NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

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

for South Bend Ethanol, LLC in St. Joseph County

Significant Permit Modification No.: 141-42172-00033

The Indiana Department of Environmental Management (IDEM) has received an application from South Bend Ethanol, LLC, located at 3201 West Calvert Street, South Bend, IN 46613, for a significant modification of its Part 70 Operating Permit issued on November 26, 2018. If approved by IDEM’s Office of Air Quality (OAQ), this proposed modification would allow South Bend Ethanol, LLC to make certain changes at its existing source. South Bend Ethanol, LLC has applied to alter the hazardous air pollutants limitations for n-hexane, benzene, and toluene at this source following the most recent results from stack testing. Additionally, South Bend Ethanol is intending to construct a sixth (6th) hammermill for corn milling, which is intended to be used as an in-line backup during periods of maintenance on the five (5) existing hammermills, so that production at this source will not experience a twenty percent (20%) decrease during times of planned and unplanned hammermill maintenance. Finally, South Bend Ethanol requested that the natural gas-fired boiler units, identified as EU-15, be removed from the permit, as these units were completely decommissioned as of October 1, 2019.

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

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

St. Joseph County Library
304 South Main Street
South Bend, IN 46601

and

IDEM Northern Regional Office
300 North Dr. Martin Luther King Jr. Boulevard, Suite 450
South Bend, IN 46601-1295

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

A copy of the preliminary findings is also available via IDEM’s Virtual File Cabinet (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 SPM 141-42172-00033 in all correspondence.

**Comments should be sent to:**

Travis Flock  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for Travis Flock or (317) 233-1782  
Or dial directly: (317) 233-1782  
Fax: (317) 232-6749 attn: Travis Flock  
E-mail: tflock@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](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](http://www.in.gov/idem/6900.htm).

**What will happen after IDEM makes a decision?**

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM’s response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM’s decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, at 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 Travis Flock of my staff at the above address.

Brian Williams, Section Chief
Permits Branch
Office of Air Quality
Ms. Katrina Gilbank  
South Bend Ethanol, LLC  
3201 West Calvert Street  
South Bend, IN 46613  

Re: 141-42172-00033  
Significant Permit Modification

Dear Ms. Gilbank:

South Bend Ethanol, LLC was issued Part 70 Operating Permit Renewal No. T141-39515-00033 on November 26, 2018 for a stationary ethanol manufacturing operation located at 3201 West Calvert Street, South Bend, IN 46613. An application requesting changes to this permit was received on October 29, 2019. 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: Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Db]
Attachment C: 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]
Attachment E: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Dc]

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.) 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.


A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. A copy of the permit is also available via IDEM’s Virtual File Cabinet (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 Travis Flock, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 233-1782 or (800) 451-6027, and ask for Travis Flock or (317) 233-1782.

Sincerely,

Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document
cc: File - St. Joseph County
    St. Joseph County Health Department
    U.S. EPA, Region 5
    Compliance and Enforcement Branch
    IDEM Northern Regional Office
Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

South Bend Ethanol, LLC
3201 W Calvert Street
South Bend, Indiana 46613

(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.

<table>
<thead>
<tr>
<th>Operation Permit No.: T141-39515-00033</th>
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Issued by: Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Issuance Date: November 26, 2018
Expiration Date: November 26, 2023

Significant Permit Modification No.: 141-40928-00033 issued on August 20, 2019
Administrative Amendment No.: 141-41836-00033, issued on September 9, 2019

Significant Permit Modification No.: 141-42172-00033

Issued by:
Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Issuance Date:
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Attachment A: Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Db]


Attachment C: 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]


Attachment E: Standards of Performance for Small Industrial-Commercial-Institutional Steam
Generating Units [40 CFR 60, Subpart Dc]

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 fuel-grade ethanol production plant.

Source Address: 3201 W Calvert Street, South Bend, Indiana 46613
General Source Phone Number: (574) 703-3365
SIC Code: 2869 (Industrial Organic Chemicals, Not Elsewhere Classified)
County Location: St Joseph
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
Not 1 of 28 Source Categories
Nested Source with fossil fuel fired boilers totaling more than two hundred fifty million (250,000,000) British thermal units per hour heat input, is 1 of 28 Source Categories, within a non-listed source
Nested Major Source, under PSD and Emission Offset Rules
Nested Minor Source, Section 112 of the Clean Air Act

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This fuel-grade ethanol production source consists of two (2) plants:

(a) South Bend Ethanol (141-00033) located at 3201 West Calvert Street, South Bend, Indiana, and

(b) Messer LLC (formerly Linde LLC) (141-00548) located at 3809 West Calvert Street, South Bend, Indiana.

Although the two (2) plants do not share common ownership or management, IDEM, OAQ has determined that since the two (2) plants are located on contiguous property that is owned by South Bend Ethanol and if it were not for the existence of South Bend Ethanol, the Messer LLC plant would not be there, the two (2) plants are considered one (1) source. Messer LLC is totally dependent on South Bend Ethanol for its feedstock of CO₂ gas. Therefore, the term "source" in the Part 70 documents refers to both South Bend Ethanol and Messer LLC as one (1) major source.

Separate Part 70 Operating Permits have been issued to South Bend Ethanol and Messer LLC solely for administrative purposes. This conclusion was initially determined under Part 70 Operating Permit Renewal (T141-6956-00033) on March 17, 2008.
A.3 Emission Units and Pollution Control Equipment Summary

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

(a) One (1) corn receiving operation, identified as EU-01, equipped with a baghouse, identified as D-0001, exhausting through Stack DC-0001, installed in 1982, consisting of one (1) rail hopper, identified as RH-0001, two (2) truck dumpers, identified as TD-0001 & TD-0002, and two (2) truck hoppers, identified as TH-0001 and TH-0002, two (2) belt conveyors, identified as CV-0001 and CV-0002, five (5) drag conveyors, identified as CV-0003, CV-0004, CV-0005, CV-0006, and CV-0008, one (1) elevator, identified as EL-0001, and one (1) elevator, identified as EL-0002, installed in December 2003, capacity: 840 tons of yellow dent corn per hour.

(b) One (1) corn handling operation, identified as EU-02, equipped with a baghouse, identified as D-0001, exhausting through Stack DC-0001, installed in 1982, consisting of one (1) pneumatic pump, identified as P-0001, seven (7) drag conveyors, identified as CV-0007, CV-0009, CV-0010 and CV-0013 through CV-0016, one (1) distributor, identified as DD-0001, two (2) bucket elevators, identified as EL-0001 and EL-0003, two (2) corn storage bins, identified as S-0005 & S-0006, capacity: 320,000 bushels of corn total, four (4) corn storage silos, identified as S-0007 through S-0010, capacity: 98,000 bushels of corn each, and two (2) sweep augers, identified as SD-0009 and SD-0010, capacity: 140 tons of yellow dent corn per hour.

(c) One (1) corn milling operation, identified as EU-03, installed in October 1982, equipped with a baghouse, identified as D-0112, exhausted through Stacks DC-0112 and BV-0112, consisting of one (1) belt conveyor, identified as CV-0011, five (5) rotary feeders, identified as RF-0111 through RF-0115, six (6) hammermills, identified as M-0050 through M-0055, three (3) screw conveyors, identified as CV-0111, CV-0101 and CV-0117, one (1) weigh hopper, identified as WH-0111, one (1) bag dump hopper, identified as B-0111, three (3) bucket elevators, identified as EL-0111, EL-0112 and EL-0113, one (1) weigh-feeder, identified as W-0121, one (1) airlock, identified as DA-0112, capacity: 140 tons of yellow corn per hour.

(d) One (1) yeast propagation operation, identified as EU-04, installed in October 1982, routed to CO2 scrubber, identified as V-230, using bisulfite solution into the scrubbing water, exhausted to Stack BL-230, consisting of three (3) yeast preparation tanks, identified as T-322 through T-324, three (3) agitators, identified as A-322 through A-324, and four (4) pumps, identified as P-320, PC-3220, PC-3230, and P-322, capacity: 16,000 gallons per tank and 2,100 tank turnovers per year.

Under the NSPS, 40 CFR Part 60, Subpart VV, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this operation are considered to be affected facilities.

(f) One (1) beerwell process, identified as EU-07, installed in December 1986, with a maximum capacity of 1,750 gallons of beer per minute, using CO₂ scrubber V-230 with bisulfite solution added to the scrubbing water as control, and exhausting to Stack BL-230, consisting of:

1. One (1) beerwell, identified as T-222.
2. Two (2) beerwell pumps, identified as P-222A and P-222B.
3. Two (2) beerwell agitators, identified as A-222A and A-222B.
4. One (1) finishing beerwell, identified as T-223, permitted in 2019, with a maximum capacity of 750,000 gallons (2,840 m³).

Under the NSPS, 40 CFR Part 60, Subpart VV, the group of all equipment (as defined at 40 CFR 60.481) in this process unit is an affected facility.

(g) One (1) degasser and recovery column, identified as EU-08, installed in October 1982, exhausted through Vent VGS-401-GS13-0 and Vent VLT-451051.

Vent VGS-401-GS13-0 routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2, to control VOC emissions from the one (1) recovery column vent condenser, identified as E-409. The associated equipment consists of:

One (1) recovery column, identified as V-402, one (1) recovery column reflux tank, identified as V-404, two (2) beer preheaters, identified as EP-4501 A & B, one (1) recovery column condenser, identified as E-4404, one (1) recovery column reboiler #2, identified as E-MS-408, one (1) recovery column vent condenser, identified as E-409, one (1) preheater #2, identified as E-412, one (1) recovery column reboiler #1, identified as E-413, one (1) auxiliary product cooler, identified as E-419, two (2) recovery column feed pumps, identified as P-401 A & P-401 B, two (2) recovery column bottoms pumps, identified as P-402 A and P-402 B, two (2) recovery column reflux pumps, identified as P-404 A and P-404 B, one (1) fusel oil transfer pump, identified as P-4601, three (3) recovery column recirculation pumps #2, identified as P-407 A, P-407 B, and P-408.

Vent VLT-451051 routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2, to control VOC emissions from the one (1) degasser vent condenser, identified as E-410. The associated equipment consists of:

One (1) degasser condenser, identified as E-403, one (1) degasser vent condenser, identified as E-410, and one (1) degasser, identified as V-401, capacity: 1,750 gallons of beer per minute.

(h) One (1) stillage concentration and evaporation process, identified as EU-09, installed in October 1982, with a maximum evaporator feed rate of 910 gallons per minute, consisting of:

1. Four (4) centrifuges, identified as CF-5001, CF-5002, CF-5103, CF 5104.
2. Three (3) stillage tanks, identified as T-502, T-515 and T-516.
3. One (1) stillage preheater, identified as E-503.
4. Four (4) 1st through 4th stage heaters, identified as E-501, E-502, E-504, and E-505.
(5) Five (5) vapor bodies, identified as T-504 and T-507 through T-510.

(6) One (1) 5th and 6th stage heater, identified as E-506.

(7) One (1) evaporation condensate tank, identified as T-506, exhausted through Stack VT-024 routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2.

(8) One (1) lube oil console, identified as C-501C.

(9) One (1) gland seal condenser, identified as C-501E.

(10) One (1) evaporator concentrates tank, identified as T-505.

(11) One (1) compressor, identified as C-501A.

(13) One (1) turbine, identified as C-501B.

(14) One (1) lube oil head tank, identified as C-501D.

(15) One (1) gland seal ejector, identified as C501F.

(16) One (1) evaporator concentrates tank agitator, identified as A 505.

(17) Four (4) stage 1 thru stage 4 circulation pumps, identified as P-504, P-505, P-507 and P 508.

(18) One (1) scrubber pump, identified as P-511.

(19) Two (2) stage 5 and 6 circulation pumps, identified as P-509 and P-510.

(20) Two (2) evaporator condensate pumps, identified as P-506 and P-521 (spare).

(21) Two (2) evaporator concentrates pump, identified as P-516 and P-516A.

(22) One (1) centrifuge, identified as CF-5105, permitted in 2019, not venting to the atmosphere.

(i) One (1) distillers dried grain and solubles (DDGS) dryer operation, identified as EU-10, installed in October 1982, exhausted through five (5) dry cyclones, identified as CY-511 through CY-515, controlled by two (2) natural gas-fired regenerative thermal oxidizers (RTOs), consisting of the following equipment:

(1) Five (5) DDGS dyers, previously identified as D-511 through D-515, permitted in 2014 as follows:

(A) Two (2) DDGS first pass dryers, identified as D-513 and D-514, each equipped with a cyclone routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2.

(B) One (1) DDGS first pass dryers, identified as D-515, with product and emissions routed to the two (2) polishing dryers, identified as D-511 and D-512.

(C) Two (2) DDGS polishing dryers, identified as D-511 and D-512, each equipped with a cyclone routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2.

(2) Five (5) DDGS dryer steam traps, identified as TR-511, TR-521, TR-531, TR-541 and TR-551.

(3) Five (5) dryer feed screw conveyors, identified as CV-511 through CV-515.

(4) One (1) wet conveyor, identified as CV-5010.

(5) Two (2) inclined wet conveyor, identified as CV-502 and CV-506.

(6) One (1) first pass dryer feed conveyor, identified as CV-516, and one (1) polishing dryer feed conveyor identified as CV-504.

(7) One (1) first pass product incline conveyor, identified as CV-503, one (1) recycle
(8) One (1) polishing dryers product conveyor, identified as CV-518 and one (1) first pass product conveyor, identified as CV-505.

(9) One (1) cooler cross-over conveyor, identified as CV-519.

(10) One (1) pug mill, identified as M-511.

(j) One (1) DDGS handling operation, identified as EU-11, installed in October 1982, consisting of two (2) bucket elevators, identified as EL-0601 and EL-0602, two (2) dust suppression nozzles, identified as DN-0601 and DN-0602, and four (4) drag conveyors, identified as CV-0600 through CV-0603, capacity: 38.98 tons of DDGS product per hour.

(k) One (1) DDGS load-out operation, identified as EU-12, installed in October 1982, equipped with a baghouse, identified as D-0601, exhausted through Stack DC-0601, consisting of five (5) drag conveyors, identified as CV-0604 through CV-0608, one (1) bucket elevator, identified as EL-0603, one (1) surge bin, identified as S-0601, one (1) belt conveyor with tripper, identified as CV-0609, one (1) dust filter, identified as D-0601, one (1) dust fan, identified as DC-0601, one (1) airlock, identified as DA-0601, one (1) winch drive, identified as H-0601, three (3) dust suspension nozzles, identified as DN-0603 through DN-0605, and one (1) shuttle belt conveyor, identified as CV-0610, maximum capacity: 83.96 tons of DDGS product per hour.

(l) One (1) alcohol load-out operation, identified as EU-13, installed in October 1982, with a maximum capacity of 72,000 gallons of ethanol per hour, using a load-out natural gas-fired flare, identified as G-602, rated at 0.100 million British thermal units per hour, as control, and exhausting to stack G-602, consisting of:

1. Two (2) bottom transfer loading arms, identified as G-604 and G-607.
2. Two (2) bottom transfer vapor recovery arms, identified as G-605 and G-608.
3. Two (2) truck/rail vapor recovery loading arms, identified as G-603 and G-606.
4. Two (2) product filters, identified as F-660 and F-661.
5. Two (2) fuel grade alcohol load-out pumps, identified as P-610 and P-611.
6. One (1) E85 blending skid, permitted in 2019

Under the NSPS, 40 CFR Part 60, Subpart VV, the group of all equipment (as defined at 40 CFR 60.481) in this process unit is an affected facility.

(m) Two (2) natural gas-fired boilers, identified as EU-16 and EU-17, approved in 2018 for construction, each with a maximum capacity of 220 MMBtu/hr, equipped with low NOx burners, and exhausting through Stack 001.

Under NSPS, 40 CFR Part 60, Subpart Db, these boilers are considered affected facilities.

(n) One (1) distillers dried grains and solubles (DDGS) cooler system, identified as EU-18, equipped with a baghouse, identified as DC-503, installed in March 2000, exhausting through Stack DC-0503 to the DDGS dryers, identified as EU-10, which are then controlled with two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2, consisting of one (1) fan, identified as BL-502, one (1) cooling coil, identified as CC-500, one (1) cooler inlet rotary valve, identified as RV-502, one (1) cooler, identified as RC-502, and five (5) conveyors, identified as CV-521, CV-522, CV-530, CV-531 and CV-532, DDGS capacity: 39.98 tons of DDGS per hour based on monthly DDGS production.
(o) Eight (8) storage tanks, consisting of:

1. One (1) internal floating roof gasoline storage tank, identified as T-601, installed in 1983, with a maximum capacity of 75,000 gallons (284 m³).
   Under the NSPS, 40 CFR Part 60, Subpart Ka, T-601 is an affected facility.

2. One (1) internal floating roof fuel ethanol storage tank, identified as T-610, installed in 1983, with a maximum capacity of 750,000 gallons (2,840 m³).

3. One (1) internal floating roof ethanol storage tank, identified as T-611, installed in 2001, with a maximum capacity of 1,250,000 gallons (4,730 m³).
   Under the NSPS, 40 CFR Part 60, Subpart Kb, T-601 is an affected facility.

4. One (1) internal floating roof in-process ethanol storage tank, identified as T-612, installed in 1983, with a maximum capacity of 75,000 gallons (284 m³).

5. One (1) corn oil storage tank, identified as T-4120, installed in 1983, capacity: 250,000 gallons.

6. Two (2) fixed roof corn oil storage tanks, installed in 2014.

7. One (1) horizontal corrosion inhibitor tank, identified as T-602, with a capacity of 9,000 gallons (34 m³).

(p) Two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2, constructed in 2014, with each RTO having a maximum heat input capacity of 8.0 MMBtu/hour, and exhausting to stack 5002.

(q) One (1) natural gas-fired Rental boiler, identified as EU-21, not to exceed a rating of 99.5 million British thermal units per hour each, constructed in 2014, equipped with low NOx burners, exhausted through Stack 001.
   Under NSPS, 40 CFR Part 60, Subpart Dc, this boiler is considered an affected facility.

(r) One (1) corn oil recovery system, constructed in 2014, with a maximum capacity of 4,600,000 gallons of corn oil per year, consisting of:

1. Separation equipment.
2. Corn oil loadout equipment.
3. One (1) primary tricanter, constructed in 2014.

### A.4 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) Combustion related activities, as follows:

1. Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, as follows:
   
   (A) Four (4) natural- gas fired space heaters, identified as SH-1 through 4,
constructed in 1982, with a maximum heat capacity of 0.550 MMBtu/hr, each.

(b) Water based activities, including the following:

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

(A) One (1) crossflow mechanical draft cooling tower, identified as CT-01, permitted in 2019, with a maximum capacity of 26,000 gallons per minute, using a drift eliminator as control, and exhausting to stack CT-01.

(c) Paved and unpaved roads and parking lots with public access, identified as EU-17.

(d) Activities associated with emergencies as follows:

(1) Stationary fire pump engines as follows:

(A) One (1) back-up diesel-fired fire pump, rated at 0.631 million British thermal units per hour and 250 horsepower.

Under the NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) the fire pump is considered an existing affected source.

(e) 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) Bag Dump-Process.

(2) DDGS finishing.

(3) Equipment leak losses from valves, pumps, and flanges.

Under the NSPS, 40 CFR Part 60, Subpart VV, the group of all equipment (as defined at 40 CFR 60.481) in this process unit is an affected facility.
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, T141-39515-00033, 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 April 15 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 5
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 Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

   Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
   Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
   Facsimile Number: 317-233-6865
   Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

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

   Indiana Department of Environmental Management
   Compliance 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 T141-39515-00033 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 combined permit, all previous registrations and permits are superseded by this combined new source review and 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:
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

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

C.1 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 thirty percent (30%) 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.2 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.3 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.4 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.5 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.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

C.7 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:
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.8 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.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

(a) For new units:

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

(b) For existing units:

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If, due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.
The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.10 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.11 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.12 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.13 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.
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.

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

The Permittee shall record the reasonable response steps taken.

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.

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)(a)(2) 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.14 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.15  Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

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

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

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

The statement must be submitted to:

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

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

C.16  General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6][326 IAC 2-2]
[326 IAC 2-3]

(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) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

1. Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, document and maintain the following records:

   (A) A description of the project.

   (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

   (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

   (i) Baseline actual emissions;

   (ii) Projected actual emissions;

   (iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

   (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

1. Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11][326 IAC 2-2][326 IAC 2-3][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.

(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.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

1. The annual emissions, in tons per year, from the project identified in (c)(1) in Section C - General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(ww) and/or 326 IAC 2-3-1(pp), for that regulated NSR pollutant, and

2. The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
(f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

1. The name, address, and telephone number of the major stationary source.

2. The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

3. The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

4. Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part 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

(g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.
SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) corn receiving operation, identified as EU-01, equipped with a baghouse, identified as D-0001, exhausting through Stack DC-0001, installed in 1982, consisting of one (1) rail hopper, identified as RH-0001, two (2) truck dumpers, identified as TD-0001 & TD-0002, and two (2) truck hoppers, identified as TH-0001 and TH-0002, two (2) belt conveyors, identified as CV-0001 and CV-0002, five (5) drag conveyors, identified as CV-0003, CV-0004, CV-0005, CV-0006, and CV-0008, one (1) elevator, identified as EL-0001, and one (1) elevator, identified as EL-0002, installed in December 2003, capacity: 840 tons of yellow dent corn per hour.

