 Controlled E.F.		*0.012*	*0.006*	*0.006*	*cleaning house separators, wheat flour mills*			
	Assumed Cyclone Eff.		*90.00%*			*SCC 3-02-007-33*			
EU-1200	Scalper	150	0.12	0.06	0.06	78.84	39.42	39.42	CE-1200
Grain Milling Operations - Hammermill									
	Hammermills Controlled E.F.		*0.067*	*0.0335*	*0.0335*	*animal feed mills, hammermill, cyclone control*			
	Cyclone Control % =		*90.00%*			*SCC 3-02-008-17*			
EU-1205 - EU-1208	Hammermills	470	0.67	0.335	0.335	1380.44	690.22	690.22	CE-1205 - CE-1208
					Non-Fugitive:	**2955.48**	**1563.59**	**871.90**	

Fugitive Emissions - Grain Receiving									
EU-1101	Truck/rail receiving pit	1680	0.18	0.059	0.010	1324.51	434.15	73.58	CE-1101
EU-1102	Truck receiving pit	1120	0.18	0.059	0.010	883.01	289.43	49.06	CE-1102
					Total Fugitive:	**2207.52**	**723.58**	**122.64**	

Notes:

The grain is handled two (2) times through the internal handling system; therefore, the PTE for the internal handling system is multiplied by a factor of 2.
Enclosed conveyors have a 70% control efficiency based on the Air Pollution Engineering Manual (Buonicore and Davis, 1992).
The receiving pits are equipped with baffles, which have a control efficiency of 21% based on AP-42 Chapter 9.9. The combination of baffles and choke feed have a control efficiency of 50%.

Appendix A: Emission Calculations
PM, PM10, and PM2.5 Emissions
From the Grain Receiving and Handling Operations

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

2(a). Controlled Potential to Emit PM/PM10/PM2.5 - Baghouse and Cartridge Filter Emissions:

Unit ID	Unit Description	Control Device ID	Control Device Type	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	Controlled Emissions (tons/yr) PM	PM10	PM2.5	Controlled Emissions (lb/hr) PM	PM10	PM2.5
EU-1101	Truck/Rail Grain Receiving Pit	CE-1101	Baghouse	0.005	24,000	4.51	4.51	4.51	1.03	1.03	1.03
EU-1101A	Drag conveyor										
EU-1102	Truck Grain Receiving Pit	CE-1102	Baghouse	0.005	10,000	1.88	1.88	1.88	0.43	0.43	0.43
EU-1102A	Drag conveyor										
EU-2001	Grain storage silo	CE-2003A	Baghouse	0.005	1,000	0.19	0.19	0.19	0.04	0.04	0.04
		CE-2003B	Baghouse	0.005	1,000	0.19	0.19	0.19	0.04	0.04	0.04
EU-2002	Grain storage silo	CE-2004A	Baghouse	0.005	1,000	0.19	0.19	0.19	0.04	0.04	0.04
		CE-2004B	Baghouse	0.005	1,000	0.19	0.19	0.19	0.04	0.04	0.04
EU-1200	Scalper	CE-1200	Baghouse	0.005	1,000	0.19	0.19	0.19	0.04	0.04	0.04
EU-1201	Hammermill surge bin										
EU-1202	Hammermill surge bin										
EU-1203	Hammermill surge bin										
EU-1204	Hammermill surge bin										
EU-1205	Hammermill	CE-1205	Baghouse	0.005	6,000	1.13	1.13	1.13	0.26	0.26	0.26
EU-1206	Hammermill	CE-1206	Baghouse	0.005	6,000	1.13	1.13	1.13	0.26	0.26	0.26
EU-1207	Hammermill	CE-1207	Baghouse	0.005	6,000	1.13	1.13	1.13	0.26	0.26	0.26
EU-1208	Hammermill	CE-1208	Baghouse	0.005	6,000	1.13	1.13	1.13	0.26	0.26	0.26
				Controlled Emissions:		**11.83**	**11.83**	**11.83**	**2.70**	**2.70**	**2.70**

Methodology
PTE of PM/PM10/PM2.5 after Control (tons/yr) = 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 of PM/PM10/PM2.5 after Control (lbs/hr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7000 lb/gr

2(b). Uncaptured/Unlimited Potential to Emit PM/PM10/PM2.5 :

Unit ID	Unit Description	Maximum Capacity (tons/hr)	Uncontrolled E.F. (lb/ton) PM	PM10	PM2.5	Control Device(s) Type	Collection and Control Efficiency (%)	Uncaptured Emissions (ton/yr) PM	PM10	PM2.5	Control Device ID
Grain Handling Operations - Grain Transfer System Venting to Baghouse(s) (excluding scalpers)											
Total # of Internal Steps =	*2*										
EU-1101 & EU-1101A											CE-1101
EU-1102 & EU-1102A											CE-1102
EU-1201											
EU-1202	(excluding scalpers)	2,800	0.061	0.0340	0.0058	Enclosure	70%	22.44	12.51	2.13	CE-1200
EU-1203						BH	95%				
EU-1204											
EU-2001											CE-2003A & CE-2003B
EU-2002											CE-2004A & CE-2004B

Appendix A: Emission Calculations
PM, PM10, and PM2.5 Emissions
From the Grain Receiving and Handling Operations

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Grain Cleaning Operations - Scalping											
	AP-42 Controlled E.F.		*0.012*	*0.006*	*0.006*						
	Assumed Cyclone Eff.		*90.00%*								
EU-1200	Scalper	150	0.12	0.06	0.06	BH	95%	3.94	1.97	1.97	CE001

Grain Milling Operations - Hammermill											
	Hammermills Controlled E.F.		*0.067*	*0.0335*	*0.0335*						
	Cyclone Control % =		*90.00%*								
EU-1205 -	Hammermills	470	0.67	0.335	0.335	Enclosure	70%	20.71	10.35	10.35	CE-1205 -
EU-1208						BH	95%				CE-1208
							Non-Fugitive (Uncaptured/Unlimited):	**47.09**	**24.83**	**14.46**	

Fugitive Emissions - Grain Receiving											
EU-1101	Truck/rail receiving pit	1680	0.18	0.059	0.010	Choke Flow	29%	47.02	15.41	2.61	CE-1101
						BH	95%				
EU-1102	Truck receiving pit	1120	0.18	0.059	0.010	Choke Flow	29%	31.35	10.27	1.74	CE-1102
						BH	95%				
							Total Fugitive:	**78.37**	**25.69**	**4.35**	

3(a). Potential to Emit after Issuance PM/PM10/PM2.5 - Uncaptured/Limited Emissions:

Unit ID	Unit Description	Control Device ID	Control Device Type	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	Limited Emissions (lb/hr) PM	PM10	PM2.5	Limited Emissions (tons/yr) PM	PM10	PM2.5
EU-1101	Truck/Rail Grain Receiving Pit	CE-1101	Baghouse	0.005	24,000	3.09	3.09	3.09	13.53	13.53	13.53
EU-1101A	Drag conveyor										
EU-1102	Truck Grain Receiving Pit	CE-1102	Baghouse	0.005	10,000	1.29	1.29	1.29	5.65	5.65	5.65
EU-1102A	Drag conveyor										
EU-2001	Grain storage silo	CE-2003A	Baghouse	0.005	1,000	0.13	0.13	0.13	0.57	0.57	0.57
		CE-2003B	Baghouse	0.005	1,000	0.13	0.13	0.13	0.57	0.57	0.57
EU-2002	Grain storage silo	CE-2004A	Baghouse	0.005	1,000	0.13	0.13	0.13	0.57	0.57	0.57
		CE-2004B	Baghouse	0.005	1,000	0.13	0.13	0.13	0.57	0.57	0.57
EU-1200	Scalper	CE-1200	Baghouse	0.005	1,000	0.13	0.13	0.13	0.57	0.57	0.57
EU-1201	Hammermill surge bin										
EU-1202	Hammermill surge bin										
EU-1203	Hammermill surge bin										
EU-1204	Hammermill surge bin										
EU-1205	Hammermill	CE-1205	Baghouse	0.005	6,000	0.77	0.77	0.77	3.37	3.37	3.37
EU-1206	Hammermill	CE-1206	Baghouse	0.005	6,000	0.77	0.77	0.77	3.37	3.37	3.37
EU-1207	Hammermill	CE-1207	Baghouse	0.005	6,000	0.77	0.77	0.77	3.37	3.37	3.37
EU-1208	Hammermill	CE-1208	Baghouse	0.005	6,000	0.77	0.77	0.77	3.37	3.37	3.37
Note:				**Controlled Emissions:**		**8.11**	**8.11**	**8.11**	**35.52**	**35.52**	**35.52**

Limited emissions are conservatively set at three times the controlled emissions in section 2a, and are subject to testing.

Appendix A: Emission Calculations
PM, PM10, and PM2.5 Emissions
From the Grain Receiving and Handling Operations

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Unit ID	Unit Description	Maximum Capacity (tons/hr)	Uncontrolled E.F. (lb/ton)			Control Device(s) Type	Collection and Control (%)	Uncaptured Emissions (ton/yr)			Control Device ID
			PM	PM10	PM2.5			PM	PM10	PM2.5	
Grain Handling Operations - Enclosed Headhouse and Grain Handling Vents to Baghouse											
	Total # of Internal Steps =	*2*	*Emission factor source, AP-42 Table 9.9.1-1, headhouse and grain handling, SCC 3-02-002-30*								
EU-1101 & EU-1101A	Truck/rail receiving pit and drag conveyor	2,800	0.061	0.0340	0.0058			22.44	12.51	2.13	CE-1101
EU-1102 & EU-1102A	Truck receiving pit and drag conveyor										CE-1102
EU-1201	hammermill surge bin										
EU-1202	hammermill surge bin					Enclosure	70%				
EU-1203	hammermill surge bin					BH	95%				CE-1200
EU-1204	hammermill surge bin										
EU-2001	grain storage silo										CE-2003A & CE-2003B
EU-2002	grain storage silo										CE-2004A & CE-2004B
Grain Cleaning Operations - Scalping											
	AP-42 Controlled E.F.		*0.012*	*0.006*	*0.006*						
	Assumed Cyclone Eff.		*90.00%*								
EU-1200	Scalper	150	0.12	0.06	0.06	BH	95.00%	3.94	1.97	1.97	CE-1200
Grain Milling Operations - Hammermill											
	Hammermills Controlled E.F.		*0.067*	*0.0335*	*0.0335*						
	Cyclone Control % =		*90.00%*								
EU-1205 - EU-1208	Hammermills	470	0.67	0.335	0.335	Enclosure	70%	20.71	10.35	10.35	CE-1205 - CE-1208
						BH	95%				
					Non-Fugitive (Uncaptured/Unlimited):			**47.09**	**24.83**	**14.46**	
Fugitive Emissions - Grain Receiving											
EU-1101	Truck/rail receiving pit	1680	0.18	0.059	0.010	Choke Flow	29%	47.02	15.41	2.61	CE-1101
						BH	95%				
EU-1102	Truck receiving pit	1120	0.18	0.059	0.010	Choke Flow	29%	31.35	10.27	1.74	CE-1102
						BH	95%				
					Fugitive (Uncaptured/Unlimited)			**78.37**	**25.69**	**4.35**	

Methodology
Non-Fugitive (Uncaptured/Unlimited) PM/PM10/PM2.5 (tons/yr) = Maximum Capacity (tons/hr) x Uncontrolled Emission Factor (lbs/ton) x (1-Capture Efficiency%) x 8760 hr/1 yr x 1 ton/2000 lbs
Fugitive (Uncaptured/Unlimited) PM/PM10/PM2.5 (tons/yr) = Maximum Capacity (tons/hr) x Uncontrolled Emission Factor (lbs/ton) x (1-Choke Flow Efficiency%) x (1-BH Efficiency%) x 8760 hr/1 yr x 1 ton/2000 lbs

Appendix A: Emission Calculations
PM, PM10, and PM2.5 Emissions
From the DDGS Handling, Loadout, and Storage Operations

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

1. Potential to Emit PM/PM10/PM2.5 - Uncontrolled/Unlimited Emissions and Controlled Unlimited Emissions:

Unit ID	Unit Description	Maximum Capacity (tons/hr)	Uncontrolled Emission Factor (lbs/ton)			Uncontrolled/Unlimited Emissions (ton/yr)		
			PM	PM10	PM2.5	PM	PM10	PM2.5
DDGS Shipping	*AP-42 Table 9.9.1-1 Uncontrolled E.F.*		*0.086*	*0.029*	*0.0049*	*grain shipping, truck (unspecified) SCC 3-02-005-60*		
EU-2201	DDGS truck loadout	200	0.086	0.029	0.0049	75.34	25.40	4.29
EU-2202A	DDGS rail loadout	200	0.086	0.029	0.0049	75.34	25.40	4.29
EU-2202B	DDGS rail loadout	200	0.086	0.029	0.0049	75.34	25.40	4.29
EU-2202C	DDGS rail loadout	200	0.086	0.029	0.0049	75.34	25.40	4.29
					Total Uncontrolled:	**301.34**	**101.62**	**17.17**

Notes:
1. Emission factor selected as the worst-case for grain shipping
2. Emission from DDGS handling before loadout are included in dryer processes.
3. Maximum capacity shown is at loadout, not the drying process

Methodology:
PM/PM10/PM2.5 (tons/yr) = Maximum Capacity (tons/yr) x Uncontrolled Emission Factor (lbs/ton) x (1-Capture Efficiency%) x 1 ton/2000 lbs

2(a). Controlled Potential to Emit PM/PM10/PM2.5 - Baghouse and Cartridge Filter Emissions:

Unit ID	Unit Description	Control Device		Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	Controlled Emissions (tons/yr)			Controlled Emissions (lb/hr)		
		ID	Type			PM	PM10	PM2.5	PM	PM10	PM2.5
EU-2201	DDGS truck loadout	CE-2201	HE filter	0.005	1,400	0.26	0.26	0.26	0.06	0.06	0.06
EU-2202A	DDGS rail loadout	CE-2202A	HE filter	0.005	1,400	0.26	0.26	0.26	0.06	0.06	0.06
EU-2202B	DDGS rail loadout	CE-2202B	HE filter	0.005	1,400	0.26	0.26	0.26	0.06	0.06	0.06
EU-2202C	DDGS rail loadout	CE-2202C	HE filter	0.005	1,400	0.26	0.26	0.26	0.06	0.06	0.06
					Controlled Emissions	**1.05**	**1.05**	**1.05**	**0.24**	**0.24**	**0.24**