(b) One (1) corn handling operation, identified as EU-02, equipped with a baghouse, identified as D-0001, exhausting through Stack DC-0001, installed in 1982, consisting of one (1) pneumatic pump, identified as P-0001, seven (7) drag conveyors, identified as CV-0007, CV-0009, CV-0010 and CV-0013 through CV-0016, one (1) distributor, identified as DD-0001, two (2) bucket elevators, identified as EL-0001 and EL-0003, two (2) corn storage bins, identified as S-0005 & S-0006, capacity: 320,000 bushels of corn total, four (4) corn storage silos, identified as S-0007 through S-0010, capacity: 98,000 bushels of corn each, and two (2) sweep augers, identified as SD-0009 and SD-0010, capacity: 140 tons of yellow dent corn per hour.

(c) One (1) corn milling operation, identified as EU-03, installed in October 1982, equipped with a baghouse, identified as D-0112, exhausted through Stacks DC-0112 and BV-0112, consisting of one (1) belt conveyor, identified as CV-0018, one (1) pneumatic pump, identified as P-0111, one (1) scalper, identified as CS-0011, two (2) surge bins, identified as B-0011 and B-0112, one (1) drag conveyor, identified as CV-0011, five (5) rotary feeders, identified as RF-0111 through RF-0115, six (6) hammermills, identified as M-0050 through M-0056, three (3) screw conveyors, identified as CV-0111, CV-0101 and CV-0117, one (1) weigh hopper, identified as WH-0111, one (1) bag dump hopper, identified as B-0111, three (3) bucket elevators, identified as EL-0111, EL-0112 and EL-0113, one (1) weigh-feeder, identified as W-0121, one (1) airlock, identified as DA-0112, capacity: 140 tons of yellow corn per hour.

(d) One (1) yeast propagation operation, identified as EU-04, installed in October 1982, routed to CO2 scrubber, identified as V-230, using bisulfite solution into the scrubbing water, exhausted to Stack BL-230, consisting of three (3) yeast preparation tanks, identified as T-322 through T-324, three (3) agitators, identified as A-322 through A-324, and four (4) pumps, identified as P-320, PC-3220, PC-3230, and P-322, capacity: 16,000 gallons per tank and 2,100 tank turnovers per year.


Under the NSPS, 40 CFR Part 60, Subpart VV, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this operation are considered to be affected facilities.
(g) One (1) degasser and recovery column, identified as EU-08, installed in October 1982, exhausted through Vent VGS-401-GS13-0 and Vent VLT-451051.

Vent VGS-401-GS13-0 routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2, to control VOC emissions from the one (1) recovery column vent condenser, identified as E-409. The associated equipment consists of:

One (1) recovery column, identified as V-402, one (1) recovery column reflux tank, identified as V-404, two (2) beer preheaters, identified as EP-4501 A & B, one (1) recovery column condenser, identified as E-4404, one (1) recovery column reboiler #2, identified as E-MS-408, one (1) recovery column vent condenser, identified as E-409, one (1) preheater #2, identified as E-412, one (1) recovery column reboiler #1, identified as E-413, one (1) auxiliary product cooler, identified as E-419, two (2) recovery column feed pumps, identified as P-401 A & P-401 B, two (2) recovery column bottoms pumps, identified as P-402 A and P-402 B, two (2) recovery column reflux pumps, identified as P-404 A and P-404 B, one (1) fusel oil transfer pump, identified as P-4601, three (3) recovery column recirculation pumps #2, identified as P-407 A, P-407 B, and P-408.

Vent VLT-451051 routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2, to control VOC emissions from the one (1) degasser vent condenser, identified as E-410. The associated equipment consists of:

One (1) degasser condenser, identified as E-403, one (1) degasser vent condenser, identified as E-410, and one (1) degasser, identified as V-401, capacity: 1,750 gallons of beer per minute.

(h) One (1) stillage concentration and evaporation process, identified as EU-09, installed in October 1982, with a maximum evaporator feed rate of 910 gallons per minute, consisting of:

1. Four (4) centrifuges, identified as CF-5001, CF-5002, CF-5103, CF 5104.
2. Three (3) stillage tanks, identified as T-502, T-515 and T-516.
3. One (1) stillage preheater, identified as E-503.
4. Four (4) 1st through 4th stage heaters, identified as E-501, E-502, E-504, and E-505.
5. Five (5) vapor bodies, identified as T-504 and T-507 through T-510.
6. One (1) 5th and 6th stage heater, identified as E-506.
7. One (1) evaporation condensate tank, identified as T-506, exhausted through Stack VT-024 routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2.
8. One (1) lube oil console, identified as C-501C.
9. One (1) gland seal condenser, identified as C-501E.
10. One (1) evaporator concentrates tank, identified as T-505.
11. One (1) compressor, identified as C-501A.
12. One (1) turbine, identified as C-501B.
13. One (1) lube oil head tank, identified as C-501D.
14. One (1) gland seal ejector, identified as C501F.
15. One (1) evaporator concentrates tank agitator, identified as A 505.
16. Four (4) stage 1 thru stage 4 circulation pumps, identified as P-504, P-505, P-507 and P 508.
17. One (1) centrifuge, identified as CF-5105, permitted in 2019, not venting to the
atmosphere.

(i) One (1) distillers dried grain and solubles (DDGS) dryer operation, identified as EU-10, installed in October 1982, exhausted through five (5) dry cyclones, identified as CY-511 through CY-515, controlled by two (2) natural gas-fired regenerative thermal oxidizers (RTOs), consisting of the following equipment:

(1) Five (5) DDGS dryers, previously identified as D-511 through D-515, permitted in 2014 as follows:

(A) Two (2) DDGS first pass dryers, identified as D-513 and D-514, each equipped with a cyclone routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2.

(B) One (1) DDGS first pass dryer, identified as D-515, with product and emissions routed to the two (2) polishing dryers, identified as D-511 and D-512.

(C) Two (2) DDGS polishing dryers, identified as D-511 and D-512, each equipped with a cyclone routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2.

(2) Five (5) DDGS dryer steam traps, identified as TR-511, TR-521, TR-531, TR-541 and TR-551.

(3) Five (5) dryer feed screw conveyors, identified as CV-511 through CV-515.

(4) One (1) wet conveyor, identified as CV-5010.

(5) Two (2) inclined wet conveyor, identified as CV-502 and CV-506.

(6) One (1) first pass dryer feed conveyor, identified as CV-516, and one (1) polishing dryer feed conveyor identified as CV-504.

(7) One (1) first pass product incline conveyor, identified as CV-503, one (1) recycle conveyor, identified as CV-517, and one (1) recycle conveyor identified as CV-520.

(8) One (1) polishing dryers product conveyor, identified as CV-518 and one (1) first pass product conveyor, identified as CV-505.

(9) One (1) cooler cross-over conveyor, identified as CV-519.

(10) One (1) pug mill, identified as M-511.

(j) One (1) DDGS handling operation, identified as EU-11, installed in October 1982, consisting of two (2) bucket elevators, identified as EL-0601 and EL-0602, two (2) dust suppression nozzles, identified as DN-0601 and DN-0602, and four (4) drag conveyors, identified as CV-0600 through CV-0603, capacity: 38.98 tons of DDGS product per hour.

(k) One (1) DDGS load-out operation, identified as EU-12, installed in October 1982, equipped with a baghouse, identified as D-0601, exhausted through Stack DC-0601, consisting of five (5) drag conveyors, identified as CV-0604 through CV-0608, one (1) bucket elevator, identified as EL-0603, one (1) surge bin, identified as S-0601, one (1) belt conveyor with tripper, identified as CV-0609, one (1) dust filter, identified as D-0601, one (1) dust fan, identified as DC-0601, one (1) airlock, identified as DA-0601, one (1) winch drive, identified as H-0601,
three (3) dust suspension nozzles, identified as DN-0603 through DN-0605, and one (1) shuttle belt conveyor, identified as CV-0610, maximum capacity: 83.96 tons of DDGS product per hour.

(l) One (1) alcohol load-out operation, identified as EU-13, installed in October 1982, with a maximum capacity of 72,000 gallons of ethanol per hour, using a load-out natural gas-fired flare, identified as G-602, rated at 0.100 million British thermal units per hour, as control, and exhausting to stack G-602, consisting of:

(1) Two (2) bottom transfer loading arms, identified as G-604 and G-607.
(2) Two (2) bottom transfer vapor recovery arms, identified as G-605 and G-608.
(3) Two (2) truck/rail vapor recovery loading arms, identified as G-603 and G-606.
(4) Two (2) product filters, identified as F-660 and F-661.
(5) Two (2) fuel grade alcohol load-out pumps, identified as P-610 and P-611.
(6) One (1) E85 blending skid, permitted in 2019

Under the NSPS, 40 CFR Part 60, Subpart VV, the group of all equipment (as defined at 40 CFR 60.481) in this process unit is an affected facility.

(m) Two (2) natural gas-fired boilers, identified as EU-16 and EU-17, rated at 220 million British thermal units per hour each, approved for construction in 2018, equipped with low NOx burners, exhausted through Stack 001.

Under NSPS, 40 CFR Part 60, Subpart Db, these boilers are considered affected facilities.

(n) One (1) distillers dried grains and solubles (DDGS) cooler system, identified as EU-18, equipped with a baghouse, identified as DC-503, installed in March 2000, exhausting through Stack DC-0503 to the DDGS dryers, identified as EU-10, which are then controlled with two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2, consisting of one (1) fan, identified as BL-502, one (1) cooling coil, identified as CC-500, one (1) cooler inlet rotary valve, identified as RV-502, one (1) cooler, identified as RC-502, and four (4) conveyors, identified as CV-522, CV-530, CV-531 and CV-532, DDGS capacity: 39.98 tons of DDGS per hour based on monthly DDGS production.

Insignificant Activities:

(a) One (1) back-up diesel-fired fire pump, rated at 0.631 million British thermal units per hour and 250 horsepower.

Under the NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) the fire pump is considered an existing affected source.

(e) Four (4) natural gas fired space heaters, identified as SH-1 through 4, constructed in 1982, with a maximum heat capacity of 0.550 MMBtu/hr.

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

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

D.1.1 PSD Limitations [326 IAC 2-2]

Pursuant to St. Joseph County Health Department construction permit/PSD approval, issued on February 12, 1982, and in order to satisfy the requirements of PSD BACT:
The following emission limitations apply to the emission units listed in Section D.1 as the corn receiving operation, identified as EU-01, the corn handling operation, identified as EU-02, the corn milling operation, identified as EU-03, the yeast propagation operation, identified as EU-04, the fermentation operation, identified as EU-05, the degasser and recovery column, identified as EU-08, the evaporation process, identified as EU-09, the distillers dried grain and solubles (DDGS) dryer operation, identified as EU-10, the DDGS handling operation, identified as EU-11, the DDGS load-out operation, identified as EU-12, the alcohol load-out operation, identified as EU-13:

(a) SO\textsubscript{2} emissions shall be limited to:

(1) 1.2 pounds per million British thermal units,

(2) 412 pounds per hour, and

(3) 1,630 tons per year*.

(b) NO\textsubscript{X} emissions shall be limited to:

(1) 0.7 pounds per million British thermal units,

(2) 240 pounds per hour, and

(3) 960 tons per year*.

(c) Particulate (PM) emissions shall be limited to:

(1) 20 pounds per hour, and

(2) 70 tons per year*.

* year = twelve (12) consecutive month period with compliance determined at the end of each month.

D.1.2 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.

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

D.1.3 Emissions Determination [326 IAC 2-2]

Compliance with Condition D.1.1(a), (b) and (c) shall be determined by calculating the SO\textsubscript{2}, NO\textsubscript{X} and PM emissions associated with the specified emission units, using the following equations:

(a) \[
\text{PSD SO}_{2} \text{ emissions} = (\text{TTNG} \times 0.6 \text{ pounds of SO}_{2}/\text{mmcf} \times 1 \text{ ton}/2,000 \text{ pounds}) + (\text{HFPO} \times 0.631 \text{ mmBtu/hr} \times 0.29 \text{ pounds of SO}_{2}/\text{mmBtu} \times 1 \text{ ton}/2,000 \text{ pounds}).
\]

(b) \[
\text{PSD NO}_{X} \text{ emissions} = (\text{TTNG} \times 100.0 \text{ pounds of NO}_{X}/\text{mmcf} \times 1 \text{ ton}/2,000 \text{ pounds}) + (\text{HFPO} \times 0.631 \text{ mmBtu/hr} \times 4.41 \text{ pounds of NO}_{X}/\text{mmBtu} \times 1 \text{ ton}/2,000 \text{ pounds}).
\]

(c) \[
\text{PSD PM emissions} = [\text{TCR} \times 0.079 \text{ pounds of PM/ton of corn} \times (1 - \text{CE})] \times 1 \text{ ton}/2,000 \text{ pounds} +
\]
[TCH x 0.061 pounds of PM/ton of corn x (1 - CE)] x 1 ton/2,000 pounds +

[TCM x 0.012 pounds of PM/ton of corn (emission factor is after control)] x 1 ton/2,000 pounds +

[TDGS11 x 6.002E-03 pounds of PM/ton of DDGS processed through the DDGS dryers] x 1 ton/2,000 pounds +

[TDGS11 x 0.061 pounds of PM/ton of DDGS handled] x 1 ton/2,000 pounds +

[TDGS12 x 0.0057 pounds of PM/ton of DDGS loaded out x (1 - CE)] x 1 ton/2,000 pounds + K +

(TTNG x 1.9 pounds of PM/mmcf x 1 ton/2,000 pounds) +
(HEGO x 1.80 mmBtu/hr x 0.31 pounds of PM/mmBtu x 1 ton/2,000 pounds) + (HFPO x 0.631 mmBtu/hr x 0.31 pounds of PM/mmBtu x 1 ton/2,000 pounds) + INSIG.

where:

TTNG = Total throughput of natural gas (mmcf) to the space heaters

HFPO = Number of hours the backup emergency fire pump operated

CE = Overall control efficiency (fraction) of the control device

TCR = Throughput of corn received (tons/month) to corn receiving operation (EU-01)

TCH = Throughput of corn handled (tons/month) to the corn handling operation (EU-02)

TCM = Throughput of corn milled (tons/month) to the corn milling operation (EU-03)

TDGS11 = Throughput of DDGS (tons/month) to DDGS handling operation (EU-11)

TDGS12 = Throughput of DDGS (tons/month) to DDGS load-out operation (EU-12)

K = 0.0001 tons/month for alcohol load-out operation (EU-13)

INSIG = PM emissions from other insignificant activities

The Permittee shall use the emission rates measured during the most recent compliant stack test in place of the emission rates given in the above equation

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

D.1.4 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1 the Permittee shall maintain records of the following:
(1) Throughput of natural gas to space heaters,

(2) Throughput of corn processed (received (EU-01), handled (EU-02) and milled (EU-03)),

(3) Throughput of DDGS, and

(4) Operational times of each of the five (5) DDGS dryers on a monthly basis.

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

D.1.5 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.1.1 using the equations in condition D.1.3(a), (b) and (c), including supporting calculations and data used for determining compliance with the emission limits in conditions D.1.1, shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reports 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.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) corn receiving operation, identified as EU-01, equipped with a baghouse, identified as D-0001, exhausting through Stack DC-0001, installed in 1982, consisting of one (1) rail hopper, identified as RH-0001, two (2) truck dumpers, identified as TD-0001 & TD-0002, and two (2) truck hoppers, identified as TH-0001 and TH-0002, two (2) belt conveyors, identified as CV-0001 and CV-0002, five (5) drag conveyors, identified as CV-0003, CV-0004, CV-0005, CV-0006, and CV-0008, one (1) elevator, identified as EL-0001, and one (1) elevator, identified as EL-0002, installed in December 2003, capacity: 840 tons of yellow dent corn per hour.

(b) One (1) corn handling operation, identified as EU-02, equipped with a baghouse, identified as D-0001, exhausting through Stack DC-0001, installed in 1982, consisting of one (1) pneumatic pump, identified as P-0001, seven (7) drag conveyors, identified as CV-0007, CV-0009, CV-0010 and CV-0013 through CV-0016, one (1) distributor, identified as DD-0001, two (2) bucket elevators, identified as EL-0001 and EL-0003, two (2) corn storage bins, identified as S-0005 & S-0006, capacity: 320,000 bushels of corn total, four (4) corn storage silos, identified as S-0007 through S-0010, capacity: 98,000 bushels of corn each, and two (2) sweep augers, identified as SD-0009 and SD-0010, capacity: 140 tons of yellow dent corn per hour.

(c) One (1) corn milling operation, identified as EU-03, installed in October 1982, equipped with a baghouse, identified as D-0112, exhausted through Stacks DC-0112 and BV-0112, consisting of one (1) belt conveyor, identified as CV-0018, one (1) pneumatic pump, identified as P-0111, one (1) scalper, identified as CS-0011, two (2) surge bins, identified as B-0011 and B-0112, one (1) drag conveyor, identified as CV-0011, five (5) rotary feeders, identified as RF-0111 through RF-0115, six (6) hammermills, identified as M-0050 through M-0055, three (3) screw conveyors, identified as CV-0111, CV-0101 and CV-0117, one (1) weigh hopper, identified as WH-0111, one (1) bag dump hopper, identified as B-0111, three (3) bucket elevators, identified as EL-0111, EL-0112 and EL-0113, one (1) weigh-feeder, identified as W-0121, one (1) airlock, identified as DA-0112, capacity: 140 tons of yellow corn per hour.

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

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

D.2.1 Prevention of Significant Deterioration (PSD) Minor Limit for PM/PM10/PM2.5 [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 limits:

(a) PM emissions shall not exceed 0.32 pounds/hour for the one (1) corn receiving operation, identified as EU-01, and the one (1) corn handling operation, identified as EU-02.

(b) PM10 emissions shall not exceed 0.32 pounds/hour for the one (1) corn receiving operation, identified as EU-01, and the one (1) corn handling operation, identified as EU-02.

(c) PM2.5 emissions shall not exceed 0.22 pounds/hour for the one (1) corn receiving operation, identified as EU-01, and the one (1) corn handling operation, identified as EU-02.

(d) PM emissions shall not exceed 0.20 pounds/hour for the one (1) corn milling operation, identified as EU-03.
PM10 emissions shall not exceed 0.20 pounds/hour for the one (1) corn milling operation, identified as EU-03.

PM2.5 emissions shall not exceed 0.07 pounds/hour for the one (1) corn milling operation, identified as EU-03.

The Permittee shall operate no more than five (5) of the six (6) hammermills (M-0050 through M-0055) at any one point in time.

Compliance with these limits, combined with the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit PM, PM10, and PM2.5 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.2.2 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]**

Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from the corn receiving, handling and milling facilities (EU-01, EU-02 and EU-03) Stacks DC-0001 and DC-0112, and BV-0112 exhausts shall each be limited to 0.03 grains per dry standard cubic foot of exhaust air.

**D.2.3 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.2.4 Particulate Control**

(a) Pursuant to St. Joseph County Health Department construction permit/PSD approval, issued on February 12, 1982, in order to comply with Condition D.1.1, the baghouses (D-0001 and D-0112) for particulate control shall be in operation and control emissions from the corn receiving, handling and milling operations (EU-01, EU-02 and EU-03) at all times that these facilities are in operation.

(b) In order to assure compliance with Condition D.2.1, the baghouses (D-0001 and D-0112) for particulate control shall be in operation and control emissions from the corn receiving, handling and milling operations (EU-01, EU-02 and EU-03) at all times these facilities are in operation.

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

**D.2.5 Testing Requirements [326 IAC 2-1.1-11]**

(a) In order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM/PM10/PM2.5 testing for the two (2) baghouses (D-0001 and D-0112) controlling PM/PM10/PM2.5 emissions from the corn receiving, handling and milling operations (EU-01, EU-02 and EU-03) utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 and PM2.5 includes filterable and condensable PM.
In order to demonstrate compliance with Condition D.2.2, the Permittee shall perform PM testing for the two (2) baghouses (D-0001 and D-0112) controlling PM emissions from the corn receiving, handling and milling operations (EU-01, EU-02 and EU-03), utilizing methods as approved by the Commissioner at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.2.6 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the corn receiving, handling and milling facilities (EU-01, EU-02 and EU-03) Stack DC-0001, DC-0112 and BV-0112 exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

Pursuant to 40 CFR 64, Compliance Assurance Monitoring (CAM), these requirements satisfy the CAM requirement for the corn receiving operations, identified as EU-01.

D.2.7 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 emission unit. 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, or dust traces.
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)]

D.2.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.6, the Permittee shall maintain a daily record of visible emission notations of the corn receiving, handling and milling stack exhausts DC-0001, DC-0112 and BV-0112. 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 corn receiving, handling and milling operations did not operate that day).

(b) To document the compliance status with Condition D.2.1(g), the Permittee shall maintain operation records of the hammermills.

(c) 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

Emissions Unit Description:

(d) One (1) yeast propagation operation, identified as EU-04, installed in October 1982, routed to CO2 scrubber, identified as V-230, using bisulfite solution into the scrubbing water, exhausted to Stack BL-230, consisting of three (3) yeast preparation tanks, identified as T-322 through T-324, three (3) agitators, identified as A-322 through A-324, and four (4) pumps, identified as P-320, PC-3220, PC-3230, and P-322, capacity: 16,000 gallons per tank and 2,100 tank turnovers per year.


Under the NSPS, 40 CFR Part 60, Subpart VV, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this operation are considered to be affected facilities.

(f) One (1) beerwell process, identified as EU-07, installed in December 1986, with a maximum capacity of 1,750 gallons of beer per minute, using CO2 scrubber V-230 with bisulfite solution added to the scrubbing water as control, and exhausting to Stack BL-230, consisting of:

(1) One (1) beerwell, identified as T-222.
(2) Two (2) beerwell pumps, identified as P-222A and P-222B.
(3) Two (2) beerwell agitators, identified as A-222A and A-222B.
(4) One (1) finishing beerwell, identified as T-223, permitted in 2019, with a maximum capacity of 750,000 gallons (2,840 m³).