Methodology
PTE of PM/PM10/PM2.5 after Control (tons/yr) = 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 of PM/PM10/PM2.5 after Control (lbs/hr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7000 lb/gr

2(b). Uncaptured/Unlimited Potential to Emit PM/PM10/PM2.5 :

Unit ID	Unit Description	Maximum Capacity (tons/hr)	Uncontrolled Emission Factor (lbs/ton)			Control Device(s)	Collection and Control Efficiency	Uncaptured/Unlimited Emissions (ton/yr)		
			PM	PM10	PM2.5		(%)	PM	PM10	PM2.5
DDGS Shipping	*AP-42 Table 9.9.1-1 Uncontrolled E.F.*		*0.086*	*0.029*	*0.0049*	*grain shipping, truck (unspecified) SCC 3-02-005-60*				
EU-2201	DDGS truck loadout	200	0.086	0.029	0.0049	HE filter	95%	3.77	1.27	0.21
EU-2202A	DDGS rail loadout	200	0.086	0.029	0.0049	HE filter	95%	3.77	1.27	0.21
EU-2202B	DDGS rail loadout	200	0.086	0.029	0.0049	HE filter	95%	3.77	1.27	0.21
EU-2202C	DDGS rail loadout	200	0.086	0.029	0.0049	HE filter	95%	3.77	1.27	0.21
						Non-Fugitive (Uncaptured/Unlimited)		**15.07**	**5.08**	**0.86**

3(a). Potential to Emit after Issuance PM/PM10/PM2.5 - Uncaptured/Limited Emissions:

Unit ID	Unit Description	Control Device		Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	Limited Emissions (lb/hr)			Limited Emissions (tons/yr)		
		ID	Type			PM	PM10	PM2.5	PM	PM10	PM2.5
EU-2201	DDGS truck loadout	CE-2201	HE filter	0.005	1,400	0.18	0.18	0.18	0.79	0.79	0.79
EU-2202A	DDGS rail loadout	CE-2202A	HE filter	0.005	1,400	0.18	0.18	0.18	0.79	0.79	0.79
EU-2202B	DDGS rail loadout	CE-2202B	HE filter	0.005	1,400	0.18	0.18	0.18	0.79	0.79	0.79
EU-2202C	DDGS rail loadout	CE-2202C	HE filter	0.005	1,400	0.18	0.18	0.18	0.79	0.79	0.79
Note:					**Controlled Emissions:**	**0.72**	**0.72**	**0.72**	**3.15**	**3.15**	**3.15**

Limited emissions are conservatively set at three times the controlled emissions in section 2a, and are subject to testing.

Unit ID	Unit Description	Maximum Capacity (tons/hr)	Uncontrolled Emission Factor (lbs/ton)			Control Device(s)	Collection and Control Efficiency	Uncaptured/Unlimited Emissions (ton/yr)		
			PM	PM10	PM2.5		(%)	PM	PM10	PM2.5
DDGS Shipping	*AP-42 Table 9.9.1-1 Uncontrolled E.F.*		*0.086*	*0.029*	*0.0049*	*grain shipping, truck (unspecified) SCC 3-02-005-60*				
EU-2201	DDGS truck loadout	200	0.086	0.029	0.0049	HE filter	95%	3.77	1.27	0.21
EU-2202A	DDGS rail loadout	200	0.086	0.029	0.0049	HE filter	95%	3.77	1.27	0.21
EU-2202B	DDGS rail loadout	200	0.086	0.029	0.0049	HE filter	95%	3.77	1.27	0.21
EU-2202C	DDGS rail loadout	200	0.086	0.029	0.0049	HE filter	95%	3.77	1.27	0.21
						Non-Fugitive (Uncaptured/Unlimited)		**15.07**	**5.08**	**0.86**

Methodology:
Non-Fugitive (Uncaptured/Unlimited) PM/PM10/PM2.5 (tons/yr) = Maximum Capacity (tons/hr) x Uncontrolled Emission Factor (lbs/ton) x (1-Capture Efficiency%) x 8760 hr/1 yr x 1 ton/2000 lbs

4. Potential to Emit VOC/HAPs from Wet Cake Storage Pad- Fugitive Emissions:

Annual Throughput (100% Wet Cake): 825000 tons/yr

Emission Unit	Pollutant	Emission Rate (lbs/ton)*	Potential Emissions (tons/yr)**
Wet Cake Pad	VOC	0.0083	3.42
	Acetaldehyde	0.00011	0.045
	Acrolein	0.00002	0.008
	Formaldehyde	0.00022	0.091
	Methanol	0.00004	0.017
	Total HAPs:	**---**	**0.161**

Methodology
* Based on Denco stack testing results (MN).
Fugitive VOC/HAPs (tons/yr) = Annual Throughput (tons/yr) x Emission Factor (lbs/ton) x 1 ton/2000 lbs
** This plant is capable of producing both DDGS and MDGS; however, the emissions from the DDGS production is likely the worst case scenario.
Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.

Appendix A: Emission Calculations
VOC and HAP Emissions from the Fermentation and Distillation Processes

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Potential to Emit (PTE) of VOC and HAP:

VOCs

Emission Unit		Control Device		Emission Rate Before Control[1] (lb/hr)	Scrubber Control Efficiency[2]	Potential to Emit VOC		
ID	Description	Description	ID			Uncontrolled (tons/yr)	After Issuance (lb/hr)	After Issuance (tons/yr)
EU-1400	Beer Well #2	Scrubber	CE-1401	756.6	98.0%	3313.86	24.50	107.31
EU-1401 - EU-1406	Fermentation Tanks (1-6)							
EU-1407	Beer Well #1							
EU-1408	Yeast Propagation Tank							
EU-1500	Degas Column	Scrubber	CE-1504	57.3	98.0%	250.76	2.50	10.95
EU-1510	Stripping Column							
EU-1530	Rectifying Column							
EU-1550	Beer Column							
EU-1570 - EU-1573	Evaporators (#1 - #4)							
Total						**3564.62**		**118.26**

Notes:
1. Uncontrolled VOC emission rates are from stack tests conducted October 5, 2015
2. Scrubber control efficiency required by 326 IAC 8-5-6

Methodology
Uncontrolled PTE (tons/yr) = Emission Rate Before Control (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
PTE After Issuance (tons/yr) = PTE After Issuance (lb/hr) *(limited PTE)* x 8,760 (hr/yr) / (2,000 (lb/ton)

HAPs

Emission Unit		Pollutant	Emission Rate Before Control[1] (lb/hr)	Scrubber Control Efficiency[1]	Potential to Emit		
ID	Description				Uncontrolled (tons/yr)	After Issuance (lb/hr)	After Issuance (tons/yr)
EU-1400	Beer Well #2	Acetaldehyde	12.20	96.90%	53.44	0.75	3.29
EU-1401 - EU-1406	Fermentation Tanks (1-6)	Acrolein	3.64	98.41%	15.94	0.15	0.66
EU-1407	Beer Well #1	Formaldehyde	0.08	99.35%	0.35	--	0.35
EU-1408	Yeast Propagation Tank	Methanol	16.36	99.70%	71.66	0.15	0.66
EU-1500	Degas Column	Acetaldehyde	1.79	99.90%	7.84	0.20	0.88
EU-1510	Stripping Column	Acrolein	0.07	99.71%	0.31	--	0.31
EU-1530	Rectifying Column	Formaldehyde	0.01	99.86%	0.02	--	0.02
EU-1550	Beer Column	Methanol	2.47	99.99%	10.82	0.10	0.44
EU-1570 - EU-1573	Evaporators (#1 - #4)						

Notes:
1. Uncontrolled HAP emission rates and control efficiencies are from stack tests conducted October 5, 2015

Methodology
Uncontrolled PTE (tons/yr) = Emission Rate Before Control (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
PTE After Issuance (tons/yr) = PTE After Issuance (lb/hr) *(limited PTE)* x 8,760 (hr/yr) / (2,000 (lb/ton)
Where PTE After Issuance (lb/hr) is not shown in the table, the HAP emission from that process is not limited and PTE After Issuance is the Uncontrolled PTE

Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBTU/HR<100, each
(BL-5001, BL-5002, BL-5003, and BL-5004)

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Emissions Unit ID	Heat Input Capacity (MMBtu/hr)
EU-5001	92.4
EU-5002	92.4
EU-5003	92.4
EU-5004	92.4
Total	**369.6**

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
369.6	1020	3174.21

	Pollutant						
	PM*	PM10*	PM2.5*	SO2**	NO_x**	VOC*	CO**
Emission Factor in lb/MMCF	1.9	7.6	7.6	10.0	51.00	5.5	51.00
Potential Emission in tons/yr	3.02	12.06	12.06	15.87	80.94	8.73	80.94

* Emission factors from Fifth Edition AP-42, Section 1.4, "Natural Gas Combustion", 7/98.
*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
** Emission factors are based on data from the manufacturer/vendor of the boilers.
SO2 emission factor greater than AP-42. NOx and CO emission factors less than AP-42, therefore source will test to verify compliance with these emission rates.

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors sources as noted.
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	n-Hexane	Toluene	**Total-Organics**
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	3.33E-03	1.90E-03	0.12	2.86	5.40E-03	**2.99**

	HAPs - Metals					
	Lead	Cadmuim	Chromium	Manganese	Nickel	**Total-Organics**
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	7.94E-04	1.75E-03	2.22E-03	6.03E-04	3.33E-03	**8.70E-03**
Methodology is the same as above.					**Total HAPs**	**3.00**
The five highest organic and metal HAPs emission factors are provided above.					**Worst HAP**	**2.86**

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Criteria Pollutants
From Two (2) 76.7 MMBtu/hr Natural Gas DDGS Dryers and Cooling Systems Consisting of Two (2) Swiss Combi Systems

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Maximum Capacity	**350,400 tons/yr**	**Control Efficiency***	**(VOC)**	**98%**
	153.4 MMBtu/hr		**(PM/PM10/PM2.5)**	**95%**
	1,317.4 MMCF/yr			
Limited Capacity	**330,000 tons/yr**			

	Pollutant						
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO
Emission Factor**	0.5400 (lbs/ton)	0.5400 (lbs/ton)	0.5400 (lbs/ton)	0.0106 (lbs/MMBtu)	0.2100 (lbs/MMBtu)	0.4100 (lbs/ton)	0.9500 (lbs/ton)
Unlimited Potential to Emit (tons/yr)	1892	1892	1892	7.12	141.1	3591.6	166.4
Unrestricted Potential to Emit After Control (tons/yr)	**94.6**	**94.6**	**94.6**	**--**	**--**	**71.8**	**166.4**
Potential to Emit After Issuance (tons/yr)	**89.1**	**89.1**	**89.1**	**7.12**	**141.1**	**67.7**	**156.8**

** The control efficiencies for the Swiss Combi Eco-Dry systems were not provided by the source. The units use cyclones for product recovery and it is conservatively assumed that the Swiss Combi systems will achieve 95% PM/PM10/PM2.5 control. 326 IAC 8-5-6 requires 98% control efficiency for VOC. All other pollutants are uncontrolled.*
***Emission factors are based on after control and are estimated by the manufacturer/vendor of Swiss Combi systems. SO2 emission factor is greater than AP-42 emission factor for natural gas combustion.*
The Permittee will perform stack testing to demonstrate compliance with the above emission rates.

Methodology
Unrestricted Potential to Emit After Control (tons/yr) = Maximum Capacity (tons/yr) x Emission Factor (lb/ton) / 2,000 (lb/ton) *PM, PM10, PM2.5, VOC, and CO*
Unlimited Potential to Emit (tons/yr) = Maximum Capacity (tons/yr) x Emission Factor (lb/ton) / 2,000 (lb/ton) / (1 - Control Efficiency (%)/100) *PM, PM10, PM2.5, VOC, and CO*
Unlimited Potential to Emit (tons/yr) = Maximum Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8,760 (hr/yr) / 2,000 (lb/ton) *SO2 and NOx*
Potential to Emit After Issuance (tons/yr) = Limited Capacity (tons/yr) x Emission Factor (lb/ton) / 2,000 (lb/ton) *PM, PM10, PM2.5, VOC, and CO*
Potential to Emit After Issuance (tons/yr) = Unlimited Potential to Emit (tons/yr) *SO2 and NOx*

Appendix A: Emission Calculations
HAP Emissions
From Two (2) 76.7 MMBtu/hr Natural Gas DDGS Dryers and Cooling Systems Consisting of Two (2) Swiss Combi Systems

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Maximum Capacity **350,400 tons/yr** **Limited Capacity** **330,000 tons/yr**
Control Efficiency **98%**

Process HAPs	Pollutant				
	Acetaldehyde	Acrolein	Formaldehyde	Methanol	Total
Uncontrolled Potential to Emit (tons/yr)	**265.09**	**199.98**	**125.57**	**46.51**	**637.15**
Unrestricted PTE after Control (tons/yr)	**5.30**	**4.00**	**2.51**	**0.93**	**12.74**
PTE After Issuance (tons/yr)	**4.99**	**3.77**	**2.37**	**0.88**	**12.00**
PTE After Issuance (lb/hr) (single unit)[1]	**0.57**	**0.43**	**0.27**	**0.10**	

Notes:
1. HAP emission limits (PTE After Issuance (lb/hr) (single unit)) are based on October 2015 stack testing. Single-unit limits are set as 20% higher than the highest test result for the two units.