Under the NSPS, 40 CFR Part 60, Subpart VV, the group of all equipment (as defined at 40 CFR 60.481) in this process unit is an affected facility.

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

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

D.3.1 Prevention of Significant Deterioration (PSD) Minor Limit for VOC [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the VOC emissions from the CO2 scrubber, identified as V-230, shall not exceed 7.67 pounds/hour.

Compliance with this limit, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide total potential to emit 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.3.2 Volatile Organic Compounds (VOC) [326 IAC 2-2]

Pursuant to the St. Joseph County Health Department, construction permit/PSD approval, issued on February 12, 1982 and revised through the Part 70 Operating Permit, all of the off-gases will be processed by scrubbing.

D.3.3 LAER Requirements CO2 Scrubber (VOC) [326 IAC 2-3][326 IAC 2-2][326 IAC 2-1.1][326 IAC 2-7][326 IAC 8-1-6]

(a) Pursuant to 326 IAC 2-3, the Permittee shall vent the additional exhaust streams from the yeast propagator tanks (EU-04) and the beerwell (EU-07) to the CO2 scrubber (V-230).

(b) The CO2 scrubber (V-230) shall achieve an overall VOC control efficiency equal to or greater than ninety-five percent (95%), including the existing exhaust stream from the fermentation operation (EU-05).

(c) In accordance with 326 IAC 2-3, operation of the CO2 scrubber (V-230) consistent with the requirements of this condition shall constitute compliance with the LAER requirements for the VOC emissions from the yeast propagator tanks (EU-04) and the beerwell (EU-07) to be vented to the CO2 scrubber (V-230).

D.3.4 Hazardous Air Pollutants [326 IAC 2-4.1] [40 CFR 63]

In order to assure this source is an area source of HAPs under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(a) The single HAP emissions from the CO2 Scrubber (V-230), which controls the yeast propagation (EU-04), the fermentation operation (EU-05), and the beerwell (EU-07), are limited as follows:

1. The acetaldehyde emissions from the CO2 Scrubber (V-230), shall not exceed 0.05 pounds per hour;
2. The acrolein emissions from the CO2 Scrubber (V-230), shall not exceed 0.13 pounds per hour;
3. The formaldehyde emissions from the CO2 Scrubber (V-230), shall not exceed 0.005 pounds per hour; and
4. The methanol emissions from the CO2 Scrubber (V-230), shall not exceed 0.025 pounds per hour.

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

D.3.5 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.3.6 VOC and HAP Control Requirements

(a) In order to assure compliance with Conditions D.3.1, D.3.2, D.3.3, and D.3.4, the scrubber for VOC and HAP control shall be in operation and control emissions from the yeast propagator tanks (EU-04), the fermentation operation (EU-05), and the beerwell (EU-07), at all times that these emission units are in operation.

(b) In order to comply with the LAER for VOC in Condition D.3.3(b), the bisulfite solution shall be applied at a minimum feed rate of 3.2 gallons per hour into the scrubbing water of the CO₂ Scrubber (V-230) until a rate is established through the latest compliance stack test.

D.3.7 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.3.1 and D.3.4, not later than 180 days after the issuance date of this permit, Permit No. 141-39515-00033, the Permittee shall perform VOC, acetaldehyde, acrolein, formaldehyde, and methanol testing of the CO₂ scrubber (V-230) controlling VOC and HAP emissions from the yeast propagation, fermentation, and beerwell operations (EU-04, EU-05 and EU-07) utilizing methods approved by the commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. 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) In order to demonstrate compliance with Condition D.3.3(b), with the application of the bisulfite solution into the scrubbing water of the CO₂ Scrubber, the Permittee shall perform testing of the overall VOC control efficiency of the scrubber 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 2-7-5(1)][326 IAC 2-7-6(1)]

D.3.8 Scrubber Parametric Monitoring [40 CFR 64]

(a) The Permittee shall monitor and record the pressure drop across the scrubber (V-230) used in conjunction with the yeast propagation operation (EU-04), the fermentation process (EU-05), and the beerwell (EU-07) at least once per day when these operations and processes are in operation. When for any one reading, the pressure drop across the scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 15 and 28 inches of water, unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. 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. The instrument 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.3.9 Scrubber Flow Rate [40 CFR 64]

(a) The Permittee shall monitor and record the flow rate of the scrubber CO₂ scrubber (V-230) at least once per day the yeast propagation operation (EU-04), the fermentation
process (EU-05), and the beerwell (EU-07) are in operation. The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with limits in Condition D.3.5(a). 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. 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.

(b) The Permittee shall record the bisulfite solution feed rate into the scrubbing water used in conjunction with the CO2 scrubber (V-230) at least once per day the yeast propagation operation (EU-04), the fermentation process (EU-05), and the beerwell (EU-07) are in operation. The Permittee shall determine the minimum feed rate from the latest valid stack test that demonstrates compliance with limits in Condition D.3.5(b). On and after the date the stack test results are available, the Permittee shall maintain a feed rate at or above the minimum rate as observed during the latest compliant stack test. When for any one reading, the feed 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.

The instrument used for determining the flow rate 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.3.10 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the yeast propagation operation (EU-04), the fermentation process (EU-05), and the beerwell (EU-07). Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.3.11 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.8, the Permittee shall maintain a daily record of the pressure drop across the scrubber (V-230). The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the yeast propagation operation and fermentation process did not operate that day).

(b) To document the compliance status with Condition D.3.9(a), the Permittee shall maintain daily records of the water flow rate in the scrubber V-230. The Permittee shall include in its daily record when a water flow rate reading is not taken and the reason for the lack of a water flow rate reading (e.g., the process did not operate that day).

(c) To document the compliance status with Condition D.3.9(b), the Permittee shall maintain daily records of the bisulfite solution feed rate into the scrubbing water of the CO2 scrubber V-230. The Permittee shall include in its daily record when a bisulfite solution feed rate reading is not taken and the reason for the lack of a bisulfite solution feed rate 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.
SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Degasser, Evaporation, DDGS Dryer, and DGGS Cooler Operations

(g) One (1) degasser and recovery column, identified as EU-08, installed in October 1982, exhausted through Vent VGS-401-GS13-0 and Vent VLT-451051.

Vent VGS-401-GS13-0 routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2, to control VOC emissions from the one (1) recovery column vent condenser, identified as E-409. The associated equipment consists of:

One (1) recovery column, identified as V-402, one (1) recovery column reflux tank, identified as V-404, two (2) beer preheaters, identified as EP-4501 A & B, one (1) recovery column condenser, identified as E-4404, one (1) recovery column reboiler #2, identified as E-MS-408, one (1) recovery column vent condenser, identified as E-409, one (1) preheater #2, identified as E-412, one (1) recovery column reboiler #1, identified as E-413, one (1) auxiliary product cooler, identified as E-419, two (2) recovery column bottoms pumps, identified as P-401 A & P-401 B, two (2) recovery column reflux pumps, identified as P-402 A and P-402 B, two (2) recovery column reflux pumps, identified as P-404 A and P-404 B, one (1) fusel oil transfer pump, identified as P-4601, three (3) recovery column recirculation pumps #2, identified as P-407 A, P-407 B, and P-408.

Vent VLT-451051 routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2, to control VOC emissions from the one (1) degasser vent condenser, identified as E-410. The associated equipment consists of:

One (1) degasser condenser, identified as E-403, one (1) degasser vent condenser, identified as E-410, and one (1) degasser, identified as V-401, capacity: 1,750 gallons of beer per minute.

(h) One (1) stillage concentration and evaporation process, identified as EU-09, installed in October 1982, with a maximum evaporator feed rate of 910 gallons per minute, consisting of:

(1) Four (4) centrifuges, identified as CF-5001, CF-5002, CF-5103, CF 5104.
(2) Three (3) stillage tanks, identified as T-502, T-515 and T-516.
(3) One (1) stillage preheater, identified as E-503.
(4) Four (4) 1st through 4th stage heaters, identified as E-501, E-502, E-504, and E-505.
(5) Five (5) vapor bodies, identified as T-504 and T-507 through T-510.
(6) One (1) 5th and 6th stage heater, identified as E-506.
(7) One (1) evaporation condensate tank, identified as T-506, exhausted through Stack VT-024 routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2.
(8) One (1) lube oil console, identified as C-501C.
(9) One (1) gland seal condenser, identified as C-501E.
(10) One (1) evaporator concentrates tank, identified as T-505.
(11) One (1) compressor, identified as C-501A.
(12) One (1) turbine, identified as C-501B.
(13) One (1) lube oil head tank, identified as C-501D.
(14) One (1) gland seal ejector, identified as C501F.
(15) One (1) evaporator concentrates tank agitator, identified as A 505.
(16) Four (4) stage 1 thru stage 4 circulation pumps, identified as P-504, P-505, P-507 and P-508.
(17) One (1) scrubber pump, identified as P-511.
(19) Two (2) stage 5 and 6 circulation pumps, identified as P-509 and P-510.
(20) Two (2) evaporator condensate pumps, identified as P-506 and P-521 (spare).
(21) Two (2) evaporator concentrates pump, identified as P-516 and P-516A.
(22) One (1) centrifuge, identified as CF-5105, permitted in 2019, not venting to the atmosphere.

(j) One (1) distillers dried grain and solubles (DDGS) dryer operation, identified as EU-10, installed in October 1982, exhausted through five (5) dry cyclones, identified as CY-511 through CY-515, controlled by two (2) natural gas-fired regenerative thermal oxidizers (RTOs), consisting of the following equipment:

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<td>(1) Five (5) DDGS dyers, previously identified as D-511 through D-515, permitted in 2014 as follows:</td>
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<td>(A) Two (2) DDGS first pass dryers, identified as D-513 and D-514, each equipped with a cyclone routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2.</td>
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<td>(B) One (1) DDGS first pass dryer, identified as D-515, with product and emissions routed to the two (2) polishing dryers, identified as D-511 and D-512.</td>
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<td>(C) Two (2) DDGS polishing dryers, identified as D-511 and D-512, each equipped with a cyclone routed to two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2.</td>
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<td>(2) Five (5) DDGS dryer steam traps, identified as TR-511, TR-521, TR-531, TR-541 and TR-551.</td>
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<td>(3) Five (5) dryer feed screw conveyors, identified as CV-511 through CV-515.</td>
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<td>(4) One (1) wet conveyor, identified as CV-5010.</td>
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<td>(5) Two (2) inclined wet conveyor, identified as CV-502 and CV-506.</td>
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<td>(6) One (1) first pass dryer feed conveyor, identified as CV-516, and one (1) polishing dryer feed conveyor identified as CV-504.</td>
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<td>(7) One (1) first pass product incline conveyor, identified as CV-503, one (1) recycle conveyor, identified as CV-517, and one (1) recycle conveyor identified as CV-520.</td>
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<td>(8) One (1) polishing dryers product conveyor, identified as CV-518 and one (1) first pass product conveyor, identified as CV-505.</td>
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<td>(9) One (1) cooler cross-over conveyor, identified as CV-519.</td>
</tr>
<tr>
<td></td>
<td>(10) One (1) pug mill, identified as M-511.</td>
</tr>
</tbody>
</table>
|   | (p) One (1) distillers dried grains and solubles (DDGS) cooler system, identified as EU-18, equipped with a baghouse, identified as DC-503, installed in March 2000, exhausting through Stack DC-0503, controlled with two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2, consisting of one (1) fan, identified as BL-502, one (1) cooling coil, identified as CC-500, one (1) cooler inlet rotary valve, identified as RV-502, one (1) cooler, identified as RC-502, and five (5) conveyors, identified as CV-521, CV-522, CV-
530, CV-531 and CV-532, DDGS capacity: 39.98 tons of DDGS per hour based on monthly DDGS production.

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

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

D.4.1 LAER Requirements [326 IAC 2-1.1][326 IAC 2-2][326 IAC 2-3][326 IAC 2-7][326 IAC 8-1-6]

(a) Pursuant to 326 IAC 2-3, the Permittee shall operate the two (2) regenerative thermal oxidizers (RTOs) to control VOC emissions from the five (5) DDGS dryers (EU-10), the evaporation process (EU-09) and the recovery column vent condenser, identified as E-409 (part of EU-08).

(b) The Permittee shall ensure that the two (2) RTOs are designed to achieve an overall VOC control efficiency of ninety-eight percent (98%) and that actual control efficiency achieved is no less than ninety-five percent (95%).

(c) In accordance with 326 IAC 2-3, operation of the two (2) RTOs within the prescribed overall control efficiency and compliance with the limit in (b) shall constitute compliance with the lowest achievable emission reduction (LAER) requirements for the five (5) DDGS dryers (EU-10), the evaporation process (EU-09) and the recovery column vent condenser, identified as E-409 (part of EU-08).

D.4.2 BACT Requirements (VOC) [326 IAC 8-1-6][326 IAC 2-2-3]

Pursuant to 326 IAC 8-1-6, 326 IAC 2-2-3, and PSD/SSM 141-30226-00033, BACT has been determined to be the following for the distillers dried grains and solubles (DDGS) cooler system, identified as EU-18:

For the DDGS cooler system, the BACT for VOC is the use of a thermal oxidizer; and:

(a) Whenever the thermal oxidizer is in service:

(1) The thermal oxidizer shall have an overall VOC control efficiency of not less than 98%, and the maximum VOC emission rate shall be less than 0.55 lb/hr; or

(2) The thermal oxidizer shall have an outlet VOC concentration of not more than 10 ppmv.

Note: In lieu of operating one (1) dedicated RTO for the control VOCs from the DDGS cooler system, the Permittee has opted to route the DDGS cooler system exhaust to the DDGS Dryers, identified as EU-10, which then route to the two (2) natural gas-fired regenerative thermal oxidizers (RTOs), identified as RTO-1 and RTO-2.

D.4.3 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

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

(a) PM emissions shall not exceed 0.09 pounds/hour for the one (1) DDGS cooler baghouse, identified as DC-503.

(b) PM10 emissions shall not exceed 0.09 pounds/hour for the one (1) DDGS cooler baghouse, identified as DC-503.
(c) PM2.5 emissions shall not exceed 0.026 pounds/hour for the one (1) DDGS cooler baghouse, identified as DC-503.

(d) Total VOC emissions shall not exceed 15.56 pounds/hour for the two (2) RTOs, identified as RTO-1 and RTO-2.

(e) The Permittee shall operate no more than one (1) of the first pass dryers (D-513 or D-514), and one (1) of the polishing dryers (D-511 or D-512), at a time, when one (1) of the two (2) RTOs (RTO-1 or RTO-2) is out-of-service.

(f) The Permittee shall not operate the first pass dryer D-515 when one (1) of the two (2) RTOs (RTO-1 or RTO-2) is out-of-service.

Compliance with these limits, in combination with the potential to emit (PTE) from all other emission units at this source, shall limit the source-wide total potential to emit PM, PM10, PM2.5, 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.4.4 Hazardous Air Pollutants [326 IAC 2-4.1] [40 CFR 63]
In order to assure this source is an area source of HAPs under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(a) The single HAP emissions from the Thermal Oxidizers (RTO-1 and RTO-2) which controls the degasser and recovery column (EU-08), the stillage concentration and evaporation process (EU-09), the DDGS Dryers (EU-10), and the DDGS Cooler (EU-18), are limited as follows:

(1) The acetaldehyde emissions from the RTOs, shall not exceed 1.20 pounds per hour;
(2) The acrolein emissions from the RTOs, shall not exceed 0.65 pounds per hour;
(3) The formaldehyde emissions from the RTOs, shall not exceed 0.11 pounds per hour, and
(4) The methanol emissions from the RTOs, shall not exceed 0.80 pounds per hour.

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

D.4.5 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]
Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from the two (2) regenerative thermal oxidizers (RTOs) and the one (1) DDGS cooler baghouse, identified as EU-18, shall each not exceed 0.03 grains per dry standard cubic foot of exhaust air.

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 VOC and HAP Control Requirements

In order to assure compliance with Condition D.4.1, D.4.2, D.4.3, and D.4.4, the RTO’s (RTO-1 and RTO-2) for VOC and HAP control shall be in operation and control emissions from the degasser and recovery column, stillage concentration and evaporation process, DDGS dryer operation, and DDGS cooler operation facilities at all times the degasser and recovery column, stillage concentration and evaporation process, DDGS dryer operation, and DDGS cooler operation facilities are in operation.

D.4.8 Particulate Control

(a) In order to comply with Conditions D.1.1, at least one (1) of the two (2) RTOs for particulate control shall be in operation and control emissions from the DDGS dryer operation (EU-10) at all times that one (1) or more of the DDGS dryers are in operation.

(b) In order to comply with Conditions D.4.3, the baghouse for particulate control shall be in operation and control emissions from the distillers dried grains and solubles (DDGS) cooler system (EU-18) at all times that the distillers dried grains and solubles (DDGS) cooler system is in operation.

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

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

(a) In order to demonstrate compliance with Conditions D.4.1, D.4.2, and D.4.3, the Permittee shall perform overall VOC control efficiency testing and outlet emissions rate testing of the two (2) RTOs (RTO-1 and RTO-2) utilizing methods as approved by the Commissioner at least 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) In order to demonstrate compliance with Condition D.4.4, not later than 180 days after the issuance date of this permit, Permit No. 141-39515-00033, the Permittee shall perform outlet acetaldehyde, acrolein, formaldehyde, and methanol emissions rate testing of the two (2) RTOs (RTO-1 and RTO-2) utilizing methods 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 Thermal Oxidizer Temperature [40 CFR 64]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperatures. For the purposes of this condition continuous shall mean no less than once per minute. The outputs of these systems shall be recorded as a 3-hour average. The Permittee shall operate the thermal oxidizers at or above the 3-hour average temperature of 1,600°F.
(b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limit in Condition D.4.1(b) and D.4.2, as approved by IDEM.

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

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

D.4.11 Thermal Oxidizer Parametric Monitoring [40 CFR 64]

(a) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with the limit in Conditions D.4.1 and D.4.2, as approved by IDEM.

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

(c) When, for any one reading, the duct pressure or fan amperage is outside the above mentioned range, 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. A 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.

D.4.12 Baghouse Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse (DC-503) used in conjunction with the distillers dried grains and solubles (DDGS) cooler system (EU-18), at least once per day when this process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take reasonable response. The normal range for this unit is a pressure drop between 0.5 and 9.0 inches of water unless a different upper-bound or lower bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument 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 annually or as established by the manufacturer's specifications whichever is more frequent.

D.4.13 Broken or Failed Bag Detection

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

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

<table>
<thead>
<tr>
<th>D.4.14 Record Keeping Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To document the compliance status with Condition D.4.10, the Permittee shall maintain records of the continuous operating temperature required under Condition D.4.9.</td>
</tr>
<tr>
<td>(b) To document the compliance status with Condition D.4.10, the Permittee shall maintain a daily record of the duct pressure or fan amperage of the thermal oxidizers controlling the degasser and recovery column, evaporation process and the DDGS dryer operation. The Permittee shall include in its daily record when a duct pressure or fan amperage reading is not taken and the reason for the lack of a duct pressure or fan amperage reading (e.g., the degasser and recovery column, evaporation process and the DDGS dryer operation did not operate that day).</td>
</tr>
<tr>
<td>(c) To document the compliance status with Condition D.4.3, when one (1) RTO is out of service, the Permittee shall maintain records of the dryers in operation.</td>
</tr>
<tr>
<td>(d) To document the compliance status with Condition D.4.12, the Permittee shall maintain a daily record of the pressure drop across the baghouse (DC-503) controlling the distillers dried grains and solubles (DDGS) cooler system (EU-18). The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the distillers dried grains and solubles (DDGS) cooler system did not operate that day).</td>
</tr>
<tr>
<td>(e) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.</td>
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</tbody>
</table>
SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

**Emissions Unit Description:**

(j) One (1) DDGS handling operation, identified as EU-11, installed in October 1982, consisting of two (2) bucket elevators, identified as EL-0601 and EL-0602, two (2) dust suppression nozzles, identified as DN-0601 and DN-0602, and four (4) drag conveyors, identified as CV-0600 through CV-0603, capacity: 38.98 tons of DDGS product per hour.

(k) One (1) DDGS load-out operation, identified as EU-12, installed in October 1982, equipped with a baghouse, identified as D-0601, exhausted through Stack DC-0601, consisting of five (5) drag conveyors, identified as CV-0604 through CV-0608, one (1) bucket elevator, identified as EL-0603, one (1) surge bin, identified as S-0601, one (1) belt conveyor with tripper, identified as CV-0609, one (1) dust filter, identified as D-0601, one (1) dust fan, identified as DC-0601, one (1) airlock, identified as DA-0601, one (1) winch drive, identified as H-0601, three (3) dust suspension nozzles, identified as DN-0603 through DN-0605, and one (1) shuttle belt conveyor, identified as CV-0610, maximum capacity: 83.96 tons of DDGS product per hour.

(l) One (1) alcohol load-out operation, identified as EU-13, installed in October 1982, with a maximum capacity of 72,000 gallons of ethanol per hour, using a load-out natural gas-fired flare, identified as G-602, rated at 0.100 million British thermal units per hour, as control, and exhausting to stack G-602, consisting of:

1. Two (2) bottom transfer loading arms, identified as G-604 and G-607.
2. Two (2) bottom transfer vapor recovery arms, identified as G-605 and G-608.
3. Two (2) truck/rail vapor recovery loading arms, identified as G-603 and G-606.
4. Two (2) product filters, identified as F-660 and F-661.
5. Two (2) fuel grade alcohol load-out pumps, identified as P-610 and P-611.
6. One (1) E85 blending skid, permitted in 2019

Under the NSPS, 40 CFR Part 60, Subpart VV, the group of all equipment (as defined at 40 CFR 60.481) in this process unit is an affected facility.