Methodology
PTE After Issuance (tons/yr) = PTE After Issuance (lb/hr) (single unit) x 2 (units) x 8,760 (hr/yr) / 2,000 (lb/ton)
Unrestricted PTE after Control (tons/yr) = PTE After Issuance (tons/yr) x Maximum Capacity (tons/yr) / Limited Capacity (tons/yr)
Uncontrolled PTE (tons/yr) = Unrestricted PTE after Control (tons/yr) / (1-Control Efficiency (%)/100)

Natural Gas Combustion HAPs
Potential Throughput
MMCF/yr
1317.4

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	1.38E-03	7.90E-04	4.94E-02	1.19	2.24E-03	**1.24**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
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	3.29E-04	7.25E-04	9.22E-04	2.50E-04	1.38E-03	**3.61E-03**
Emission Factors from AP-42, Chapter 1.4, Table 1.4-3.					**Total HAPs**	**1.24**
(AP-42 Supplement D 3/98)					**Worst HAP**	**1.19**

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

Methodology
All Emission factors are based on normal firing.
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Potential Emission in tons/yr = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
VOC and HAP Emissions from Ethanol Loading Racks

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

1. Emission Factors: AP-42

Denatured ethanol will be shipped by either truck or railcar. The plant capacity is limited to 135,714.29 kgal/yr as denatured fuel ethanol. In order to provide a worst-case emission estimate, the calculations are based on 100% of plant production being shipped as denatured ethanol. Railcars will be dedicated fleets, but the trucks may be used to carry gasoline prior to filling with denatured ethanol. According to AP-42 Section 5.2.2.1, emissions from filling cargo carriers consist of vapors from the product last contained that are displaced by the new liquid. Railcars and trucks will be filled by submerged loading process. Both truck and railcar loadout racks will be controlled by a carbon absoprtion/absorption hydrocarbon vapor recovery system (C-2101), which has a control efficiency of 98% for VOC and HAPs. According to AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids (01/95), the VOC emission factors for the truck and rail loading racks can be estimated from the following equation:

$$L = 12.46 \times (SPM)/T$$

where:

L = loading loss (lbs/kgal)
S = a saturation factor (see AP-42, Table 5.2-1)
P = true vapor pressure of the liquid loaded (psia) (ethanol, from data in Table 3-8, Perry's Chemical Engineers' Handbook, 6th ed.)
M = molecular weight of vapors (lb/lb-mole) (trucks - gasoline, RVP 8.3, AP-42 Table 7.1-2, railcars - ethanol)
T = temperature of the bulk liquid loaded (°R)

Railcars and Trucks

Previous Carried Liquid	S	P (psia)	M (lb/lb-mole)	T (°R)	L (lbs/kgal)
Gasoline[1]	1.0	0.89	68	530	1.42
Ethanol[2]	0.6	0.89	46	530	0.58

Notes:
1. Trucks, submerged fill, dedicated vapor balance service (worst case)
2. Railcars, submerged fill dedicated normal service

2. Potential to Emit VOC Before Control:

Max. Loading Rate for Truck Loadout: 252 kgal/hr (for truck loading)
PTE of VOC before Control (tons/yr) = 252 kgal/hr x 6.22 lbs/kgal x 8760 hr/yr x 1 ton/2000 lbs = **1,564 tons/yr**
Max. Loading Rate Rail Loadout: 252 kgal/hr (for railcar loading)
PTE of VOC before Control (tons/yr) = 252 kgal/hr x 1.05 lbs/kgal x 8760 hr/yr x 1 ton/2000 lbs = **635 tons/yr**

3. Potential to Emit After Issuance for Truck and Railcar Loading:

Annual Production Limit: 135,714.29 kgal/yr (for all truck and railcar loading)
*Vapor Recovery System Emission Rate: 0.2946 lbs VOC/kgal (for truck and railcar loading) (C-2101)
(1) Assume all denatured ethanol is loaded to trucks (controlled by S2101):
PTE of VOC (tons/yr) = 0.2946 lbs/kgal x 135,714.29 kgal/yr x 1 ton/2000 lbs = **19.99 tons/yr**
(2) Assume all denatured ethanol is loaded to railcars (controlled by S2101):
PTE of VOC (tons/yr) = 0.2946 lbs/kgal x 135,714.29 kgal/yr x 1 ton/2000 lbs = **19.99 tons/yr**
Worst Case Potential to Emit VOC = 19.99 tons/yr
*lb VOC/kgal was back calculated based upon information from stack testing for inlet data and using 98% control efficiency

4. Potential to Emit HAPs:

HAP emissions are mainly from displaced vapors of previous tank contents.
A. Truck Loading

HAP[1]	HAP Fraction[2]	Potential to Emit HAP		
		Before Control (tons/yr)	After Issuance (tons/yr)	(lb/kgal)
Benzene	0.009	14.08	0.14	2.07E-03
Cumene	0.001	1.56	1.56E-02	2.31E-04
Ethylbenzene	0.001	1.56	1.56E-02	2.31E-04
n-Hexane	0.016	25.03	0.25	3.69E-03
Naphthalene	0.005	7.82	7.82E-02	1.15E-03
Toluene	0.013	20.34	0.20	3.00E-03
2,2,4-Trimethylpentane	0.008	12.51	0.13	1.84E-03
Xylenes	0.005	7.82	7.82E-02	1.15E-03
Total	**0.048**	**90.73**	**0.91**	

Notes:
1. Source: Table 3-2, Technical Guidance-Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities, Volume 1:Chapters , EPA-450/3-91-022a, November 1991
2. HAP as fraction of VOC emissions. Total HAP fraction in source document does not equal sum of components. PTE totals are sum of named-HAP PTE as a worst case.

Methodology
PTE of HAP Before Control (tons/yr) = PTE of VOC before Control (tons/yr) x HAP Fraction
PTE After Issuance (tons/yr) = Worst Case Potential to Emit VOC (tons/yr) x HAP Fraction

B. Railcar Loading

HAP	HAP Fraction[1]	PTE HAP Before Control (tons/yr)
Acetaldehyde	2.00E-04	0.31
Methanol	2.00E-04	0.31
Total	**4.00E-04**	**0.63**

Notes:
1. HAP content of ethanol product is 200 ppmw (each) of acetaldehyde and methanol, as in storage tank PTE calculations.

Methodology
PTE of HAP Before Control (tons/yr) = PTE of VOC before Control (tons/yr) x HAP Fraction

Appendix A: Emission Calculations
PM/PM10/PM2.5 Emissions
From the the Cooling Tower (Insignificant Activity CT-4001)

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Circulating water flow rate (W_c)	44,850	gal/min	Values provided by the equipment supplier for
Blowdown/drift TDS	4000	mg/l	an identical unit at another site.
Drift loss	0.005%		Worst case value for crossflow towers complying with ASHRAE Standard 189.1

Total Liquid Drift	PM/PM10/PM2.5 Emissions	
($lb/10^3$ gal)	(lb/hr)	(tons/yr)
0.42	4.49	19.66

Methodology
Methodology ref: par. 2, page 13.4-3, AP-42 (1/95)
Total Liquid Drift ($lb/10^3$ gal) = Drift loss (%) / 100 x 8.34 (lb/gal) x 1,000 ($gal/10^3$ gal)
Emissions (lb/hr) = Total Liquid Drift ($lb/10^3$ gal) x Circulating water flow rate (gal/min) / 1,000 ($gal/10^3$ gal) x 60 (min/hr) x Blowdown/drift TDS (mg/l) / 1,000,000 (mg/l / weight fraction)
Emissions (tons/yr) = Emissions (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620 mi/day
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

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

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Denaturant Delivery	50.6	1.0	50.6	27.8	1403.5	4800	0.909	45.98	16782
Ethanol (denatured)	15.2	1.0	15.2	27.8	421.0	4800	0.909	13.79	5034
Grain	118.7	1.0	118.7	27.8	3294.4	4800	0.909	107.93	39393
DDGS	26.7	1.0	26.7	27.8	741.2	4800	0.909	24.28	8863
Corn Oil	2.8	1.0	2.8	27.8	78.1	4800	0.909	2.56	934
		Totals	**214.0**		**5938.2**			**194.5**	**71006**

Average Vehicle Weight Per Trip = 27.8 tons/trip
Average Miles Per Trip = 0.91 miles/trip

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

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	27.8	27.8	27.8	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	2.579	0.516	0.1266	lb/mile
Mitigated Emission Factor, Eext =	2.358	0.472	0.116	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Mitigated PTE of PM (Before Control) (tons/yr)	Mitigated PTE of PM10 (Before Control) (tons/yr)	Mitigated PTE of PM2.5 (Before Control) (tons/yr)	Mitigated PTE of PM (After Control) (tons/yr)	Mitigated PTE of PM10 (After Control) (tons/yr)	Mitigated PTE of PM2.5 (After Control) (tons/yr)
Denaturant Delivery	21.64	4.33	1.06	9.89	1.98	0.49
Ethanol (denatured)	6.49	1.30	0.32	2.97	0.59	0.15
Grain	50.80	10.16	2.49	23.23	4.65	1.14
DDGS	11.43	2.29	0.56	5.23	1.05	0.26
Corn Oil	1.20	0.24	0.06	0.55	0.11	0.03
Totals	**91.57**	**18.31**	**4.50**	**41.86**	**8.37**	**2.06**

Methodology

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

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Maintenance road next to barge loadout	1.0	1.0	1.0	5.0	5.0	4800	0.909	0.9	331.8
Maintenance road next to rail spur	1.0	1.0	1.0	5.0	5.0	4200	0.795	0.8	290.3
Maintenance road around Elec. Substation	1.0	0.14	0.1	5.0	0.7	1200	0.227	0.0	11.9
Maintenance road to each well (2) by river	1.0	0.14	0.1	5.0	0.7	2000	0.379	0.1	19.8
Misc. maintenance roads at facility	1.0	0.14	0.1	5.0	0.7	1000	0.189	0.0	9.9
		Totals	**2.4**		**12.1**			**1.8**	**663.6**

Average Vehicle Weight Per Trip = 5.0 tons/trip
Average Miles Per Trip = 0.75 miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	6.0	6.0	6.0	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Iron and Steel Production)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	5.0	5.0	5.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365] (Equation 2 from AP-42 13.2.2)
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	3.80	1.01	0.10	lb/mile
Mitigated Emission Factor, Eext =	2.50	0.67	0.07	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Mitigated PTE of PM (Before Control) (tons/yr)	Mitigated PTE of PM10 (Before Control) (tons/yr)	Mitigated PTE of PM2.5 (Before Control) (tons/yr)	Mitigated PTE of PM (After Control) (tons/yr)	Mitigated PTE of PM10 (After Control) (tons/yr)	Mitigated PTE of PM2.5 (After Control) (tons/yr)
Maintenance road next to barge loadout	0.41	0.11	0.01	0.21	0.06	0.01
Maintenance road next to rail spur	0.36	0.10	0.01	0.18	0.05	0.00
Maintenance road around Elec. Substation	0.01	0.00	0.00	0.01	0.00	0.00
Maintenance road to each well (2) by river	0.02	0.01	0.00	0.01	0.00	0.00
Misc. maintenance roads at facility	0.01	0.00	0.00	0.01	0.00	0.00
Totals	**0.83**	**0.22**	**0.02**	**0.41**	**0.11**	**0.01**

Methodology

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

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit

Appendix A: Emission Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)
Emergency Generator (EU-7000)

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Output Horsepower Rating (hp)	1495.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	747,500
Sulfur Content (S) of Fuel (% by weight)	0.050

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04	4.01E-04	4.01E-04	4.05E-04 *(.00809S)*	2.40E-02 **see below	7.05E-04	5.50E-03
Potential Emission in tons/yr	0.26	0.15	0.15	0.15	8.97	0.26	2.06

*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	Formaldehyde	Acetaldehyde	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
Potential Emission in tons/yr	2.03E-03	7.35E-04	5.05E-04	2.06E-04	6.59E-05	2.06E-05	5.55E-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).

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)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Potential Emission of Total HAPs (tons/yr)	**4.12E-03**

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)
Diesel Fire Pump (EU-7075B)

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Output Horsepower Rating (hp)	460.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	230,000

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.25	0.25	0.25	0.24	3.57	0.29	0.77

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	7.51E-04	3.29E-04	2.29E-04	3.15E-05	9.50E-04	6.17E-04	7.45E-05	1.35E-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).

Potential Emission of Total HAPs (tons/yr)	**3.12E-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)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A: Emission Calculations
VOC Emissions
From Storage Tank Emissions

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

Tank ID	Tank Capacity (gal)	Description	Liquid	Throughput (MM gal/yr)	Losses					VOC PTE (tons/yr)	HAP Emission Factor	HAP PTE		
					Rim Seal (lb/yr)	Withdrawl (lb/yr)	Deck Fitting (lb/yr)	Deck Seam (lb/yr)	Total (lb/yr)			Acetaldehyde (tons/yr)	Methanol (tons/yr)	Total (tons/yr)
T-2110	250,000	Anhydrous Tank 1	Ethanol	66.2	40.02	420.74	129	18.34	608.1	0.31	0.0002%	6.26E-07	6.26E-07	1.25E-06
T-2111	250,000	Anhydrous Tank 2	Ethanol	66.2	40.02	420.74	129	18.34	608.1	0.31	0.0002%	6.26E-07	6.26E-07	1.25E-06
T-2101	39,500	Off-Spec Storage Tank	Ethanol	9.5	-	-	-	-	287.03	0.14	0.0002%	2.87E-07	2.87E-07	5.74E-07
T-2102	1,015,164	Denatured Ethanol Storage Tank	Ethanol & Denaturant	45.2	75.65	169.74	185.86	57.77	489.02	0.24	0.0002%	4.89E-07	4.89E-07	9.78E-07
T-2103	1,015,164	Denatured Ethanol Storage Tank	Ethanol & Denaturant	45.2	75.65	169.74	185.86	57.77	489.02	0.24	0.0002%	4.89E-07	4.89E-07	9.78E-07
T-2105	1,015,164	Denatured Ethanol Storage Tank	Ethanol & Denaturant	45.2	75.65	169.74	185.86	57.77	489.02	0.24	0.0002%	4.89E-07	4.89E-07	9.78E-07
T-2104	128,800	Denaturant Storage Tank	Natural Gasoline	3.4	428.06	23.72	1935.99	152.54	2540.31	1.27	0.0000%	0.00	0.00	0.00
										2.53		**2.52E-06**	**2.52E-06**	**5.04E-06**

Notes:
VOC emissions from all tanks except T-2101 were calculated by the Permittee using EPA TANKS software (version 4.09d).
Total losses (lb/yr) for T-2101 from ATSD App A, SSM No. 129-33774-00050, issued January 23, 2014
Acetaldehyde and Methanol are both at 200 ppm in the final product. It is conservatively assumed the same composition in all VOCs that are predominantly ethanol.
Denaturant (natural gasoline) is condensate from natural gas transportation, predominantly pentane and low molecular weight aliphatics, HAP content is considered negligible.