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

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

D.5.1 BACT Requirements (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, BACT has been determined to be the following for the alcohol load-out operation, identified as EU-13:

(a) The VOC emissions from the alcohol load-out operation, identified as EU-13, shall be collected and controlled by the load-out natural gas-fired flare, identified as G-602.

(b) The overall efficiency of the flare, identified as G-602 (including the capture efficiency and destruction efficiency) shall be at least 98%.

(c) The VOC emissions from the load-out natural gas-fired flare, identified as G-602, shall not exceed 2.62 pounds per hour.
D.5.2 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

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

(a) PM emissions shall not exceed 0.08 pounds/hour for the one (1) DDGS loadout baghouse, identified as D-0601.

(b) PM10 emissions shall not exceed 0.08 pounds/hour for the one (1) DDGS loadout baghouse, identified as D-0601.

(c) PM2.5 emissions shall not exceed 0.08 pounds/hour for the one (1) DDGS loadout baghouse, identified as D-0601.

(d) The load-out natural gas-fired flare, identified as G-602, shall not exceed 4,034 hours of loadout per twelve (12) consecutive month period, with compliance determined at the end of each month.

(e) VOC emissions from the one (1) alcohol load-out operation, identified as EU-13, shall not exceed 0.10 pound per one thousand (1,000) gallons of loading, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit PM, PM10, PM2.5, and VOC from all other emission units at this source, shall limit the source-wide total potential to emit PM, PM10, PM2.5, 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.5.3 Hazardous Air Pollutants [326 IAC 2-4.1] [40 CFR 63]

The single HAP emissions from the alcohol loadout flare (G-602), which controls the alcohol loadout operation (EU-13), are limited as follows:

(a) The n-hexane emissions from the alcohol loadout flare (G-602), shall not exceed 0.15 pounds per hour.

(b) The toluene emissions from the alcohol loadout flare (G-502) shall not exceed 0.10 pounds per hour.

(c) The benzene emissions from the alcohol loadout flare (G-502) shall not exceed 0.10 pounds per hour.

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

D.5.4 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

(a) Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from the DDGS handling operation (EU-11) shall be limited to 0.03 grains per dry standard cubic foot of exhaust air.

(b) Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from the DDGS loadout operation (EU-12) Stack DC-0601 exhaust shall be limited to 0.03 grains per dry standard cubic foot of exhaust air.
D.5.5 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.5.6 VOC and HAP Control Requirements

In order to assure compliance with Conditions D.5.1, D.5.2, and D.5.3, the flare (G-502) for VOC and HAP control shall be in operation and control emissions from the alcohol load-out operation (EU-13) facility at all times the alcohol load-out operation facility is in operation.

D.5.7 Particulate Control

(a) Pursuant to St. Joseph County Health Department construction permit/PSD approval, issued on February 12, 1982, and in order to comply with Condition D.1.1, the baghouse (D-0601) for particulate control shall be in operation and control emissions from the DDGS load-out operation (EU-12) at all times that this DDGS load-out is in operation.

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

D.5.8 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.5.2, the Permittee shall perform VOC testing of the flare 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) In order to demonstrate compliance with Condition D.5.2, the Permittee shall perform PM/PM10/PM2.5 of the testing of the DDGS loadout baghouse (D-0601) 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 Condition D.5.3(a), not later than 180 days after the issuance date of this permit, Permit No 141-39515-00033, the Permittee shall perform n-hexane testing of the flare utilizing methods approved by the commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

(d) In order to demonstrate compliance with Condition D.5.3(b) and (c), the Permittee shall perform benzene and toluene testing of the flare utilizing methods approved by the commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. 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.5.9 Visible Emissions Notations

(a) Visible emission notations of the DDGS load-out operation (EU-12) Stack DC-0601 exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.5.10 Flare Pilot Flame

In order to comply with Conditions D.5.1 and D.5.2, the Permittee shall:

(a) Maintain a flare pilot flame when the associated emission unit is in operation and continuously monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when the associated emission unit is in operation.

(b) Maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when the one (1) alcohol load-out operation, identified as EU-13, is in operation.

D.5.11 Broken or Failed Bag Detection

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

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. 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, or dust traces.
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.5.12 Record Keeping Requirements

(a) To document the compliance status with Condition D.5.9, the Permittee shall maintain a daily record of visible emission notations of the DDGS load-out operation stack exhaust DC-0601. 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 DDGS load-out operation did not operate that day).

(b) To document the compliance status with Condition D.5.2(c), the Permittee shall maintain records of the hours of operation for the load-out natural gas-fired flare for each month and each compliance period.

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

D.5.13 Reporting Requirements

A quarterly report of the information to document the compliance status with Conditions D.5.2(c) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reports 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.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Boilers

(m) Two (2) natural gas-fired boilers, identified as EU-16 and EU-17, approved in 2018 for construction, each with a maximum capacity of 220 MMBtu/hr, equipped with low NOx burners, and exhausting through Stack 001.

Under NSPS, 40 CFR Part 60, Subpart Db, these boilers are considered affected facilities.

(q) One (1) natural gas-fired Rental boiler, identified as EU-21, not to exceed a rating of 99.5 million British thermal units per hour each, approved in 2014 for construction, equipped with low NOx burners, exhausted through Stack 001.

Under NSPS, 40 CFR Part 60, Subpart Dc, this boiler is considered an affected facility.

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

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

D.6.1 Prevention of Significant Deterioration (PSD) Minor Limit PM/PM10/PM2.5/SO2/NOx/VOC/CO [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) Natural gas usage, total, EU-21 shall not exceed 3,641.13 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) NOx emissions from the natural gas combustion shall not exceed 135.66 pounds per million cubic feet (lb/mmscf).

(c) CO emissions from the natural gas combustion shall not exceed 51.00 pounds per million cubic feet (lb/mmscf).

Compliance with these limits, in combination with the limits in Conditions D.2.1, D.3.1, D.4.3, and D.5.2, shall limit the net emissions increase from the 2014 optimization modification to less than twenty-five (25) tons PM, fifteen (15) tons PM10, ten (10) tons PM2.5, forty (40) tons SO2, forty (40) tons NOx, forty (40) tons VOC, and one-hundred (100) tons CO per twelve (12) consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to Significant Source Modification 141-34355-00033.

D.6.2 Prevention of Significant Deterioration (PSD) Minor Limit CO [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:

(1) Total natural gas throughput to the natural gas-fired boilers, identified as EU-16 and EU-17, shall not exceed 3,337 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) CO emissions from the natural gas combustion shall not exceed 84.00 pounds per million cubic feet (lb/mmscf).

Compliance with this limit shall limit the net emissions increase from the 2018 boiler replacement
modification to less than one-hundred (100) tons CO per twelve (12) consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to Significant Source Modification 141-40020-00033

D.6.3 Prevention of Significant Deterioration (PSD) Minor Limit NOx/CO [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) NOx emissions from emissions from the natural gas fired boilers, identified as EU-16, EU-17, and EU-21, shall not exceed 40.39 pounds per million cubic feet (lb/mmscf).

(b) CO emissions from the natural gas-fired boiler, identified as EU-21, shall not exceed 51.00 pounds per million cubic feet (lb/mmscf).

(c) Total NOx emissions from the boilers, EU-16, EU-17 and EU-21, shall not exceed 220 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Total CO emissions from the boilers, EU-16, EU-17 and EU-21, shall not exceed 200 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit NOx and CO from all other emission units at this source, shall limit the source-wide total potential to emit 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.

D.6.4 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(b)(3), the PM emissions from each boiler (EU-16, EU-17, EU-21) shall not exceed 0.01 grains per dry standard cubic foot of exhaust air, when combusting natural gas.

D.6.5 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.6.6 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.6.1(a), not later than 180 days after the startup of the two (2) new natural gas-fired boilers, identified as EU-16 and EU-17, the Permittee shall perform CO and NOx testing of the two boilers (EU-16, EU-17) utilizing methods approved by the commissioner. This test shall be repeated at least once every 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) In order to demonstrate compliance with Condition D.6.1, and 6.3, not later than one hundred and eighty (180) days after restart of the existing boilers, identified as EU-21, the Permittee shall perform NOx and CO testing for the natural gas-fired package boiler, identified as EU-21, utilizing methods as approved by the Commissioner at least once every five (5) years from the date of this valid compliance demonstration. Testing shall
be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

**D.6.7 Emissions Determination**

Compliance with Conditions D.6.3(d) and D.6.3(e) shall be determined by calculating the CO and NOx emissions associated with the specified emission units, using the following equation:

\[
\begin{align*}
\text{CO emissions (tons/yr)} &= (\text{TTNG} \times 84.0 \text{ pounds of CO/mmcf}) + (\text{RTNG} \times 51.00 \text{ pounds of CO/mmcf of natural gas}) \\
\text{NOx emissions (tons/yr)} &= (\text{TTNG} \times 40.39 \text{ pounds of NOx/mmcf}) + (\text{RTNG} \times 40.39 \text{ pounds NOx/mmcf of natural gas})
\end{align*}
\]

where:

\[
\begin{align*}
\text{TTNG} &= \text{Total throughput of natural gas (mmcf) to boilers EU-16 and EU-17} \\
\text{RTNG} &= \text{Total throughput of natural gas (mmcf) to rental boiler EU-21}
\end{align*}
\]

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

**D.6.8 Record Keeping Requirements**

(a) To document the compliance status with Condition D.6.1(a), D.6.2, D.6.3(d), and D.6.3(e), the Permittee shall maintain records of the natural gas usage for each of the boilers (EU-16, EU-17, EU-21) for each month and each compliance period.

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

**D.6.9 Reporting Requirements**

A quarterly report of the information to document the compliance status with Condition D.6.1(a) D.6.2(a), D.6.3(d), and D.6.3(e) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee’s obligation with regard to the reports 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.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Storage Tanks

(o) Eight (8) storage tanks, consisting of:

(1) One (1) internal floating roof gasoline storage tank, identified as T-601, installed in 1983, with a maximum capacity of 75,000 gallons (284 m³).

Under the NSPS, 40 CFR Part 60, Subpart Ka, T-601 is an affected facility.

(2) One (1) internal floating roof fuel ethanol storage tank, identified as T-610, installed in 1983, with a maximum capacity of 750,000 gallons (2,840 m³).

(3) One (1) internal floating roof ethanol storage tank, identified as T-611, installed in 2001, with a maximum capacity of 1,250,000 gallons (4,730 m³).

Under the NSPS, 40 CFR Part 60, Subpart Kb, T-601 is an affected facility.

(4) One (1) internal floating roof in-process ethanol storage tank, identified as T-612, installed in 1983, with a maximum capacity of 75,000 gallons (284 m³).

(5) One (1) corn oil storage tank, identified as T-4120, installed in 1983, capacity: 250,000 gallons.

(6) Two (2) fixed roof corn oil storage tanks, installed in 2014.

(7) One (1) horizontal corrosion inhibitor tank, identified as T-602, with a capacity of 9,000 gallons (34 m³).

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

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

D.7.1 Petroleum Liquid Storage Facility [326 IAC 8-4-3]

Storage tank (T-601) shall be maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials. All openings, except stub drains, shall be equipped with covers, lids, or seals such that:

(a) the cover, lid, or seal is in the closed position at all times except when in actual use;

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

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

D.7.2 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.
D.7.3 Record Keeping Requirements [326 IAC 8-4-3]

(a) Pursuant to 326 IAC 8-4-3, the Permittee will maintain records of the types of volatile petroleum liquid stored, the maximum true vapor pressure of the liquid as stored, and the results of the inspections performed on the storage vessels. Such records shall be maintained for a period of two (2) years and shall be made available to the commissioner upon written request.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.
SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

(b) Water based activities, including the following:

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

(A) One (1) crossflow mechanical draft cooling tower, identified as CT-01, permitted in 2019, with a maximum capacity of 26,000 gallons per minute, using a drift eliminator as control, and exhausting to stack CT-01.

(e) 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) Bag Dump-Process.
(2) DDGS finishing.

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

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

D.8.1 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from the insignificant activities listed in the table below shall each be limited to 0.03 grains per dry standard cubic foot of exhaust air.

<table>
<thead>
<tr>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling tower, CT-01</td>
</tr>
<tr>
<td>Bag Dump-Process</td>
</tr>
<tr>
<td>DDGS finishing</td>
</tr>
</tbody>
</table>
D.8.2 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.

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

D.8.3 Particulate Control

In order to assure compliance with Condition D.8.1, the drift eliminator for particulate control shall be in operation and control emissions from the cooling tower CT-01 facility at all times the cooling tower CT-01 facility is in operation.
SECTION E.1 NSPS

Emissions Unit Description:

(m) Two (2) natural gas-fired boilers, identified as EU-16 and EU-17, rated at 220 million British thermal units per hour each, approved for construction in 2018, equipped with low NOx burners, exhausted through Stack 001.

Under NSPS, 40 CFR Part 60, Subpart Db, these 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.)

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 Db.

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

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

E.1.2 New Source Performance Standard for Industrial-Commercial-Institutional Steam Generating Units NSPS [326 IAC 12] [40 CFR Part 60, Subpart Db]

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

(1) 40 CFR 60.40b(a)
(2) 40 CFR 60.41b
(3) 40 CFR 60.42b(k)(2)
(4) 40 CFR 60.43b(h)(2)(ii)(5)
(5) 40 CFR 60.44b(a), (j)
(6) 40 CFR 60.45b(d), (j)
(7) 40 CFR 60.46b
(8) 40 CFR 60.47b
(9) 40 CFR 60.48b(g)(2)
(10) 40 CFR 60.49b(a), (c) (d)(1), (g), (o), (p), (q)
**SECTION E.2**

**NSPS**

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**Emissions Unit Description:**

(q) Eight (8) storage tanks, consisting of:

1. One (1) internal floating roof gasoline storage tank, identified as T-601, installed in 1983, with a maximum capacity of 75,000 gallons (284 m³).

Under the NSPS, 40 CFR Part 60, Subpart Ka, T-601 is an affected facility.

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

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

E.2.1 General Provisions Relating to NSPS Ka [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.110a, 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 emissions units listed above, except as otherwise specified in 40 CFR 60.110a through 60.115a, Subpart Ka.

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

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

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Pursuant to 40 CFR Part 60, Subpart Ka, the Permittee shall comply with the provisions of 40 CFR Part 60.110a (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 12, for the emissions units listed above as specified as follows:

1. 40 CFR 60.110a (a) and (c)
2. 40 CFR 60.111a
3. 40 CFR 60.112a (a)(1, 3 and 4) and (b)
4. 40 CFR 60.113a
5. 40 CFR 60.114a
6. 40 CFR 60.115a (a), (b), (c) and (d)(2)
SECTION E.3 NSPS

Emissions Unit Description:

(q) Eight (8) storage tanks, consisting of:

(3) One (1) internal floating roof ethanol storage tank, identified as T-611, installed in 2001, with a maximum capacity of 1,250,000 gallons (4,730 m³).

Under the NSPS, 40 CFR Part 60, Subpart Kb, T-601 is an affected facility.

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

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

E.3.1 General Provisions Relating to NSPS Kb [326 IAC 12-1][40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.110b, 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 emissions units listed above, except when otherwise specified in 40 CFR 60.110b through 60.117b, Subpart Kb.

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

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


Pursuant to 40 CFR Part 60, Subpart Kb, the Permittee shall comply with the provisions of 40 CFR Part 60,110b (included as Attachment D to the operating permit), which are incorporated by reference as 326 IAC 12, for the emissions units listed above as specified as follows:

(1) 40 CFR 60.110b (a), (d) and (e)(1, 2 and 3)
(2) 40 CFR 60.111b
(3) 40 CFR 60.112b (a)(1, 3 and 4) and (b)
(4) 40 CFR 60.113b (a) and (c)
(5) 40 CFR 60.114b
(6) 40 CFR 60.115b
(7) 40 CFR 60.116b
(8) 40 CFR 60.117b
SECTION E.4 NSPS

Emissions Unit Description:


Under the NSPS, 40 CFR Part 63, Subpart VV, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this operation are considered to be affected facilities.

(f) One (1) beerwell process, identified as EU-07, installed in December 1986, with a maximum capacity of 1,750 gallons of beer per minute, using CO₂ scrubber V-230 with bisulfite solution added to the scrubbing water as control, and exhausting to Stack BL-230, consisting of:

1. One (1) beerwell, identified as T-222.
2. Two (2) beerwell pumps, identified as P-222A and P-222B.
3. Two (2) beerwell agitators, identified as A-222A and A-222B.
4. One (1) finishing beerwell, identified as T-223, permitted in 2019, with a maximum capacity of 750,000 gallons (2,840 m³).

Under the NSPS, 40 CFR Part 60, Subpart VV, the group of all equipment (as defined at 40 CFR 60.481) in this process unit is an affected facility.

(l) One (1) alcohol load-out operation, identified as EU-13, installed in October 1982, with a maximum capacity of 72,000 gallons of ethanol per hour, using a load-out natural gas-fired flare, identified as G-602, rated at 0.100 million British thermal units per hour, as control, and exhausting to stack G-602, consisting of:

1. Two (2) bottom transfer loading arms, identified as G-604 and G-607.
2. Two (2) bottom transfer vapor recovery arms, identified as G-605 and G-608.
3. Two (2) truck/rail vapor recovery loading arms, identified as G-603 and G-606.
4. Two (2) product filters, identified as F-660 and F-661.
5. Two (2) fuel grade alcohol load-out pumps, identified as P-610 and P-611.
6. One (1) E85 blending skid, permitted in 2019

Under the NSPS, 40 CFR Part 60, Subpart VV, the group of all equipment (as defined at 40 CFR 60.481) in this process unit is an affected facility.

Insignificant Activities:

(f) Equipment leak losses from valves, pumps, and flanges.

Under the NSPS, 40 CFR Part 60, Subpart VV, the group of all equipment (as defined at 40 CFR 60.481) in this process unit is an affected facility.
New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.4.1 General Provisions Relating to NSPS VV [326 IAC 12-1][40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.480, 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 emissions units listed above, except when otherwise specified in 40 CFR 60.480 through 60.489 Subpart VV.

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

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


Pursuant to 40 CFR Part 60, Subpart VV, the Permittee shall comply with the provisions of 40 CFR Part 60.480 (included as Attachment E to the operating permit), which are incorporated by reference as 326 IAC 12, for the emissions units listed above as specified as follows:

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

Emissions Unit Description:

(q) One (1) natural gas-fired Rental boiler, identified as EU-21, not to exceed a rating of 99.5 million British thermal units per hour each, constructed in 2014, equipped with low NOx burners, exhausted through Stack 001.

Under NSPS, 40 CFR Part 60, Subpart Dc, this boiler 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.)

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


(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 emissions units listed above, except as otherwise specified in 40 CFR Part 60, Subpart Dc.

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

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

E.5.2 New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units NSPS [326 IAC 12][40 CFR Part 60, Subpart Dc]

Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart Dc, which are incorporated by reference as 326 IAC 12 (included as Attachment J to the operating permit), for the emissions units listed above as specified as follows:

(1) 40 CFR 60.40c(a)
(2) 40 CFR 60.41c
(3) 40 CFR 60.42c
(4) 40 CFR 60.43c(a)(2)
(5) 40 CFR 60.44c
(6) 40 CFR 60.45c
(7) 40 CFR 60.46c
(8) 40 CFR 60.47c
(9) 40 CFR 60.48c (1)
SECTION E.6 NESHAP

Emissions Unit Description:

Insignificant Activities:

(d) Activities associated with emergencies as follows:

(1) Stationary fire pump engines as follows:

(A) One (1) back-up diesel-fired fire pump, rated at 0.631 million British thermal units per hour and 250 horsepower.

Under the NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) the fire pump is considered an existing affected source.

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

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


(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 emissions units 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 Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251


The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment I to the operating permit), which are incorporated by reference as 326 IAC 20-82.

(a) One (1) back-up diesel-fired fire pump, rated at 0.631 million British thermal units per hour and 250 horsepower:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii) and (iv)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6604(b)
(7) 40 CFR 63.6605
(8) 40 CFR 63.6625(e)(3), (f), (h), and (i)
(9) 40 CFR 63.6640(a), (b), (e), (f)(1), (f)(2)(i), and (f)(4)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650
(12) 40 CFR 63.6655
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665
(15) 40 CFR 63.6670
(16) 40 CFR 63.6675
(17) Table 2d (item 4)
(18) Table 6 (item 9)
(19) Table 7 (item 4)
(20) Table 8
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: South Bend Ethanol
Source Address: 3201 West Calvert Street, South Bend, Indiana 46613
Part 70 Permit No.: T141-39515-00033
Facilities: Corn receiving (EU-01), corn handling (EU-02), corn milling (EU-03) Five (5) DDGS dryers (EU-10), DDGS handling (EU-11), alcohol load-out (EU-13)
Parameter: PM emissions
Limit: A total of 70 tons per twelve (12) consecutive month period with compliance determined at the end of each month (as calculated by Condition D.1.2(c)).

<table>
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<th>QUARTER:</th>
<th>YEAR:</th>
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<td>Month</td>
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<table>
<thead>
<tr>
<th>Month</th>
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☐ 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: South Bend Ethanol  
Source Address: 3201 West Calvert Street, South Bend, Indiana 46613  
Part 70 Permit No.: T141-39515-00033  
Facility: One (1) natural gas-fired Rental boiler (EU-21)  
Parameter: Natural gas usage (million cubic feet)  
Limit: Shall not exceed 3,641.13 million cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>QUARTER :</th>
<th>YEAR:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Month</strong></td>
<td><strong>Natural Gas Usage (MMcf)</strong></td>
</tr>
<tr>
<td></td>
<td>This Month</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- □ 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: South Bend Ethanol
Source Address: 3201 West Calvert Street, South Bend, Indiana 46613
Part 70 Permit No.: T141-39515-00033
Facility: Alcohol Load-out Operation (EU-13)
Parameter: Hours of Operation
Limit: Shall not exceed 4,034 hours per twelve (12) consecutive month period, with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>QUARTER</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>Hours of Operation</td>
</tr>
<tr>
<td></td>
<td>This Month</td>
</tr>
</tbody>
</table>

- [ ] 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: South Bend Ethanol, LLC
Source Address: 3201 W Calvert Street, South Bend, Indiana 46613
Part 70 Permit No.: T141-39515-00033
Facility: Boilers EU-16, EU-17
Parameter: Natural Gas Usage
Limit: Total natural gas throughput to the new natural gas- fired boilers, identified as EU-16 and EU-17, shall not exceed 3,337 million cubic feet per twelve (12) consecutive month period.

<table>
<thead>
<tr>
<th>QUARTER</th>
<th>YEAR</th>
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<table>
<thead>
<tr>
<th>Month</th>
<th>Natural Gas Usage (MMcf)</th>
<th>Natural Gas Usage (MMcf)</th>
<th>Natural Gas Usage (MMcf)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
</tr>
<tr>
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</tr>
</tbody>
</table>

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

Submitted by: ____________________________________________
Title / Position: ________________________________________
Signature: _____________________________________________
Date: _____________________________
Phone: _____________________________
Part 70 Quarterly Report

Source Name: South Bend Ethanol, LLC  
Source Address: 3201 W Calvert Street, South Bend, Indiana 46613  
Part 70 Permit No.: T141-39515-00033  
Facility: Boilers EU-16, EU-17, EU-21  
Parameter: NOx Emissions  
Limit: A total of 220 tons per twelve (12) consecutive month period with compliance determined at the end of each month

<table>
<thead>
<tr>
<th>QUARTER</th>
<th>YEAR</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>NOx Emissions (tons/month)</th>
<th>NOx Emissions (tons/month)</th>
<th>NOx Emissions (tons/12 month period) - (This Month + Previous 11 Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
<td></td>
</tr>
</tbody>
</table>

- 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: South Bend Ethanol, LLC
Source Address: 3201 W Calvert Street, South Bend, Indiana 46613
Part 70 Permit No.: T141-39515-00033
Facility: Boilers EU-16, EU-17, EU-21
Parameter: CO Emissions
Limit: A total of 220 tons per twelve (12) consecutive month period with compliance determined at the end of each month

<table>
<thead>
<tr>
<th>QUARTER :</th>
<th>YEAR:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>CO Emissions (tons/month)</th>
<th>CO Emissions (tons/month)</th>
<th>CO Emissions (tons/12 consecutive month period)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>(This Month + Previous 11 Months)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- No deviation occurred in this quarter.

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

Submitted by: ________________________________
Title / Position: ____________________________
Signature: _________________________________
Date: ________________________________
Phone: ________________________________
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:
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.

| 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, SO₂, VOC, NOₓ, 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 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: South Bend Ethanol, LLC
Source Address: 3201 W Calvert Street, South Bend, Indiana 46613
Part 70 Permit No.: T141-39515-00033

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

<table>
<thead>
<tr>
<th>Permit Requirement (specify permit condition #)</th>
<th>Date of Deviation:</th>
<th>Duration of Deviation:</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Number of Deviations:</th>
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<tr>
<th>Probable Cause of Deviation:</th>
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<table>
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<tr>
<th>Response Steps Taken:</th>
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</table>

<table>
<thead>
<tr>
<th>Permit Requirement (specify permit condition #)</th>
<th>Date of Deviation:</th>
<th>Duration of Deviation:</th>
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</table>

<table>
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<tr>
<th>Number of Deviations:</th>
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</table>

<table>
<thead>
<tr>
<th>Probable Cause of Deviation:</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Response Steps Taken:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permit Requirement</td>
</tr>
<tr>
<td>--------------------</td>
</tr>
<tr>
<td>Number of Deviations:</td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
</tr>
<tr>
<td>Response Steps Taken:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Permit Requirement</th>
<th>Date of Deviation</th>
<th>Duration of Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Deviations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response Steps Taken:</td>
<td></td>
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</tbody>
</table>

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<thead>
<tr>
<th>Permit Requirement</th>
<th>Date of Deviation</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Number of Deviations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response Steps Taken:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Form Completed by: _____________________________

Title / Position: _____________________________

Date: _____________________________

Phone: _____________________________
Source Description and Location

<table>
<thead>
<tr>
<th>Source Name:</th>
<th>South Bend Ethanol, LLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Location:</td>
<td>3201 West Calvert Street, South Bend, IN 46613</td>
</tr>
<tr>
<td>County:</td>
<td>St. Joseph</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>2869 (Industrial Organic Chemicals, Not Elsewhere Classified)</td>
</tr>
<tr>
<td>Operation Permit No.:</td>
<td>T141-39515-00033</td>
</tr>
<tr>
<td>Operation Permit Issuance Date:</td>
<td>November 26, 2018</td>
</tr>
<tr>
<td>Minor Source Modification No.:</td>
<td>141-42120-00033</td>
</tr>
<tr>
<td>Significant Permit Modification No.:</td>
<td>141-42172-00033</td>
</tr>
<tr>
<td>Permit Reviewer:</td>
<td>Travis Flock</td>
</tr>
</tbody>
</table>

Source Definition

This fuel-grade ethanol production source consists of two (2) plants:

(a) South Bend Ethanol, LLC (141-00033) located at 3201 West Calvert Street, South Bend, Indiana, and

(b) Messer LLC (formerly Linde LLC) (141-00548) located at 3809 West Calvert Street, South Bend, Indiana.

Although the two (2) plants do not share common ownership or management, IDEM, OAQ has determined that since the two (2) plants are located on contiguous property that is owned by South Bend Ethanol, LLC and if it were not for the existence of South Bend Ethanol, LLC, the Messer LLC plant would not be there, the two (2) plants are considered one (1) source. Messer LLC is totally dependent on South Bend Ethanol, LLC for its feedstock of CO₂ gas. Therefore, the term "source" in the Part 70 documents refers to both South Bend Ethanol, LLC and Messer LLC as one (1) major source.

Separate Part 70 Operating Permits have been issued to South Bend Ethanol, LLC and Messer LLC solely for administrative purposes. This conclusion was initially determined under Part 70 Operating Permit (T141-6956-00033) on March 17, 2008.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. 141-39515-00033 on November 26, 2018.

The source has since received the following approvals:

<table>
<thead>
<tr>
<th>Permit Type</th>
<th>Permit Number</th>
<th>Issuance Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV SSM</td>
<td>141-40020-00033</td>
<td>November 2, 2018</td>
</tr>
<tr>
<td>TV SPM</td>
<td>141-40928-00033</td>
<td>August 20, 2019</td>
</tr>
<tr>
<td>TV AA</td>
<td>141-41836-00033</td>
<td>September 9, 2019</td>
</tr>
</tbody>
</table>
County Attainment Status

The source is located in St. Joseph County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO\textsubscript{2}</td>
<td>Better than national standards.</td>
</tr>
<tr>
<td>CO</td>
<td>Unclassifiable or attainment effective November 15, 1990.</td>
</tr>
<tr>
<td>O\textsubscript{3}</td>
<td>Unclassifiable or attainment effective August 3, 2018, for the 2015 8-hour ozone standard.(^1)</td>
</tr>
<tr>
<td>PM\textsubscript{2.5}</td>
<td>Unclassifiable or attainment effective April 15, 2015, for the annual 2012 PM\textsubscript{2.5} standard.</td>
</tr>
<tr>
<td>PM\textsubscript{2.5}</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM\textsubscript{2.5} standard.</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>Unclassifiable effective November 15, 1990.</td>
</tr>
<tr>
<td>NO\textsubscript{2}</td>
<td>Unclassifiable or attainment effective January 29, 2012, for the 2010 NO\textsubscript{2} standard.</td>
</tr>
<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011 for the 2008 lead standard.</td>
</tr>
</tbody>
</table>

\(^1\)Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO\textsubscript{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\textsubscript{x} emissions are considered when evaluating the rule applicability relating to ozone. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO\textsubscript{x} emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM\textsubscript{2.5}
St. Joseph County has been classified as attainment for PM\textsubscript{2.5}. Therefore, direct PM\textsubscript{2.5}, SO\textsubscript{2}, and NO\textsubscript{x} emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
St. Joseph 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 gasoline storage tank, an ethanol storage tank, an ethanol production operation, and boilers with a total heat input rating of greater than 250 million British thermal units per hour (MMBtu/hr) which support the fuel-grade ethanol production plant.

(a) EPA published a final rule in the Federal Register on May 1, 2007, that excluded ethanol production facilities that produce ethanol through natural fermentation, from the major source category "Chemical Process Plants". Therefore, the fugitive emissions from ethanol production facilities are not counted toward determination of PSD, Emission Offset, and Part 70 Permit applicability.

(b) The gasoline storage tank, identified as T-601, has an applicable New Source Performance Standard, Subpart Ka, that was in effect on August 7, 1980. Therefore, its fugitive VOC emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.
(c) The fugitive VOC emissions from the ethanol storage tank, identified as T-611, are not counted toward PSD, Emission Offset, and Part 70 Permit applicability because the applicable NSPS, Kb was in effect after August 7, 1980.

(d) The fugitive VOC emissions from equipment leaks are not counted toward PSD, Emission Offset, and Part 70 Permit applicability because the applicable NSPS, VV was in effect after August 7, 1980.

(e) The 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 "nested activities". Therefore, any fugitive emissions from these boilers are counted toward PSD, Emission Offset, and Part 70 Permit 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).

<table>
<thead>
<tr>
<th>Greenhouse Gas (GHG) Emissions</th>
</tr>
</thead>
</table>

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](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.

<table>
<thead>
<tr>
<th>Source Status - Existing Source</th>
</tr>
</thead>
</table>

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)

<table>
<thead>
<tr>
<th></th>
<th>PM(^1)</th>
<th>PM(_{10})(^1)</th>
<th>PM(_{2.5})(^{1,2})</th>
<th>SO(_2)</th>
<th>NO(_X)</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP(^3)</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitives*</td>
<td>41.39</td>
<td>56.08</td>
<td>50.29</td>
<td>79.45</td>
<td>230.46</td>
<td>111.35</td>
<td>242.76</td>
<td>9.10</td>
<td>23.60</td>
</tr>
<tr>
<td>Total PTE of the Nested Source - Fossil-fueled boilers with a total heat input capacity &gt; 250 MMBtu/hr as defined at 326 IAC 2-2-1(ff)(1)(A)</td>
<td>7.99</td>
<td>31.97</td>
<td>31.97</td>
<td>2.52</td>
<td>220.00</td>
<td>23.13</td>
<td>200.00</td>
<td>6.40</td>
<td>6.71</td>
</tr>
<tr>
<td>Fugitives from Nested Source</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
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<td>242.76</td>
<td>9.10</td>
<td>23.60</td>
</tr>
</tbody>
</table>

\(^1\)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, n-hexane

*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 nested source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant(s), NO\(_X\) and CO, are emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(c) 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.

(d) These emissions are based on the TSD of TV SPM No. 141-40928-00033, issued on August 20, 2019.

### Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by South Bend Ethanol, LLC on October 29, relating to the request to alter the hazardous air pollutants limitations for n-hexane, benzene, and toluene at this source following the most recent results from stack testing. Additionally, South Bend Ethanol, LLC is intending to construct a sixth (6th) hammermill for corn milling, which is intended to be used as an in-line backup during periods of maintenance on the five (5) existing hammermills, so that production at this source will not experience a twenty percent (20%) decrease during times of planned...
and unplanned hammermill maintenance. Finally, South Bend Ethanol, LLC requested that the natural gas-fired boiler units, identified as EU-15, be removed from the permit, as these units were completely decommissioned as of October 1, 2019.

The following is a list of the new emission unit and pollution control device:

(a) One hammermill, identified as M-0055, approved in 2019 for construction, with a maximum capacity of sixty-five thousand (65,000) pounds of corn grain per hour, using baghouse D-0112 as a control, and exhausting to stacks DC-0112 and BV-0112.

The following is a list of the emission units and pollution control devices removed from the source:

(b) Two (2) natural gas-fired package boilers, identified as EU-15, rated at 220 million British thermal units per hour each, installed in October 1982, equipped with low NOx burners, exhausted through Stack 001.

**Enforcement Issues**

IDEM is aware that there is a pending enforcement action regarding VOC limits for RTO-1 and RTO-2. IDEM is reviewing this matter and will take the appropriate action.

**Emission Calculations**

See Appendix A of this Technical Support Document for detailed emission calculations.

**Permit Level Determination – Part 70 Modification at 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.

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM(_{10})</th>
<th>PM(_{2.5})(^1)</th>
<th>SO(_2)</th>
<th>NO(_x)</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP(^2)</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hammermill M-0055</td>
<td>17.08</td>
<td>17.08</td>
<td>4.27</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total PTE Before Controls of the New Emission Units:</strong></td>
<td><strong>17.08</strong></td>
<td><strong>17.08</strong></td>
<td><strong>4.27</strong></td>
<td><strong>--</strong></td>
<td><strong>--</strong></td>
<td><strong>--</strong></td>
<td><strong>--</strong></td>
<td><strong>--</strong></td>
<td><strong>--</strong></td>
</tr>
</tbody>
</table>

\(^1\)PM\(_{2.5}\) listed is direct PM\(_{2.5}\).

\(^2\)Single highest HAP.

Appendix A of this TSD reflects the detailed potential emissions of the modification.

(a) Approval to Construct

Pursuant to 326 IAC 2-7-10.5(e)(1)(A), a Minor Source Modification is required because this modification has the potential to emit PM and PM\(_{10}\) that is less than twenty-five (25) tons per year and equal to or greater than five (5) tons per year.
(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.

<table>
<thead>
<tr>
<th>Permit Level Determination – PSD and Emission Offset</th>
</tr>
</thead>
</table>

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 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.

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}^{1}$</th>
<th>SO$_2$</th>
<th>NO$_X$</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hammermill M-0055</td>
<td>17.08</td>
<td>17.08</td>
<td>4.27</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total for Modification</td>
<td>17.08</td>
<td>17.08</td>
<td>4.27</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
<td>---</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

$^{1}$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.

<table>
<thead>
<tr>
<th>PTE of the Entire Source After Issuance of the Part 70 Modification</th>
</tr>
</thead>
</table>

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 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.
<table>
<thead>
<tr>
<th>Source-Wide Emissions After Issuance (ton/year)</th>
<th>PM(^1)</th>
<th>PM(_{10})</th>
<th>PM(_{2.5})(^{1,2})</th>
<th>SO(_2)</th>
<th>NO(_X)</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP(^3)</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitives*</td>
<td>37.81</td>
<td>41.72</td>
<td>35.93</td>
<td>78.31</td>
<td>230.46</td>
<td>124.44</td>
<td>242.76</td>
<td>5.77</td>
<td>21.12</td>
</tr>
<tr>
<td>Total PTE of the Nested Source - Fossil-fueled boilers with a total heat input capacity &gt; 250 MMBtu/hr as defined at 326 IAC 2-2-1(ff)(1)(A)</td>
<td>4.40</td>
<td>17.61</td>
<td>17.61</td>
<td>1.39</td>
<td>220.00</td>
<td>12.74</td>
<td>200.00</td>
<td>4.17</td>
<td>4.37</td>
</tr>
<tr>
<td>Fugitives from Nested Source</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total PTE of Entire Source</td>
<td>37.81</td>
<td>41.72</td>
<td>35.93</td>
<td>78.31</td>
<td>230.46</td>
<td>124.44</td>
<td>242.76</td>
<td>5.77</td>
<td>21.16</td>
</tr>
</tbody>
</table>

Title V Major Source Thresholds NA 100 100 100 100 100 100 10 25

PSD Major Source Thresholds (nested source) 100 100 100 100 100 100 -- --

PSD Major Source Thresholds (entire source) 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, 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.

This existing nested source is a major stationary source, under PSD (326 IAC 2-2), because the PSD regulated pollutants NO\(_X\) and CO are emitted at a rate of 100 tons per year or more, each, and it is one of the twenty-eight (28) listed source categories specified in 326 IAC 2-2-1(ff)(1).

(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) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this proposed modification of EU-03 to add an additional hammermill.

**National Emission Standards for Hazardous Air Pollutants (NESHAP):**

(b) 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 of EU-03 to add an additional hammermill.

**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:

<table>
<thead>
<tr>
<th>Emission Unit/Pollutant</th>
<th>Control Device</th>
<th>Applicable Emission Limitation</th>
<th>Uncontrolled PTE (tons/year)</th>
<th>Controlled PTE (tons/year)</th>
<th>CAM Applicable (Y/N)</th>
<th>Large Unit (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-03 for PM</td>
<td>BH, identified as D-0112</td>
<td>326 IAC 6-3-2</td>
<td>&lt;100</td>
<td>-</td>
<td>N^1</td>
<td>N</td>
</tr>
<tr>
<td>EU-03 for PM10</td>
<td>BH, identified as D-0112</td>
<td>326 IAC 2-2-2</td>
<td>&lt;100</td>
<td>-</td>
<td>N^1</td>
<td>N</td>
</tr>
<tr>
<td>EU-03 for PM2.5</td>
<td>BH, identified as D-0112</td>
<td>326 IAC 2-2-2</td>
<td>&lt;100</td>
<td>-</td>
<td>N^1</td>
<td>N</td>
</tr>
</tbody>
</table>
Under the Part 70 Permit program (40 CFR 70), PM is not a regulated pollutant.

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for criteria 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.

PM* For limitations under 326 IAC 6-3-2, 326 IAC 6.5, and 326 IAC 6.8, IDEM OAQ uses PM as a surrogate for the regulated air pollutant PM10. Therefore, uncontrolled PTE and controlled PTE reflect the emissions of the regulated air pollutant PM10.

N¹ CAM does not apply for PM10 and PM2.5 because the uncontrolled PTE of PM10 and PM2.5 are less than the major source threshold.

Controls: BH = Baghouse

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the new units as part of this modification.

State Rule Applicability - Entire Source

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

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.

326 IAC 1-7 (Stack Height)
The source is subject to 326 IAC 1-7.

326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)
PSD and Emission Offset applicability is discussed under the Permit Level Determination – PSD and Emission Offset section and the Permit Level Determination - PSD Emissions Increase of this document.

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

(a) PM emissions shall not exceed 0.20 pounds/hour for the one (1) corn milling operation, identified as EU-03.

(b) PM10 emissions shall not exceed 0.20 pounds/hour for the one (1) corn milling operation, identified as EU-03.

(c) PM2.5 emissions shall not exceed 0.07 pounds/hour for the one (1) corn milling operation, identified as EU-03.

The new hammermill, identified as M-0055, that is being added to the Corn Milling Operating, identified as EU-03, will be subject to the existing PSD PM, PM10, and PM2.5 limits for EU-03 which are not being modified in this permitting action.

(d) The Permittee shall operate no more than five (5) of the six (6) hammermills (M-0050 through M-0055) at any one point in time.

This is a new limit due to this modification.

Compliance with these limits, combined with the potential to emit PM, PM10, and PM2.5 PTE from all other emission units at this source, shall limit the source-wide total potential to emit PM, PM10, and PM2.5 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.
**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).

The uncontrolled potential to emit hazardous air pollutants (HAPs) is greater than 10 tons per year of a single HAP, and greater than 25 tons per year of a combination of HAPs. The source has agreed to limit HAPs emissions to render 326 IAC 2-4.1 not applicable.

The source will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs after issuance of this renewal. Therefore, 326 IAC 2-4.1 does not apply to any units at this facility.

The source HAP limits that are applicable to this modification are the HAP limits for the alcohol loadout operation, identified as EU-13.

The single HAP emissions from the alcohol loadout flare (G-602), which controls the alcohol loadout operation (EU-13), are limited as follows:

(a) The n-hexane emissions from the alcohol loadout flare (G-602), shall not exceed 0.15 pounds per hour.

(b) The toluene emissions from the alcohol loadout flare (G-502) shall not exceed 0.10 pounds per hour.

(c) The benzene emissions from the alcohol loadout flare (G-502) shall not exceed 0.10 pounds per hour.

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

**326 IAC 2-6 (Emission Reporting)**

Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted triennially. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

**326 IAC 2-7-6(5) (Annual Compliance Certification)**

The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certifications that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.
326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

Opacity limitations for this source are as follows:

(A) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period.

(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.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the source contains paved roads that have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source is not subject to the requirements of 326 IAC 6-5, because the source has potential fugitive particulate emissions of less than twenty-five (25) tons per year.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
This source (located in St. Joseph County) is located in one of the counties listed in 326 IAC 6.5, but is not one of the sources specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10. The source-wide PTE of PM is 10 tons per year or more. Therefore, this source is subject to the requirements of 326 IAC 6.5-1-2 because the source-wide actual emissions of PM can be 10 tons per year or more.