Methodology
Total Losses (lb/yr) = Rim Seal Losses + Withdrawl Losses + Deck Fitting Losses + Desck Seam Losses
VOC PTE (tons/yr) = Total Losses (lb/yr) / 2,000 (lb/ton)
Single HAP PTE (tons/yr) = VOC PTE (tons/yr) x HAP Emission Factor (%)/100
Total HAP PTE = Acetaldehyde PTE + Methanol PTE

Appendix A: Emission Calculations
VOC Emissions
Corn Oil Separation Process

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

1. Tank Emissions:

Tank ID	Tank Capacity (gal)	Description	Potential VOC Emissions (lbs/yr)	Potential VOC Emissions (tons/yr)	HAP Emission Factor (%)	Acetaldehyde Emissions (tpy)	Methanol Emissions (tpy)	Total HAP Emissions (tpy)
TP-6901	1,000	Emulsion Mix Flash Tank	12.32	0.01	0.0002%	1.232E-08	1.232E-08	2.464E-08
TP-6930	450	Emulsion Settling Tank	12.00	0.01	0.0002%	1.20E-08	1.20E-08	2.40E-08
TP-6931	400	Bio Oil Product Tank	11.66	0.01	0.0002%	1.166E-08	1.166E-08	2.332E-08
TF-8901	9,500	Bio Oil Storage Tank 1	12.73	0.01	0.0002%	1.273E-08	1.273E-08	2.546E-08
TF-8902	9,500	Bio Oil Storage Tank 2	12.73	0.01	0.0002%	1.273E-08	1.273E-08	2.546E-08
TF-8903	9,500	Bio Oil Storage Tank 3	12.73	0.01	0.0002%	1.273E-08	1.273E-08	2.546E-08
TF-8904	9,500	Bio Oil Storage Tank 4	12.73	0.01	0.0002%	1.273E-08	1.273E-08	2.546E-08
TS-6852	560	Aqueous Soluble Phase Receiver	12.18	0.01	0.0002%	1.218E-08	1.218E-08	2.436E-08
TS-6853	205	Emulsion Concentrate Receiver #1	11.95	0.01	0.0002%	1.195E-08	1.195E-08	2.39E-08
TS-6854	270	Emulsion Concentrate Receiver #2						
TS-6860	3,759	Centrifuge Feed Tank	13.7	0.01	0.0002%	1.37E-08	1.37E-08	2.74E-08
				0.06		**1.2473E-07**	**1.2473E-07**	**2.4946E-07**

Methodology
VOC emissions from the storage tanks were calculated by the Permittee using EPA TANKS software (version 4.09d) and have been verified.
Acetaldehyde and Methanol are both at 200ppm in the final product. It is conservatively assumed the same composition in all VOCs that are predominantly ethanol.

2. Fugitive VOC Emissions:

Equipment Component Source	Product	Component Count**	Emission Factor*** (lbs/comp-hr)	Subpart VV Control Effectiveness* *** (%)	Fugitive VOC Emissions (tons/yr)
Valves	Light Liquid	20	0.008884629	84%	0.12
Pumps	Light Liquid	10	0.04387199	69%	0.60
Connectors	All	25	0.004034459	87%	0.06
Total					**0.78**

HAP	HAP Fraction*	Fugitive HAP Emissions (tons/yr)
Acetaldehyde	2.00E-04	1.56E-04
Methanol	2.00E-04	1.56E-04
		3.11E-04

*This is the weighted average alchohol concentration for all processes and components at the source.
((Process Specifc Alcohol Conc.)*(Number of Components in Process)) / (Total Number of Components at Source)
** Component count for entire source estimated by the source.
*** Emission factors are from Protocol for Equipment leak Emission Estimates, EPA-453/R-95-017.
**** Control Effectiveness is from Protocol for Equipment leak Emission Estimates, EPA-453/R-95-017, Table 5-2.

* The HAP fractions for Acetaldehyde and Methanol are assumed to be the same as for all other leaks at the source. The HAP fractions were derived from similar plant stack testing

Methodology
Fugitive VOC Emissions (tons/yr) = Component Count x Emission Factor (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs x (1-Control Effectiveness)

3. Loading Emissions

According to AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids (01/95), the VOC emission factors for the truck and rail loading racks can be estimated from the following equation:

$$L = 12.46 \times (SPM)/T$$

where:

L = loading loss (lbs/kgal)
S = a saturation factor (see AP-42, Table 5.2-1)
P = true vapor pressure of the liquid loaded (psia)
M = molecular weight of vapors
T = temperature of the bulk liquid loaded (degree R)

Railcars and Trucks

Previous Stored Liquid	S	P (psia)	M (lbs/mole lbs)	T (degree R)	L (lbs/kgal)
Corn Oil	0.6	0.0085	96.09	509.88	0.01

Therefore, the emission factor for loading corn oil to the trucks

Potential to Emit VOC:

Max. Loading Rate for Truck Loadout: 0.40 kgal/hr (for truck loading)

PTE of VOC before Control (tons/yr) = 0.40 kgal/hr x 0.01 lbs/kgal x 8760 hr/yr x 1 ton/2000 lbs = **0.02 tons/yr**

Max. Loading Rate Rail Loadout: 0.40 kgal/hr (for railcar loading)

PTE of VOC before Control (tons/yr) = 0.40 kgal/hr x 0.01 lbs/kgal x 8760 hr/yr x 1 ton/2000 lbs = **0.02 tons/yr**

4. Total Corn Oil Seperation Process Emissions:

	Tanks	**Fugitive**	**Loadout**	**Total**
Potential VOC (tpy)	0.06	0.78	-	**0.84**
Potential Total HAPs (tpy)	2.49E-07	3.11E-04	-	**3.11E-04**
Acetaladehyde (tpy)	1.25E-07	1.56E-04	-	**1.56E-04**

Appendix A: Emission Calculations
VOC and HAP Emissions
From Equipment Leaks

Company Name: Green Plains Mount Vernon LLC
Source Address: 8999 West Franklin Road, Mt. Vernon, Indiana 47620
Significant Source Modification No.: 129-43193-00050
Significant Permit Modification No.: 129-43205-00050
Reviewer: Doug Logan
Date: 9/23/2020

1. Fugitive VOC Emissions: Alcohol Concentration (% wt)[1] 49.7%

Component Type	Service	Component Count[2]	Average Emission Factor[3]		Control Effectiveness[4]	Fugitive VOC Potential to Emit (tons/yr)
			(kg/hr/source)	(lb/hr/source)		
Valves	Gas	194	0.0060	0.0132	87%	0.72
	Light Liquid	906	0.0040	0.0089	84%	2.80
	Heavy Liquid[5]		0.0002	0.0005	84%	0
Pumps	Light Liquid	39	0.0199	0.0439	69%	1.15
	Heavy Liquid[5]		0.0086	0.0190	69%	0
Compressor seals	Gas[6]		0.2280	0.5026	0%	0
Pressure-Relief Valves	Gas[7]	28	0.1040	0.2293	87%	1.82
Connectors	All[8]	2503	0.0018	0.0040	47%	11.75
Open-ended lines	All[9]		0.0017	0.0037	100%	0
Sampling Connections	All[9]		0.0150	0.0331	100%	0
Total						**18.25**

1. This is the weighted average alchohol concentration for all processes and components at the source.
2. Component count from LDAR report for the source, 8/20/20.
3. Average emission factors are from Table 2-1, Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017, November 1995.
4. Control effectiveness from Table 5-2, Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017, November 1995, monthly monitoring with 10,000 ppmv leak definition, except as noted.
5. Reference does not include control effectiveness for heavy liquid service, taken as the same as light liquid service.
6. Control effectiveness for compressors taken as 0% because operators typically do not have backup units available.
7. Reference does not include control effectiveness for PTV's, taken as the same as valves in gas service.
8. Reference does not include control effectiveness for connectors with LDAR conditions applied to other components, taken as half of the HON negotiated rulemaking value from the same table.
9. Reference does not include control effectiveness for these components, taken as effectively 100%, ref. Sections 5.2.7 and 5.2.8 of the Protocol.