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) The single HAP emissions from the CO2 Scrubber (V-230), which controls the yeast propagation (EU-04), the fermentation operation (EU-05), and the beerwell (EU-07), are limited as follows:

(1) The acetaldehyde emissions from the CO2 Scrubber (V-230), shall not exceed 0.05 pounds per hour;

(2) The acrolein emissions from the CO2 Scrubber (V-230), shall not exceed 0.13 pounds per hour;

(3) The formaldehyde emissions from the CO2 Scrubber (V-230), shall not exceed 0.005 pounds per hour; and

(4) The methanol emissions from the CO2 Scrubber (V-230), shall not exceed 0.025 pounds per hour.

(b) The single HAP emissions from the Thermal Oxidizers (RTO-1 and RTO-2) which controls the degasser and recovery column (EU-08), the stillage concentration and evaporation process (EU-09), the DDGS Dryers (EU-10), and the DDGS Cooler (EU-18), are limited as follows:

(1) The acetaldehyde emissions from the RTOs, shall not exceed 1.10 pounds per hour;

(2) The acrolein emissions from the RTOs, shall not exceed 0.65 pounds per hour;
(3) The formaldehyde emissions from the RTOs, shall not exceed 0.11 pounds per hour, and
(4) The methanol emissions from the RTOs, shall not exceed 0.80 pounds per hour.

c) The single HAP emissions from the alcohol loadout flare (G-602), which controls the alcohol loadout operation (EU-13), are limited as follows:

(1) The n-hexane emissions from the alcohol loadout flare (G-602), shall not exceed 0.15 pounds per hour.
(2) The toluene emissions from the alcohol loadout flare (G-502) shall not exceed 0.10 pounds per hour.
(3) The benzene emissions from the alcohol loadout flare (G-502) shall not exceed 0.10 pounds per hour.

Individual HAP limits for the RTO’s are being reduced, new limits for benzene and toluene are being added for the alcohol loadout flare, and combined HAP limits for the scrubber, RTO’s, and flare are being removed. The new and modified limits for individual HAPs ensure that the source-wide potential to emit a combination of HAPs remains less than twenty five (25) tons per year.

Compliance with these limits, combined with the potential to emit HAP from all other emission units at the source, shall limit the source-wide potential to emit single HAP to less than 10 tons per twelve (12) consecutive month period and the source-wide potential to emit total HAPs to less than 25 tons per twelve (12) consecutive month period, and shall render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

<table>
<thead>
<tr>
<th>State Rule Applicability – Individual Facilities</th>
</tr>
</thead>
</table>

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

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the new hammermill, identified as M-0055, which is being added to the existing corn milling operation, identified as EU-03, is not subject to the requirements of 326 IAC 6-3-2 because M-0055 is subject to more stringent limitations under 326 IAC 6.5-1-2.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-2(a), the new hammermill, identified as M-0055, which is being added to the existing corn milling operation, identified as EU-03, is subject to requirements of 326 IAC 6.5 since M-0055 is located in St. Joseph County. The new hammermill, identified as M-0055, which is being added to the existing corn milling operation, identified as EU-03 shall not have particulate matter emission content greater than three-hundredths (0.03) grain per dry standard cubic foot (dscf), each.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
The new hammermill, identified as M-0055, which is being added to the existing corn milling operation, identified as EU-03, is not subject to 326 IAC 326 IAC 7-1.1 because it has a potential to emit (or limited potential to emit) sulfur dioxide (SO2) of less than 25 tons per year or 10 pounds per hour.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, the new hammermill, identified as M-0055, which is being added to the existing corn milling operation, identified as EU-03, was constructed after January 1, 1980, it is not subject to the requirements of 326 IAC 8-1-6 because its unlimited VOC potential emissions are less than twenty-five (25) tons per year.
326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to the hammermill, identified as M-0055, because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to the hammermill, identified as M-0055, since this unit is not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

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) PSD PM emissions =
[TCR x 0.079 pounds of PM/ton of corn x (1 - CE)] x 1 ton/2,000 pounds +
[TCH x 0.061 pounds of PM/ton of corn x (1 - CE)] x 1 ton/2,000 pounds +
[TCM x 0.012 pounds of PM/ton of corn (emission factor is after control)] x 1 ton/2,000 pounds +
[TDGS11 x 6.002E-03 pounds of PM/ton of DDGS processed through the DDGS dryers] x 1 ton/2,000 pounds +
[TDGS11 x 0.061 pounds of PM/ton of DDGS handled] x 1 ton/2,000 pounds +
[TDGS12 x 0.0057 pounds of PM/ton of DDGS loaded out x (1 - CE)] x 1 ton/2,000 pounds +
(K +
(TTNG x 1.9 pounds of PM/mmcf x 1 ton/2,000 pounds) +
(HEGO x 1.80 mmBtu/hr x 0.31 pounds of PM/mmBtu x 1 ton/2,000 pounds) +
(HFPO x 0.631 mmBtu/hr x 0.31 pounds of PM/mmBtu x 1 ton/2,000 pounds) +
INSIG.

where:

TTNG = Total throughput of natural gas (mmcf) to the space heaters
HFPO = Number of hours the backup emergency fire pump operated
CE = Overall control efficiency (fraction) of the control device
TCR = Throughput of corn received (tons/month) to corn receiving operation (EU-01)
TCH = Throughput of corn handled (tons/month) to the corn handling operation (EU-02)
TCM = Throughput of corn milled (tons/month) to the corn milling operation (EU-03)
TDGS11 = Throughput of DDGS (tons/month) to DDGS handling operation (EU-11)
TDGS12 = Throughput of DDGS (tons/month) to DDGS load-out operation (EU-12)
K = 0.0001 tons/month for alcohol load-out operation (EU-13)
INSIG = PM emissions from other insignificant activities

The Permittee shall use the emission rates measured during the most recent compliant stack test in place of the emission rates given in the above equation.

(b) In order to limit the source-wide total potential to emit PM, PM10, and PM2.5 to less than 250 tons per twelve (12) consecutive month period, and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the baghouses (D-0001 and D-0112) for particulate control shall be in operation and control emissions from the corn receiving, handling and milling operations (EU-01, EU-02 and EU-03) at all times these facilities are in operation.

(c) Pursuant to St. Joseph County Health Department construction permit/PSD approval, issued on February 12, 1982, in order to assure compliance, the baghouses (D-0001 and D-0112) for particulate control shall be in operation and control emissions from the corn receiving, handling and milling operations (EU-01, EU-02 and EU-03) at all times that these facilities are in operation.

There are no new or modified compliance requirements included with this 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. Section A.3(k) has been modified to reflect the new hammermill, identified as M-0055, which has been added to the existing corn milling operation, identified as EU-03.
2. Section D.5.3 has been modified to reflect the new HAP limitations, following results of the most recent HAP stack testing conducted by the source, and verified via IDEM OAQ Compliance and Enforcement.
3. Section D.1(c) has been modified to reflect the new hammermill, identified as M-0055, which has been added to the existing corn milling operation, identified as EU-03.
4. Section D.2(c) has been modified to reflect the new hammermill, identified as M-0055, which has been added to the existing corn milling operation, identified as EU-03.
5. Section A.3(s) has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.
6. Section D.1(s) has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.
7. Section D.1.1 has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.
8. Section D.1.3 has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.
(9) Section D.1.4 has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.

(10) Section D.6 has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.

(11) Section D.6.1 has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.

(12) Section D.6.3 has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.

(13) Section D.6.4 has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.

(14) Section D.6.6 has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.

(15) Section D.6.7 has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.

(16) Section D.6.8 has been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.

(17) The Part 70 Quarterly Reports have been modified to reflect the removal of the two (2) natural gas-fired package boilers, identified as EU-15.

A.3 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:

(c) One (1) corn milling operation, identified as EU-03, installed in October 1982, equipped with a baghouse, identified as D-0112, exhausted through Stacks DC-0112 and BV-0112, consisting of one (1) belt conveyor, identified as CV-0018, one (1) pneumatic pump, identified as P-0111, one (1) scalper, identified as CS-0011, two (2) surge bins, identified as B-0011 and B-0112, one (1) drag conveyor, identified as CV-0011, five (5) rotary feeders, identified as RF-0111 through RF-0115, five (5) six (6) hammermills, identified as M-0050 through M-0054 M-0055, three (3) screw conveyors, identified as CV-0111, CV-0101 and CV-0117, one (1) weigh hopper, identified as WH-0111, one (1) bag dump hopper, identified as B-0111, three (3) bucket elevators, identified as EL-0111, EL-0112 and EL-0113, one (1) weigh-feeder, identified as W-0121, one (1) airlock, identified as DA-0112, capacity: 140 tons of yellow corn per hour.

(e) Two (2) natural gas-fired package boilers, identified as EU-15, rated at 220 million British thermal units per hour each, installed in October 1982, equipped with low NOx burners, exhausted through Stack 001.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

...
(c) One (1) corn milling operation, identified as EU-03, installed in October 1982, equipped with a baghouse, identified as D-0112, exhausted through Stacks DC-0112 and BV-0112, consisting of one (1) belt conveyor, identified as CV-0018, one (1) pneumatic pump, identified as P-0111, one (1) scalper, identified as CS-0011, two (2) surge bins, identified as B-0011 and B-0112, one (1) drag conveyor, identified as CV-0011, five (5) rotary feeders, identified as RF-0111 through RF-0115, five (5) hammermills, identified as M-0050 through M-0055, three (3) screw conveyors, identified as CV-0111, CV-0101 and CV-0117, one (1) weigh hopper, identified as WH-0111, one (1) bag dump hopper, identified as B-0111, three (3) bucket elevators, identified as EL-0111, EL-0112 and EL-0113, one (1) weigh-feeder, identified as W-0121, one (1) airlock, identified as DA-0112, capacity: 140 tons of yellow corn per hour.

... Two (2) natural gas-fired package boilers, identified as EU-15, rated at 220 million British thermal units per hour each, installed in October 1982, equipped with low NOx burners, exhausted through Stack 001.

Emission Limitations and Standards [326 IAC 2-7.5(1)]

D.1.1 PSD Limitations [326 IAC 2-2]

Pursuant to St. Joseph County Health Department construction permit/PSD approval, issued on February 12, 1982, and in order to satisfy the requirements of PSD BACT:

The following emission limitations apply to the emission units listed in Section D.1 as the corn receiving operation, identified as EU-01, the corn handling operation, identified as EU-02, the corn milling operation, identified as EU-03, the yeast propagation operation, identified as EU-04, the fermentation operation, identified as EU-05, the degasser and recovery column, identified as EU-08, the evaporation process, identified as EU-09, the distillers dried grain and solubles (DDGS) dryer operation, identified as EU-10, the DDGS handling operation, identified as EU-11, the DDGS load-out operation, identified as EU-12, and the alcohol load-out operation, identified as EU-13, and the two (2) natural gas-fired package boilers, identified as EU-15:

Compliance Determination Requirements [326 IAC 2-7.5(1)]

D.1.3 Emissions Determination [326 IAC 2-2]

Compliance with Condition D.1.1(a), (b) and (c) shall be determined by calculating the SO2, NOX and PM emissions associated with the specified emission units, using the following equations:

(a) PSD SO2 emissions = ((TNG + TTNG) x 0.6 pounds of SO2/mmcf x 1 ton/2,000 pounds) + (HFPO x 0.631 mmBtu/hr x 0.29 pounds of SO2/mmBtu x 1 ton/2,000 pounds).

(b) PSD NOX emissions = (TNG x 135.66 pounds of NOx/mmcf x 1 ton/2,000 pounds) + (TTNG x 100.0 pounds of NOx/mmcf x 1 ton/2,000 pounds) + (HFPO x 0.631 mmBtu/hr x 4.41 pounds of NOx/mmBtu x 1 ton/2,000 pounds).

(c) PSD PM emissions = [(TNG x 1.9 pounds of PM/mmcf of natural gas) x 1 ton/2,000 pounds] + [TCR x 0.079 pounds of PM/ton of corn x (1 - CE)] x 1 ton/2,000 pounds + [TCH x 0.061 pounds of PM/ton of corn x (1 - CE)] x 1 ton/2,000 pounds
[TCM x 0.012 pounds of PM/ton of corn (emission factor is after control)] x 1 ton/2,000 pounds +

[TDGS11 x 6.002E-03 pounds of PM/ton of DDGS processed through the DDGS dryers] x 1 ton/2,000 pounds +

[TDGS11 x 0.061 pounds of PM/ton of DDGS handled] x 1 ton/2,000 pounds +

[TDGS12 x 0.0057 pounds of PM/ton of DDGS loaded out x (1 - CE)] x 1 ton/2,000 pounds + K +

(TTNG x 1.9 pounds of PM/mmcf x 1 ton/2,000 pounds) + (HEGO x 1.80 mmBtu/hr x 0.31 pounds of PM/mmBtu x 1 ton/2,000 pounds) + (HFPO x 0.631 mmBtu/hr x 0.31 pounds of PM/mmBtu x 1 ton/2,000 pounds) + INSIG.

where:

TTNG = Total throughput of natural gas (mmcf) to the space heaters

HFPO = Number of hours the backup emergency fire pump operated

TNG = Throughput of natural gas (mmcf) to the two (2) package boilers (EU-15)

CE = Overall control efficiency (fraction) of the control device

TCR = Throughput of corn received (tons/month) to corn receiving operation (EU-01)

TCH = Throughput of corn handled (tons/month) to the corn handling operation (EU-02)

TCM = Throughput of corn milled (tons/month) to the corn milling operation (EU-03)

TDGS11 = Throughput of DDGS (tons/month) to DDGS handling operation (EU-11)

TDGS12 = Throughput of DDGS (tons/month) to DDGS load-out operation (EU-12)

K = 0.0001 tons/month for alcohol load-out operation (EU-13)

INSIG = PM emissions from other insignificant activities

The Permittee shall use the emission rates measured during the most recent compliant stack test in place of the emission rates given in the above equation.

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

D.1.4 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1 the Permittee shall maintain records of the following:

(1) Throughput of natural gas to space heaters,

(2) Throughput of natural gas to EU-15,
(3) (2) Throughput of corn processed (received (EU-01), handled (EU-02) and milled (EU-03)),

(4) (3) Throughput of DDGS, and

(5) (4) Operational times of each of the five (5) DDGS dryers on a monthly basis.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(c) One (1) corn milling operation, identified as EU-03, installed in October 1982, equipped with a baghouse, identified as D-0112, exhausted through Stacks DC-0112 and BV-0112, consisting of one (1) belt conveyor, identified as CV-0018, one (1) pneumatic pump, identified as P-0111, one (1) scalper, identified as CS-0011, two (2) surge bins, identified as B-0011 and B-0112, one (1) drag conveyor, identified as CV-0011, five (5) rotary feeders, identified as RF-0111 through RF-0115, five (5) six (6) hammermills, identified as M-0050 through M-0054 M-0055, three (3) screw conveyors, identified as CV-0111, CV-0101 and CV-0117, one (1) weigh hopper, identified as WH-0111, one (1) bag dump hopper, identified as B-0111, three (3) bucket elevators, identified as EL-0111, EL-0112 and EL-0113, one (1) weigh-feeder, identified as W-0121, one (1) airlock, identified as DA-0112, capacity: 140 tons of yellow corn per hour.

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

D.2.1 Prevention of Significant Deterioration (PSD) Minor Limit for PM/PM10/PM2.5 [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 limits:

(g) The Permittee shall operate no more than five (5) of the six (6) hammermills (M-0050 through M-0055) at any one point in time.

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

D.2.8 Record Keeping Requirements

(b) To document the compliance status with Condition D.2.1(g), the Permittee shall maintain operation records of the hammermills.

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

D.5.3 Hazardous Air Pollutants [326 IAC 2-4.1] [40 CFR 63]

The single HAP emissions from the alcohol loadout flare (G-602), which controls the alcohol loadout operation (EU-13), are limited as follows:

(a) The n-hexane emissions from the alcohol loadout flare (G-602), shall not exceed 0.34 pounds per hour.

(b) The toluene emissions from the alcohol loadout flare (G-502) shall not exceed 0.03 pounds per hour.

(c) The benzene emissions from the alcohol loadout flare (G-502) shall not exceed 0.02 pounds per hour.
SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Boilers

... Two (2) natural gas-fired package boilers, identified as EU-15, rated at 220 million British thermal units per hour each, installed in October 1982, equipped with low NOx burners, exhausted through Stack 001.

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

D.6.1 Prevention of Significant Deterioration (PSD) Minor Limit PM/PM10/PM2.5/SO2/NOx/VOC/CO [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) Natural gas usage, total, for EU-15 and EU-21 shall not exceed 3,641.13 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) NOx emissions from the natural gas combustion shall not exceed 135.66 pounds per million cubic feet (lb/mmscf).

(c) CO emissions from the natural gas combustion shall not exceed 51.00 pounds per million cubic feet (lb/mmscf).

Compliance with these limits, in combination with the limits in Conditions D.2.1, D.3.1, D.4.3, and D.5.2, shall limit the net emissions increase from the 2014 optimization modification to less than twenty-five (25) tons PM, fifteen (15) tons PM₁₀, ten (10) tons PM₂.₅, forty (40) tons SO₂, forty (40) tons NOₓ, forty (40) tons VOC, and one-hundred (100) tons CO per twelve (12) consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to Significant Source Modification 141-34355-00033.

D.6.3 Prevention of Significant Deterioration (PSD) Minor Limit NOx/CO [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) NOx emissions from each of the natural gas-fired package boilers, identified as EU-15, shall not exceed 135.66 pounds per million cubic feet (lb/mmscf).

(b) NOx emissions from emissions from the natural gas-fired boilers, identified as EU-16, EU-17, and EU-21, shall not exceed 40.39 pounds per million cubic feet (lb/mmscf).

(c) CO emissions from the natural gas-fired boilers, identified as EU-15 and EU-21, shall not exceed 51.00 pounds per million cubic feet (lb/mmscf).

(d) Total NOx emissions from the boilers, EU-15, EU-16, EU-17 and EU-21, shall not exceed 220 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(e) Total CO emissions from the boilers, EU-15, EU-16, EU-17 and EU-21, shall not exceed 200 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
Compliance with these limits, combined with the potential to emit NOx and CO from all other emission units at this source, shall limit the source-wide total potential to emit 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.

D.6.4 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(b)(3), the PM emissions from each boiler (EU-15, EU-16, EU-17, EU-21) shall not exceed 0.01 grains per dry standard cubic foot of exhaust air, when combusting natural gas.

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

D.6.6 Testing Requirements [326 IAC 2-1.1-11]

(b) In order to demonstrate compliance with Condition D.6.1, and 6.3, not later than one hundred and eighty (180) days after restart of the existing boilers, identified as EU-15 and EU-21, the Permittee shall perform NOx and CO testing for the two (2) natural gas-fired package boilers, identified as EU-15 and EU-21, utilizing methods as approved by the Commissioner at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.6.7 Emissions Determination

Compliance with Conditions D.6.3(d) and D.6.3(e) shall be determined by calculating the CO and NOx emissions associated with the specified emission units, using the following equation:

\[
\text{CO emissions (tons/yr)} = \left(\frac{TNG \times 51.00 \text{ pounds of CO/mmcf of natural gas}}{51.00 \text{ mmcf of natural gas}}\right) + \left(\frac{TTNG \times 84.0 \text{ pounds of CO/mmcf}}{51.00 \text{ mmcf of natural gas}}\right) + \left(\frac{RTNG \times 51.00 \text{ pounds of CO/mmcf of natural gas}}{51.00 \text{ mmcf of natural gas}}\right)
\]

\[
\text{NOx emissions (tons/yr)} = \left(\frac{TNG \times 135.66 \text{ pounds of NOx/mmcf of natural gas}}{51.00 \text{ mmcf of natural gas}}\right) + \left(\frac{TTNG \times 40.39 \text{ pounds of NOx/mmcf}}{51.00 \text{ mmcf of natural gas}}\right) + \left(\frac{RTNG \times 40.39 \text{ pounds NOx/mmcf of natural gas}}{51.00 \text{ mmcf of natural gas}}\right)
\]

where:

\[
TNG = \text{Throughput of natural gas (mmcf) to the two (2) package boilers (EU-15) per twelve (12) consecutive month period (tons)}
\]

TTNG = Total throughput of natural gas (mmcf) to boilers EU-16 and EU-17

RTNG = Total throughput of natural gas (mmcf) to rental boiler EU-21

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

D.6.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.6.1(a), D.6.2, D.6.3(d), and D.6.3(e), the Permittee shall maintain records of the natural gas usage for each of the boilers (EU-15, EU-16, EU-17, EU-21) for each month and each compliance period.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: South Bend Ethanol, LLC
Source Address: 3201 West Calvert Street, South Bend, Indiana 46613
Part 70 Permit No.: T141-39515-00033
Facilities: Corn receiving (EU-01), corn handling (EU-02), corn milling (EU-03), Five (5) DDGS dryers (EU-10), DDGS handling (EU-11), alcohol load-out (EU-13), and two (2) package boilers (EU-15)
Parameter: PM emissions
Limit: A total of 70 tons per twelve (12) consecutive month period with compliance determined at the end of each month (as calculated by Condition D.1.2(c)).

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

Part 70 Quarterly Report

Source Name: South Bend Ethanol, LLC
Source Address: 3201 West Calvert Street, South Bend, Indiana 46613
Part 70 Permit No.: T141-39515-00033
Facility: Two (2) package boilers (EU-15) and one One (1) natural gas-fired Rental boiler (EU-21)
Parameter: Natural gas usage (million cubic feet)
Limit: Shall not exceed 3,641.13 million cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

Part 70 Quarterly Report

Source Name: South Bend Ethanol, LLC
Source Address: 3201 W Calvert Street, South Bend, Indiana 46613
Part 70 Permit No.: T141-39515-00033
Facility: Boilers EU-15, EU-16, EU-17, EU-21
Parameter: NOx Emissions
Limit: A total of 220 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: South Bend Ethanol, LLC
Source Address: 3201 W Calvert Street, South Bend, Indiana 46613
Part 70 Permit No.: T141-39515-00033
Facility: Boilers EU-15, EU-16, EU-17, EU-21
Parameter: CO Emissions
Limit: A total of 220 tons per twelve (12) consecutive month period with compliance determined at the end of each month

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 October 29, 2019.