Methodology

Alcohol Concentration (wt %) = [Σ((Process Specific Alcohol Conc.) x (Number of Components in Process))] / (Total Number of Components at Source)

Emission Factor (lb/hr/source) = Emission Factor (kg/hr/source) x 2.2046 (lb/kg)

Fugitive VOC Emissions (tons/yr) = Component Count x Emission Factor (lbs/hr/source) x 8,760 (hr/yr) / 2,000 (lb/ton) x [1-Control Effectiveness(%)]/100 x Alcohol Concentration (% wt)/100

2. Fugitive HAP Emissions:

HAP	HAP Fraction*	Fugitive HAP Emissions (tons/yr)
Acetaldehyde	2.00E-04	3.65E-03
Methanol	2.00E-04	3.65E-03
Benzene	2.50E-03	4.56E-02
Carbon Disulfide	2.00E-05	3.65E-04
Cumene	1.00E-04	1.82E-03
Ethylbenzene	5.00E-05	9.12E-04
n-Hexane	5.00E-02	9.12E-01
Toluene	5.00E-03	9.12E-02
Xylenes	5.00E-04	9.12E-03
Total		**1.06**

* The HAP fractions for Acetaldehyde and Methanol ware derived from similar plant stack testing and the remaining HAP fractions are for gasoline vapors.

Methodology

Fugitive HAP Emissions (tons/yr) = Fugitive VOC Emissions (tons/yr) x HAP Fraction

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

October 15, 2020

Dan Labhart
Green Plains Mount Vernon, LLC
8999 W Franklin Rd
Mount Vernon, IN 47620-9179

Re: Public Notice
Green Plains Mount Vernon, LLC
Permit Level: Title V Sig Source Mod Min PSD
Title V Sig Permit Mod
Permit Number: 129-43193-00050 &
129-43205-00050

Dear Mr. Labhart:

Enclosed is the Notice of 30-Day Period for Public Comment for your draft air permit.

Our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person. The Notice of 30-Day Period for Public Comment has also been sent to the OAQ Permits Branch Interested Parties List and, if applicable, your Consultant/Agent and/or Responsible Official/Authorized Individual.

The preliminary findings, including the draft permit, technical support document, emission calculations, and other supporting documents, **are available electronically at**:

IDEM's online searchable database: http://www.in.gov/apps/idem/caats/ . Choose Search Option **by Permit Number**, then enter permit 43193 or 43205.

and

IDEM's Virtual File Cabinet (VFC): http://www.IN.gov/idem. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

The Public Notice period will begin the date the Notice is published on the IDEM Official Public Notice website. Publication has been requested and is expected within 2-3 business days. You may check the exact Public Notice begins and ends date here: https://www.in.gov/idem/5474.htm

Please note that as of April 17, 2019, IDEM is no longer required to publish the notice in a newspaper.

OAQ has submitted the draft permit package to the Alexandrian Public Library, 115 West 5th Street in Mount Vernon, IN. 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 draft permit 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 Doug Logan, 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 4-5328 or dial (317) 234-5328.

Sincerely,

Theresa Weaver

Theresa Weaver
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter access via website 8/10/2020

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
Eric J. Holcomb
Governor
Bruno L. Pigott
Commissioner

October 15, 2020

To: Alexandrian Public Library

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: Green Plains Mount Vernon, LLC
Permit Number: 129-43193-00050 & 129-43205-00050

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
- 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 updated 4/2019

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

Notice of Public Comment

October 15, 2020
Green Plains Mount Vernon, LLC
129-43193-00050 & 129-43205-00050

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 posted on IDEM's Public Notice website at https://www.in.gov/idem/5474.htm.

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 Joanne Smiddie-Brush with the Air Permits Administration Section at 1-800-451-6027, ext. 3-0185 or via e-mail at JBRUSH@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 Letter 2/28/2020

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

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

October 15, 2020

A 30-day public comment period has been initiated for:

Permit Number: **129-43193-00050 & 129-43205-00050**
Applicant Name: **Green Plains Mount Vernon, LLC**
Location: **Mount Vernon, Posey 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	TAWEAVER October 15, 2020 PAGE 1 of 2 Green Plains Mount Vernon LLC 129-43193-00050; 129-43205-00050 (draft)		
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**

AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Dan Labhart Green Plains Mount Vernon LLC 8999 W Franklin Rd Mount Vernon IN 476209179 (Source CAATS)									
2		Adam Crotteau Vice President of Operations Green Plains Mount Vernon LLC 1811 Aksarben Dr Omaha NE 68106 *(RO CAATS)*									
3		Evansville City Council and Mayors Office 1NW MLK Blvd, Rm 302 Evansville IN 47708 *(Local Official)*									
4		Posey County Commissioners County Courthouse, 126 E. 3rd Street Mount Vernon IN 47620 *(Local Official)*									
5		Posey County Health Department 100 Vista Dr Mount Vernon IN 47620 *(Health Department)*									
6		Mount Vernon City Council and Mayors Office 520 Main Street Mount Vernon IN 47620 *(Local Official)*									
7		Dr. Jeff Seyler Univ. of So Ind., 8600 Univ. Blvd. Evansville IN 47712 *(Affected Party)*									
8		Mr. Don Mottley Save Our Rivers 6222 Yankeetown Hwy Boonville IN 47601 *(Affected Party)*									
9		Alexandrian Public Library 115 W 5th St Mt. Vernon IN 47620 *(Library)*									
10		Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 *(Affected Party)*									
11		Mrs. Connie Parkinson 510 Western Hills Dr. Mt. Vernon IN 47620 *(Affected Party)*									
12		Robert Hess c/o Mellon Corporation 830 Post Road East, Suite 105 Westport CT 06880 *(Affected Party)*									
13		David Boggs 216 Western Hills Dr Mt Vernon IN 47620 (Affected Party)									
14		John Blair 800 Adams Ave Evansville IN 47713 *(Affected Party)*									
15		Alfred & Aurelia Mohr 5901 N Caburn Road Mt. Vernon IN 47620 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877

Mail Code 61-53

IDEM Staff	TAWEAVER October 15, 2020 PAGE 1 of 2 Green Plains Mount Vernon LLC 129-43193-00050; 129-43205-00050 (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**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Charles Elbert 900 Van Avenue Evansville IN 47714 (Affected Party)									
2		Mr. Bob Sheeder Senior Consultant NAQS Environmental Experts 301 South 9th Street, Suite 200 Lincoln NE 68508 *(Consultant)*									
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