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 141-42120-00033. The operation of this proposed modification shall be subject to the conditions of the attached proposed Significant Permit Modification No. 141-42172-00033.

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

IDEM Contact

(a) If you have any questions regarding this permit, please contact Travis Flock, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 233-1782 or (800) 451-6027, and ask for Travis Flock or (317) 233-1782.

(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:** South Bend Ethanol LLC  
**Address City IN Zip:** 3201 W. Calvert, South Bend, IN 46613  
**Minor Source Modification No.:** 141-42120-00033  
**Significant Permit Modification:** 141-42172-00033  
**Reviewer:** Travis Flock

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* PM2.5 listed is direct PM2.5  
** Emissions for Messer, LLC taken from Permit No. 141-36904-00548
### PTE Summary

**Company Name:** South Bend Ethanol LLC  
**Address City IN Zip:** 3201 W. Calvert, South Bend, IN 46613  
**Minor Source Modification No.:** 141-42120-00033  
**Significant Permit Modification** 141-42172-00033  
**Reviewer:** Travis Flock

#### Potential to Emit after Issuance (tons/yr)

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*PM2.5 listed is direct PM2.5  
**Emissions for Messer, LLC taken from Permit No. 141-36904-00548

#### Uncontrolled PTE of Nested Source (tons/yr)

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<th>Emission Unit</th>
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<th>SO₂</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
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*PM2.5 listed is direct PM2.5

#### PTE of Nested Source After Issuance (tons/yr)

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<th>SO₂</th>
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Appendix A: Emission Calculations

PTE Summary

Company Name: South Bend Ethanol LLC  
Address City IN Zip: 3201 W. Calvert, South Bend, IN 46613  
Minor Source Modification No.: 141-42120-00033  
Significant Permit Modification 141-42172-00033  
Reviewer: Travis Flock

| Boiler EU-16 | EU-16 | 1.79 | 7.18 | 7.18 | 0.57 | 220.00 | 5.20 | 200.00 |
| Boiler EU-17 | EU-17 | 1.79 | 7.18 | 7.18 | 0.57 | 220.00 | 5.20 | 200.00 |
| Total        |       | 4.40 | 17.61| 17.61| 1.39 | 220.00 | 12.74| 200.00 |

*PM2.5 listed is direct PM2.5
### Appendix A: Emission Calculations

#### HAPs PTE Summary

**Company Name:** South Bend Ethanol LLC  
**Address City IN Zip:** 3201 W. Calvert, South Bend, IN 46613  
**Minor Source Modification No.:** 141-41210-00033  
**Significant Permit Modification:** 141-42172-00033  
**Reviewer:** Travis Flock

### Uncontrolled Potential to Emit (tons/yr)

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<th>Cadmium</th>
<th>Carbon Disulfide</th>
<th>Chromium</th>
<th>Cumene</th>
<th>Dichlorobenzene</th>
<th>Ethylbenzene</th>
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<td>EU-02</td>
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### Emission Calculations

**HAPs PTE Summary**

**Company Name:** South Bend Ethanol LLC  
**Address City IN Zip:** 3201 W. Calvert, South Bend, IN 46613

**Minor Source Modification No.:** 141-41210-00033  
**Significant Permit Modification** 141-42172-00033

**Reviewer:** Travis Flock

---

#### Potential to Emit after Issuance (tons/yr)

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**Notes:**
1. Shaded cells indicate where limits are included in the permit.
Modification Summary for Addition of 6th Hammermill to EU-03 operations

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<th>Unit Type</th>
<th>Unit ID</th>
<th>Maximum Throughput (lbs/hr)</th>
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<td>Hammermill</td>
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Methodology
See AP-42, Grain Elevators 9.9.1, Table 9.9.1-1 and Table 9.9.1-2
*When PM2.5 AP-42 emission factors are not established, assume 25% of PM10.
** Assume 99% control efficiency of baghouse D-0112
PM PTE = Maximum Throughput (lbs/hr) * PM emission factor (lbs/ton) * (8760/2000)
PM10 PTE = Maximum Throughput (lbs/hr) * PM10 emission factor (lbs/ton) * (8760/2000)
PM2.5 PTE = Maximum Throughput (lbs/hr) * PM10 emission factor (lbs/ton) * (8760/2000)
South Bend Ethanol LLC
3201 W. Calvert, South Bend, IN 46613
141-41210-00033
141-42172-00033
Travis Flock

<table>
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<tr>
<th>Maximum Throughput (tons/hr)</th>
<th>PM Emission Factor (lbs/ton)</th>
<th>PM10 Emission Factor (lbs PM10/ton grain)</th>
<th>PM2.5 Emission Factor (lbs PM2.5/ton grain)</th>
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<td>Uncontrolled PM2.5 emissions (lb/hr)</td>
<td>Uncontrolled PM emissions (tons/year)</td>
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1. Baghouse Stack PM/PM10/PM2.5 Emissions:

| ID   | Baghouse ID | Throughput | Uncontrolled PM Emission Factor (lbs/ton) | Uncontrolled PM10 Emission Factor (lbs/ton) | Uncontrolled PM2.5 Emission Factor (lbs/ton) | SCC Code | Uncontrolled Fugitive PM Emissions (tons/yr) | Uncontrolled Fugitive PM10 Emissions (tons/yr) | Uncontrolled Fugitive PM2.5 Emissions (tons/yr) | Controlled Fugitive PM Emissions (tons/yr) | Controlled Fugitive PM10 Emissions (tons/yr) | Controlled Fugitive PM2.5 Emissions (tons/yr) |
|------|-------------|------------|-------------------------------------------|---------------------------------------------|---------------------------------------------|----------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| EU-02| D-0001      | 1,226,400  | 0.080                                     | 0.034                                       | 0.0058                                      | 3-02-005-30 | 37.41                                      | 20.85                                      | 3.54                                        | 0.37                                        | 0.21                                        | 0.04                                        |
| EU-11| D-0001      | 341,485    | 0.086                                     | 0.029                                        | 0.0049                                      | 3-02-005-50 | 14.68                                      | 4.95                                        | 0.84                                        | 0.84                                        | 0.84                                        | 0.84                                        |
| Total|              |            |                                           |                                              |                                             |           |                                            |                                            |                                             |                                            |                                            |                                            |                                            |
|      |              |            |                                           |                                              |                                             |           | 52.09                                      |                                            |                                             |                                            |                                            |                                            |                                            |

2. Potential to Emit PM/PM10 - Fugitive Emissions:

Note:
Emission factors from AP-42, Chapter 9.9.1-1 and AP-42, Chapter 9.9.1-2. Assume all the grain receiving and DDGS loadout is by truck, which is the worst case scenario.

Methodology
Uncontrolled Fugitive PM/PM10/PM2.5 (tons/yr) = Annual Throughput Limit (tons/yr) x Uncontrolled Emission Factor (lbs/ton) x 1 ton/2000 lbs
Controlled Fugitive PM/PM10/PM2.5 (tons/yr) = Uncontrolled Fugitive PM/PM10/PM2.5 (tons/yr) x 1-Capture Efficiency
Appendix A: Emission Calculations
Fermentation (CO2) Scrubber
Accumulator Vent (EU-04), Fermentation (EU-05), and Beerwell (EU-07)

Company Name: South Bend Ethanol LLC
Address City IN Zip: 3201 W. Calvert, South Bend, IN 46613
Minor Source Modification No.: 141-41210-00033
Significant Permit Modification 141-42172-00033
Reviewer: Travis Flock

Basis: Denatured Ethanol Production: 96.31 MM gal/yr
Assumed operation time: 8760 hr/yr
Flow: 10,971 cfm

Control Efficiency:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission factor (lb/MMgpy)</th>
<th>Emission Factor (lb/hr)</th>
<th>Controlled Emissions (tons/yr)</th>
<th>Uncontrolled Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>-</td>
<td>7.67</td>
<td>33.59</td>
<td>1679.73</td>
</tr>
<tr>
<td>PM</td>
<td>4.96</td>
<td>-</td>
<td>0.24</td>
<td>2.39</td>
</tr>
<tr>
<td>PM10/2.5</td>
<td>5.55</td>
<td>-</td>
<td>0.27</td>
<td>2.67</td>
</tr>
<tr>
<td>PM+PM10/2.5</td>
<td>-</td>
<td>-</td>
<td>0.51</td>
<td>0.51</td>
</tr>
<tr>
<td>HAPs:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>0.057</td>
<td>0.25</td>
<td>7.57</td>
</tr>
<tr>
<td>Acrolein</td>
<td>-</td>
<td>0.136</td>
<td>0.60</td>
<td>18.05</td>
</tr>
<tr>
<td>Methanol*</td>
<td>-</td>
<td>0.025</td>
<td>0.11</td>
<td>1.83</td>
</tr>
<tr>
<td>Formaldehyde*</td>
<td>-</td>
<td>0.005</td>
<td>0.02</td>
<td>0.37</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>-</td>
<td>-</td>
<td>0.98</td>
<td>27.81</td>
</tr>
<tr>
<td>Other Compounds3:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetic Acid</td>
<td>-</td>
<td>0.466</td>
<td>2.04</td>
<td>-</td>
</tr>
<tr>
<td>Butyric Acid</td>
<td>43.8</td>
<td>-</td>
<td>2.11</td>
<td>-</td>
</tr>
<tr>
<td>Lactic Acid</td>
<td>32.12</td>
<td>-</td>
<td>1.55</td>
<td>-</td>
</tr>
<tr>
<td>Furfural</td>
<td>-</td>
<td>1.428</td>
<td>6.25</td>
<td>-</td>
</tr>
<tr>
<td>Glycerol</td>
<td>7.59</td>
<td>-</td>
<td>0.37</td>
<td>-</td>
</tr>
<tr>
<td>Ethanol</td>
<td>-</td>
<td>3.25</td>
<td>14.24</td>
<td>-</td>
</tr>
</tbody>
</table>

Notes:
1. Estimate and emission factors based on ICM Emission Guide
2. Based on 2017 RM20 Engineering Tests at South Bend Ethanol
3. *Other Compounds* are named, non-HAP compounds included in total VOC emission factor

4. Control efficiency of 98% for emissions of VOC from the Scrubber required based on 326 IAC Article 8, Rule 5. Assumed control efficiency of 90% for emissions of PM/PM10/PM2.5 and 98% for emissions of HAPs from the Scrubber

Methodology
Controlled emissions (tons/yr) = Emission Factor (lb/MMgpy)/Ethanol Production (MM gal/yr)/ 2000 (lbs/ton)
Controlled Emissions (tons/yr) = Emissions Factor (lb/hr)*8760 (hrs/yr)/ 2000 (lbs/ton)
Uncontrolled Emissions = Controlled Emissions/(1-Contol Efficiency)

SPM 141-40928-00033

Breakout calculations for finishing beerwell NSR, unit is controlled by scrubber and emissions are included in total above.

<table>
<thead>
<tr>
<th>Tank ID</th>
<th>Contents</th>
<th>Maximum Capacity (gal)</th>
<th>Turnovers/ yr</th>
<th>Throughput (gal)</th>
<th>Working Loss (lb/yr)</th>
<th>Breathing Loss (lb/yr)</th>
<th>Total Loss (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finishing Beerwell</td>
<td>beer</td>
<td>750,000</td>
<td>1,095</td>
<td>8.21E+08</td>
<td>7,645.48</td>
<td>48.30</td>
<td>3.85</td>
</tr>
</tbody>
</table>

Notes:
1. From TANKS 4.0.9d calculation provided by the source, beer 17.50% ethanol by weight.

Hazardous Air Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Weight Fraction</th>
<th>Acetaldehyde</th>
<th>Acrolein</th>
<th>Methanol</th>
<th>Formaldehyde</th>
<th>Combined HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finishing</td>
<td>weight fraction*</td>
<td>0.94</td>
<td>1.64E-02</td>
<td>3.92E-02</td>
<td>7.20E-03</td>
<td>1.44E-03</td>
</tr>
<tr>
<td>Beerwell</td>
<td>PTE (tons/yr)</td>
<td>3.60</td>
<td>0.06</td>
<td>0.15</td>
<td>0.03</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Notes:
1. Weight Fraction = Component / [sum of ethanol + 4 named HAPs], all lb/hr values from "Scrubber (EU-04, 05, & 07)" tab
## Appendix A: Emission Calculations

### Process Emissions

- **EU-08**
- **EU-09**
- **DDGS Dryers (EU-10)**
- **DDGS Cooler (EU-18)**
- **RTOs (RTO-1 & RTO-2)**

#### Company Name:
South Bend Ethanol LLC

#### Address City IN Zip:
3201 W. Calvert, South Bend, IN 46613

#### Significant Permit Modification No.:
141-42172-00033

#### Reviewer:
Travis Flock

### Criteria emissions from combustion of natural gas and process emissions at other gas fired equipment

**Basis:**
- SO2 factor based on AP-42 emission factor; NOx factor based on AP-42 with proposed burners
- Unit assumed to operate maximum fuel input capacity
- Assumed operation time: 8760 hr/yr
- Emission factors & controls based on DDGS throughput
- DDGS Annual production: 341,465

#### Control Efficiency:
- PM/PM10/PM2.5: 90%
- SO2: 0%
- VOC: 97% average control efficiency determined in April 11, 2019 testing
- CO: 96%
- HAPs: 98%

### Uncontrolled PTE (tons/yr)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM10</th>
<th>PM10</th>
<th>SO2</th>
<th>NOx</th>
<th>CO</th>
<th>HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</td>
<td>0.05</td>
<td>0.06</td>
<td>0.01</td>
<td>see</td>
<td>0.45</td>
<td>0.40</td>
</tr>
<tr>
<td>Units</td>
<td>lbs/hr</td>
<td>tons/yr</td>
<td>lbs/hr</td>
<td>tons/yr</td>
<td>lbs/hr</td>
<td>tons/yr</td>
</tr>
<tr>
<td>Uncontrolled</td>
<td>1.95</td>
<td>8.54</td>
<td>1.95</td>
<td>8.54</td>
<td>0.49</td>
<td>2.13</td>
</tr>
<tr>
<td>Controlled</td>
<td>0.19</td>
<td>0.85</td>
<td>0.19</td>
<td>0.85</td>
<td>0.05</td>
<td>0.23</td>
</tr>
</tbody>
</table>

#### Notes:
1. PM/PM10/PM2.5 emission factor is provided by the source and is based on test results from other similar plants (White Energy, Russel, Kansas)
2. NOx emissions are based on AP 42 Emission Factors, Table 1.4-1
3. SO2 emission factor is provided by the source and is based on test results from similar plants (Glacial Lakes Energy, Watertown, SD)
4. CO Emissions are based on RTO bed temperature of 1600 degrees Fahrenheit.
5. VOC Emissions are based on lb/hr limit requested in SPM 141-40928-00033
6. Control Efficiencies are based on control efficiencies assumed for similar plants (Permit Nos. 169-37835-00068, 135-38178-00033, 107-38517-00061)

### Controlled PTE (tons/yr)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM10</th>
<th>PM10</th>
<th>SO2</th>
<th>NOx</th>
<th>CO</th>
<th>HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</td>
<td>0.0035</td>
<td>0.0322</td>
<td>0.02</td>
<td>0.0225</td>
<td>0.02</td>
<td>0.16</td>
</tr>
<tr>
<td>Units</td>
<td>lbs/ton</td>
<td>tons/yr</td>
<td>lbs/ton</td>
<td>tons/yr</td>
<td>lbs/ton</td>
<td>tons/yr</td>
</tr>
<tr>
<td>Uncontrolled</td>
<td>6.82</td>
<td>29.88</td>
<td>62.76</td>
<td>274.68</td>
<td>34.89</td>
<td>152.61</td>
</tr>
<tr>
<td>Controlled</td>
<td>0.14</td>
<td>0.60</td>
<td>1.26</td>
<td>5.50</td>
<td>0.70</td>
<td>3.06</td>
</tr>
</tbody>
</table>

#### Notes:
1. HAPs emission factors are based on March 2017 testing completed at South Bend Ethanol

### HAPs emissions from combustion of natural gas and process emissions at other gas fired equipment

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Formaldehyde</th>
<th>Acetaldehyde</th>
<th>Acrolein</th>
<th>Methanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</td>
<td>0.0322</td>
<td>0.02</td>
<td>0.025</td>
<td>0.0035</td>
</tr>
<tr>
<td>Units</td>
<td>lbs/ton</td>
<td>tons/yr</td>
<td>lbs/ton</td>
<td>tons/yr</td>
</tr>
<tr>
<td>Uncontrolled</td>
<td>6.82</td>
<td>29.88</td>
<td>62.76</td>
<td>274.68</td>
</tr>
<tr>
<td>Controlled</td>
<td>0.14</td>
<td>0.60</td>
<td>1.26</td>
<td>5.50</td>
</tr>
</tbody>
</table>

#### Notes:
1. HAPs emission factors are based on March 2017 testing completed at South Bend Ethanol

### Methodology:

- Uncontrolled PTE (tons/yr) = Uncontrolled Emission Factor (lbs/ton DDGS) x Annual DDGS Production Limit (tons/yr) / 2000 (lbs/ton).
- Controlled PTE (tons/yr) = Controlled Emission Factor (lbs/ton DDGS) x Annual DDGS Production Limit (tons/yr) / 2000 (lbs/ton).
- Uncontrolled PTE (tons/hr) = Controlled PTE (tons/yr)/(1-Control Efficiency).
- Controlled PTE (tons/hr) = Controlled Emission Rate (tons/hr) x (1-Control Efficiency).
- Controlled PTE (tons/MMBtu) = Controlled PTE (tons/hr) / 8,760 (hrs).
- HAPs emissions from combustion of natural gas and process emissions at other gas fired equipment:
  - Uncontrolled PTE (tons/hr) = Uncontrolled Emission Rate (tons/hr) x (1-Control Efficiency).
  - Controlled PTE (tons/hr) = Controlled Emission Rate (tons/hr) x (1-Control Efficiency).
  - Controlled PTE (tons/MMBtu) = Controlled PTE (tons/hr) / 8,760 (hrs).
Appendix A: Emission Calculations

Loadout/ Ethanol Loading

Company Name:  South Bend Ethanol LLC
Address City N Zip: 3201 W. Calvert, South Bend, IN 46613
Minor Source Modification No.: 141-4270-00033
Significant Permit Modification: 141-4272-00033
Reviewer: Travis Flock

Emission Factors: AP-42, Section 5.2, June 2008

Denatured ethanol will be shipped by either truck loading or railcar loading rack. Both railcars and trucks will be filled by submerged loading process. The truck and railcars will be used to deliver natural gas to the source, and will then be filled with ethanol. Both loadout operations will be controlled by a flare (G-602), which has a control efficiency of 98% for VOC and HAPs. The calculations do not differentiate undenatured, ethanol from denatured ethanol loaded. Denatured ethanol loaded would result in greater emissions and these calculations conservatively assume that all ethanol loaded out is denatured ethanol. Truck/rails will be delivering natural gas to the source.

According to AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids (06/08), the VOC emission factors for the truck and rail loading racks can be estimated from the following equation:

\[ L = 12.46 \times \left( S \times P \times M \right) \times T \]

where:
- \( L \) = loading loss (lb/kgal)
- \( S \) = a saturation factor (see AP-42, Table 5.2-1)
- \( P \) = true vapor pressure of the liquid loaded (psia)
- \( M \) = molecular weight of vapors
- \( T \) = temperature of the bulk liquid loaded (degree R)

Previous Stored Liquid

<table>
<thead>
<tr>
<th>%</th>
<th>P (psia)</th>
<th>M (lbs/mole lbs)</th>
<th>T (degree R)</th>
<th>L (lb/kgal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denatured Ethanol (clean cargo)</td>
<td>0.5</td>
<td>0.0208</td>
<td>66</td>
<td>529.19</td>
</tr>
<tr>
<td>Denatured Ethanol (clean cargo)</td>
<td>0.5</td>
<td>0.059</td>
<td>41.83</td>
<td>529.19</td>
</tr>
</tbody>
</table>

Limited Emission Rate (lb/yr) 0 0 0 0 1756 0 8003 0

Limited Emissions 3.33E-03 3.33E-03 3.33E-03 2.63E-04 1.95 5.28 8.73 0.00

Notes:
- Emissions Uncontrolled (lb/hr) = Emissions Uncontrolled (TPY) x 8760 hr/yr
- Emissions Controlled (lb/hr) = Emissions Uncontrolled (lb/hr) x (1 - Control Efficiency)
- The source has stated that natural gasoline is delivered to the source, however, to achieve a more conservative estimate of loading loss emissions, gasoline is used to calculate loading losses.
- **98% Control Efficiency achieved from the flare control device.

3. Combustion Emissions During Truck Loading

PM/PM-10 is negligible based on smokeless design

Pilot operated 8760 hrs/yr

Rate 6.4 MMBtu/hr

Heating Value 850 Btu/ft³

Operating time 8760 hrs/yr

Limited Operating Time 4034 hrs/yr

Pilot 0.1 MMBtu/hr

PM PM10 PM2.5 SO2 NOX VOC CO HAP

Emission Factors (waste gas only)

| Source Specific Emission Factors |
|---|---|---|---|---|---|---|---|
| Denatured Ethanol loaded out via truck |

Notes:
- Emission Factors (waste gas only) = Emission Factor (kgal)
- Emissions Uncontrolled (lb/hr) = Emissions Uncontrolled (TPY) x 8760 hr/yr
- Emissions Controlled (lb/hr) = Emissions Uncontrolled (lb/hr) x (1 - Control Efficiency)

4. Pilot Emissions

Emission Factors (AP-42, Table 1.4)

| Emission Factors Note |
|---|---|---|---|---|---|---|

| Emission Factor Note |
|---|---|---|---|---|---|

Emission Rate (lb/yr) 3.33E-03 3.33E-03 3.33E-03 2.63E-04 0.04 2.41E-03 0.04 0

5. Flare Emission Summary

Potential to Emit HAPs from Loading of Trucks, using gasoline as a conservative estimate for trucks which may have been used for shipping gasoline previously:

<table>
<thead>
<tr>
<th>HAP</th>
<th>HAP Fraction</th>
<th>PTE of HAP Before Control (TPY)</th>
<th>PTE of HAP After Control (TPY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>0.0025</td>
<td>3.46</td>
<td>0.009</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>0.0009</td>
<td>0.089</td>
<td>0.001</td>
</tr>
<tr>
<td>Cumene</td>
<td>0.0001</td>
<td>0.016</td>
<td>0.003</td>
</tr>
<tr>
<td>Xylenes</td>
<td>0.0005</td>
<td>0.09</td>
<td>0.014</td>
</tr>
<tr>
<td>Toluene</td>
<td>0.005</td>
<td>0.93</td>
<td>0.136</td>
</tr>
<tr>
<td>Carbon Disulfide</td>
<td>0.0002</td>
<td>0.028</td>
<td>0.001</td>
</tr>
<tr>
<td>Hexane</td>
<td>0.05</td>
<td>68.27</td>
<td>1.360</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>0.0002</td>
<td>0.26</td>
<td>0.009</td>
</tr>
<tr>
<td>Methanol</td>
<td>0.0002</td>
<td>0.26</td>
<td>0.009</td>
</tr>
</tbody>
</table>

Total 81.14 1.62
### A. Potential to Emit (uncontrolled)

1. Two (2) natural gas fired boilers, identified as EU-16 and EU-17, approved for construction in 2018, with a maximum heat capacity of 220 MMBtu/hr each.
2. One (1) natural gas fired rental boiler, identified as EU-21, constructed in 2014, with a heat input capacity of 99.5 MMBtu/hr.

#### Unit ID | Heat Capacity (MMBtu/hr)
---|---
EU-16 | 220
EU-17 | 220
EU-21 | 99.5
**Total** | **539.5**

#### Heat Input Capacity | HHV | Potential Throughput
---|---|---
| MMBtu/hr | mmBtu/mmscf | MMCF/yr
---|---|---
EU-15, EU-16 | 440.0 | 3778.8
EU-21 | 99.5 | 854.5
**Total** | **539.5** | **4633.4**

#### AP-42 Emission Factor (lb/mmcf)

<table>
<thead>
<tr>
<th>Source Specific Emission Factor (lb/MMBtu)</th>
<th>EU-16, EU-17</th>
<th>11.1</th>
<th>22.2</th>
<th>1.7</th>
<th>0.6</th>
<th>0.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Specific Emission Factor (lb/MMBtu)</td>
<td>EU-21</td>
<td>11.1</td>
<td>22.2</td>
<td>1.7</td>
<td>0.6</td>
<td>0.04</td>
</tr>
</tbody>
</table>

#### Potential Emission in tons/yr (AP-42)

<table>
<thead>
<tr>
<th>Potential Emission in tons/yr (AP-42)</th>
<th>EU-16, EU-17</th>
<th>11.1</th>
<th>22.2</th>
<th>1.7</th>
<th>0.6</th>
<th>0.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Emission in tons/yr (AP-42)</td>
<td>EU-21</td>
<td>11.1</td>
<td>22.2</td>
<td>1.7</td>
<td>0.6</td>
<td>0.04</td>
</tr>
</tbody>
</table>

#### Methodology

1. PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM combined.
2. Low NOx burners are rated at 0.04 lb/MMBtu vendor guarantee plus safety factor.
3. Low NOx burners are rated at 0.133 lb/MMBtu per SSM/SPM Nos. 141-34355-00033 & 141-34359-00033, which it passed within 180 of initial startup in 2015 (ACES ID 194345).
4. Unit EU-21 was tested to meet compliance for a unit rated at 51.00 lb/MMcf per SSM/SPM Nos. 141-34355-00033 & 141-34359-00033, which it passed within 180 of initial startup in 2015 (ACES ID 194348).

### B. Hazardous Air Pollutants, Uncontrolled Potential to Emit

#### Potential Throughput (MMCF/yr)

<table>
<thead>
<tr>
<th>Unit</th>
<th>MMCF/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-21</td>
<td>854.5</td>
</tr>
<tr>
<td>EU-16 &amp; 17</td>
<td>3778.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4633.5</strong></td>
</tr>
</tbody>
</table>

#### HAPs - Organics

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMcf</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total Organic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Emission in tons/yr</td>
<td>4.87E-03</td>
<td>2.78E-03</td>
<td>1.74E-01</td>
<td>4.17</td>
<td>7.58E-03</td>
<td>1.38E+00</td>
</tr>
</tbody>
</table>

#### HAPs - Metals

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMcf</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total Metal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.16E-03</td>
<td>2.59E-03</td>
<td>2.24E-03</td>
<td>5.85E-04</td>
<td>4.87E-03</td>
<td>1.27E-02</td>
</tr>
</tbody>
</table>

#### Methodology

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.
C. Emission Limitations

1. Two (2) natural gas fired boilers, identified as EU-16 and EU-17, approved for construction in 2018, with a maximum heat capacity of 220 MMBtu/hr each.

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Heat Capacity (MMBtu/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-16</td>
<td>220</td>
</tr>
<tr>
<td>EU-17</td>
<td>220</td>
</tr>
<tr>
<td>Total</td>
<td>440</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>HHV</th>
<th>Potential Throughput</th>
<th>Limited Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MMBtu/hr</td>
<td>mmBtu/mmscf</td>
<td>MCF/yr</td>
</tr>
<tr>
<td>EU-16 &amp; EU-17</td>
<td>440</td>
<td>1020</td>
<td>3778.8</td>
</tr>
</tbody>
</table>

Potential Emission for EU-16, 17

<table>
<thead>
<tr>
<th>Units</th>
<th>PM0</th>
<th>PM10</th>
<th>direct PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Specific Emission Factor (lb/MMBtu)</td>
<td>1.9</td>
<td>7.6</td>
<td>7.6</td>
<td>0.6</td>
<td>146.0</td>
<td>5.5</td>
<td>24.0</td>
</tr>
<tr>
<td>Source Specific Emission Factor (lb/MMcf)</td>
<td>40.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential Emission in tons/yr (AP-42)</td>
<td>3.17</td>
<td>12.68</td>
<td>12.68</td>
<td>1.00</td>
<td>233.59</td>
<td>9.18</td>
<td>140.15</td>
</tr>
<tr>
<td>Potential Emission in tons/yr (source-specific)</td>
<td>67.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
2. PM2.5 emission factor is condensable and filterable PM2.5 combined.
3. Low NOx burners are rated at 0.04 lb/MMBtu vendor guarantee plus safety factor.
4. Unit EU-21 was tested to meet compliance for a unit rated at 0.133 lb/MMBtu per SSM/SPM Nos. 141-34355-00033 & 141-34359-00033, which it passed within 180 days of initial startup in 2015 (ACES ID 194248).

Potential Throughput (MMCF/yr)

| EU-16 & EU-17 | 3337.00 |
| Total | 3337.00 |

Potential Emission in tons/yr

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMBtu</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Specific Emission Factor</td>
<td>2.1E-03</td>
<td>1.2E-03</td>
<td>7.5E-02</td>
<td>1.8E+00</td>
<td>3.4E-03</td>
<td>3.14E+00</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>3.50E-03</td>
<td>2.08E-03</td>
<td>1.25E-01</td>
<td>3.08E+00</td>
<td>5.67E-03</td>
<td>3.14E+00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMcf</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Specific Emission Factor</td>
<td>3.4E-04</td>
<td>1.84E-03</td>
<td>2.34E-03</td>
<td>3.64E-04</td>
<td>3.90E-03</td>
<td>3.14E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>3.34E-03</td>
<td>2.86E-03</td>
<td>2.34E-03</td>
<td>3.64E-04</td>
<td>3.90E-03</td>
<td>3.14E-03</td>
</tr>
</tbody>
</table>

Total HAPs: 3.15

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Page 15 of 21 TSD App A
Appendix A: Emission Calculations

Corn Oil Recovery

Company Name: South Bend Ethanol LLC
Address City IN Zip: 3201 W. Calvert, South Bend, IN 46613
Minor Source Modification No.: 141-41210-00033
Significant Permit Modification 141-42172-00033
Reviewer: Travis Flock

Storage (VOCs)

<table>
<thead>
<tr>
<th>Basis: Tanks 4.09 software (VOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stored</td>
</tr>
<tr>
<td>Liquid             lbs/yr</td>
</tr>
<tr>
<td>Corn Oil Tk #1  68.22</td>
</tr>
<tr>
<td>Corn Oil Tk #2  68.22</td>
</tr>
<tr>
<td>Total VOCs          136.44    0.07</td>
</tr>
</tbody>
</table>

VOC emissions from Corn Oil Loading (Truck)

Emissions are based on 100% of product shipped out by truck (or rail)

Truck Loadout:

Loading Operations Basis: Calculated from AP-42, Section 5.2.2 - Loading Losses
Equation: 12.46*S*P*M/T
where: S 0.6 Saturation factor (submerged)
From Tanks 4.09 P 0.0093 Vapor pressure (average psia)
M 96.09 Molar Mass (lb/lb-mole)
From Tanks 4.09, average temp T 509.71 Product Temp (deg R)
AP-42 Factor: 0.013 lb/1000 gal
Losses calculated using this factor multiplied by loading rates:
Corn Oil Loadout rate: 4,600,000 gal/yr
VOC Loading losses 60.29 lb/yr, uncontrolled
VOC Loading losses 0.03 tons/yr, uncontrolled

Fugitive Emissions (VOCs)

Basis: Leak Rate (SOCMI average) multiplied by no. of components
Component counts based on a similar sized facility
Leak Rates and VOC control from: Protocol for Leak Emission
Rates EPA-453/R-95-017, November 1995

<table>
<thead>
<tr>
<th>Equipment</th>
<th>#</th>
<th>Leak Rate (lb/hr/source)</th>
<th>VOC lb/hr</th>
<th>VOC tpy</th>
<th>LDAR Con VOC percent tpy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Liquid Valves</td>
<td>7</td>
<td>0.00403</td>
<td>0.062</td>
<td>0.272</td>
<td>84 0.044</td>
</tr>
<tr>
<td>Light Liquid Pumps</td>
<td>4</td>
<td>0.0199</td>
<td>0.175</td>
<td>0.768</td>
<td>69 0.238</td>
</tr>
<tr>
<td>Gas Valves</td>
<td>0</td>
<td>0.00097</td>
<td>0.000</td>
<td>0.000</td>
<td>87 0.000</td>
</tr>
<tr>
<td>Flanges (connectors)</td>
<td>15</td>
<td>0.00183</td>
<td>0.060</td>
<td>0.265</td>
<td>0 0.265</td>
</tr>
<tr>
<td>Total Fugitive Components</td>
<td>26</td>
<td></td>
<td>Uncontrolled</td>
<td>1.305</td>
<td>Controlled 0.546</td>
</tr>
</tbody>
</table>

Total Corn Oil Extraction, Storage, Loading, Fugitives Components VOCs: 0.64 tons/yr controlled
1.40 tons/yr uncontrolled
### Natural Gas Combustion Only for Two (2) RTOs

#### Company Name:
South Bend Ethanol LLC

#### Address City IN Zip:
3201 W. Calvert, South Bend, IN 46613

#### Minor Source Modification No.:
141-41210-00033

#### Significant Permit Modification No.:
141-42172-00033

#### Reviewer:
Travis Flock

#### Emissions Calculations

<table>
<thead>
<tr>
<th>Unit IDs</th>
<th>Number of Units</th>
<th>Heat Capacity (MMBtu/hr)</th>
<th>Total Heat Capacity (MMBtu/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTO-1 &amp; 2</td>
<td>2</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>SH-1 - 4</td>
<td>4</td>
<td>0.55</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18.2</strong></td>
<td></td>
<td><strong>18.2</strong></td>
</tr>
</tbody>
</table>

#### Pollutant Emissions

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>1.9</td>
<td>7.6</td>
<td>7.6</td>
<td>0.6</td>
<td>100</td>
<td>5.5</td>
<td>84</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.1</td>
<td>0.6</td>
<td>0.6</td>
<td>4.09E-02</td>
<td>7.6</td>
<td>0.4</td>
<td>6.6</td>
</tr>
</tbody>
</table>

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

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

#### Methodology

All emission factors are based on normal firing.

- MMBtu = 1,000,000 Btu
- MMCF = 1,000,000 Cubic Feet of Gas
- Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
- 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

#### HAPS Calculations

**HAPs - Organics**

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Dichlorobenzene</td>
<td>1.2E-03</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.5E-02</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.8E+00</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.4E-03</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1.471E-01</strong></td>
</tr>
</tbody>
</table>

**HAPs - Metals**

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>Total - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>5.0E-04</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.1E-03</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
</tr>
<tr>
<td>Manganese</td>
<td>3.8E-04</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.1E-03</td>
</tr>
<tr>
<td><strong>Total HAPs</strong></td>
<td><strong>4.283E-04</strong></td>
</tr>
</tbody>
</table>

Worst HAP = **1.467E-01**

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: South Bend Ethanol LLC
Address City IN Zip: 3201 W. Calvert, South Bend, IN 46613
Minor Source Modification No.: 141-41219-00033
Significant Permit Modification 141-42172-00033
Reviewer: Travis Flock

A. Emissions calculated based on heat input capacity (MMBtu/hr)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMBtu</td>
<td>0.31</td>
<td>0.31</td>
<td>0.31</td>
<td>0.29</td>
<td>4.41</td>
<td>0.36</td>
<td>0.95</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.70</td>
<td>0.06</td>
<td>0.15</td>
</tr>
</tbody>
</table>

*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)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Toluene</th>
<th>Xylene</th>
<th>1,3-Butadiene</th>
<th>Formaldehyde</th>
<th>Acetaldehyde</th>
<th>Acrolein</th>
<th>Total PAH HAPs***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.47E-04</td>
<td>6.45E-05</td>
<td>4.50E-05</td>
<td>6.17E-06</td>
<td>1.86E-04</td>
<td>1.21E-04</td>
<td>1.46E-05</td>
<td>2.65E-05</td>
</tr>
</tbody>
</table>

Potential Emission of Total HAPs (tons/yr) 6.11E-04
Appendix A: Emission Calculations

Tank Emissions

Company Name: South Bend Ethanol LLC
Address City IN Zip: 3201 W. Calvert, South Bend, IN 46613
Minor Source Modification No.: 141-41210-00033
Significant Permit Modification 141-42172-00033
Reviewer: Travis Flock

<table>
<thead>
<tr>
<th>Tank ID</th>
<th>Contents</th>
<th>Maximum Capacity (gal)</th>
<th>Turnovers/yr</th>
<th>Throughput (gal)</th>
<th>Rim Seal Loss (lbs/yr)</th>
<th>Withdrawal Loss (lbs/yr)</th>
<th>Deck Fitting Loss (lbs/yr)</th>
<th>Deck Seam Loss (lbs/yr)</th>
<th>Total Loss (lbs/yr)</th>
<th>Total Loss (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-601</td>
<td>Gasoline</td>
<td>75,000</td>
<td>200</td>
<td>15,000,000</td>
<td>846.07</td>
<td>118.16</td>
<td>669.81</td>
<td>0</td>
<td>1634.03</td>
<td>0.82</td>
</tr>
<tr>
<td>T-602</td>
<td>CornPro(^2)</td>
<td>9,000</td>
<td>2.32</td>
<td>20,890</td>
<td>&lt;.01</td>
<td>&lt;.01</td>
<td>&lt;.01</td>
<td>&lt;.01</td>
<td>&lt;.01</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>T-610</td>
<td>Ethanol</td>
<td>750,000</td>
<td>50</td>
<td>37,500,000</td>
<td>195.02</td>
<td>121.43</td>
<td>110.63</td>
<td>0</td>
<td>427.08</td>
<td>0.21</td>
</tr>
<tr>
<td>T-611</td>
<td>Denatured</td>
<td>1,250,000</td>
<td>20</td>
<td>62,500,000</td>
<td>195.02</td>
<td>202.38</td>
<td>110.63</td>
<td>0</td>
<td>508.03</td>
<td>0.25</td>
</tr>
<tr>
<td>T-612</td>
<td>Ethyl Alcohol</td>
<td>75,000</td>
<td>1228</td>
<td>92,100,000</td>
<td>69.5</td>
<td>889.88</td>
<td>25.76</td>
<td>0</td>
<td>985.14</td>
<td>0.49</td>
</tr>
</tbody>
</table>

Notes:
1. From TANKS 4.0.9d calculation provided by the source, beer 17.50% ethanol by weight.
2. T-602 contents incorrectly identified as corn oil in TSD App A, TVOP Renewal No. T141-39515-00033, issued November 26, 2018, contents were correctly identified in the permit.

Hazardous Air Pollutants

<table>
<thead>
<tr>
<th></th>
<th>Benzene</th>
<th>Cumene</th>
<th>n-Hexane</th>
<th>Toluene</th>
<th>2,2,4-TMP(^1)</th>
<th>Xylenes</th>
<th>Combined HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-601</td>
<td>weight fraction(^*)</td>
<td>9.00E-03</td>
<td>1.00E-03</td>
<td>1.60E-02</td>
<td>1.30E-02</td>
<td>8.00E-03</td>
<td>5.00E-03</td>
</tr>
</tbody>
</table>

Notes:
1. 2,2,4-TMP - 2,2,4-trimethylpentane (iso-octane)
2. Source: Table C-4, "Vapor Profile of Normal Gasoline", Gasoline Distribution Industry (Stage I) - Background Information for Proposed Standards, EPA-453/R-94-002a, January 1994. Other tables in the source list MTBE, which is no longer added to gasoline in the US.

Methodology

\[
PTE \text{ (tons/yr)} = T-601 \text{ VOC PTE x HAP Weight Fraction}\
\]
# Appendix A: Emission Calculations

## Fugitive Components

### LDAR

**Company Name:** South Bend Ethanol LLC  
**Address City IN Zip:** 3201 W. Calvert, South Bend, IN 46613  
**Minor Source Modification No.:** 141-41210-00033  
**Significant Permit Modification:** 141-42172-00033  
**Reviewer:** Travis Flock

### 1. Source-Wide VOC

<table>
<thead>
<tr>
<th>Component</th>
<th>Service Type</th>
<th>Component Count</th>
<th>Emission Factor (kg/hr/source)</th>
<th>Potential to Emit (lb/hr)</th>
<th>(tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valves</td>
<td>Gas/vapor</td>
<td>98</td>
<td>5.91E-03</td>
<td>1.29</td>
<td>5.65</td>
</tr>
<tr>
<td>Light liquid</td>
<td></td>
<td>627</td>
<td>4.03E-03</td>
<td>1.57</td>
<td>24.40</td>
</tr>
<tr>
<td>Connectors</td>
<td>Gas/vapor</td>
<td>385</td>
<td>1.83E-03</td>
<td>1.55</td>
<td>6.80</td>
</tr>
<tr>
<td>Light liquid</td>
<td></td>
<td>2267</td>
<td>1.83E-03</td>
<td>9.15</td>
<td>40.07</td>
</tr>
<tr>
<td>Pump &amp; agitator seals</td>
<td>Light liquid</td>
<td>46</td>
<td>1.99E-02</td>
<td>2.02</td>
<td>8.44</td>
</tr>
<tr>
<td>Pressure relief valves</td>
<td>Gas/vapor</td>
<td>19</td>
<td>1.04E-01</td>
<td>4.36</td>
<td>19.06</td>
</tr>
</tbody>
</table>

**Total Uncontrolled Uncontrolled** 23.94 104.85

**Total After Control (LDAR Program)** Control efficiency 85%  15.73

**Notes:**
1. Includes existing component counts provided in February 22, 2019 email from the source and new components from section 3 below.
2. Emission factor source *Protocol for Equipment Leak Emission Estimates*, EPA-453/R-95-017, November 1995), Table 2-1
3. Source estimates an average LDAR control efficiency of 85% using SOCMI screening range emission factors and contracted inspection results.

### 2. Source-Wide Hazardous Air Pollutants

<table>
<thead>
<tr>
<th>HAP</th>
<th>Weight Percent</th>
<th>PTE Uncontrolled (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
<td>0.02%</td>
<td>1.77E-02</td>
</tr>
<tr>
<td>Acrolein</td>
<td>0.02%</td>
<td>2.10E-02</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.02%</td>
<td>2.10E-02</td>
</tr>
<tr>
<td>Methanol</td>
<td>0.45%</td>
<td>0.47</td>
</tr>
<tr>
<td>Total</td>
<td>0.51%</td>
<td>0.53</td>
</tr>
</tbody>
</table>

**Notes:**
1. HAP fraction derived from stack testing of typical Fermentation Scrubber

### 3. E85 Skid VOC for Modification T141-40928-00033

<table>
<thead>
<tr>
<th>Component</th>
<th>Service Type</th>
<th>Component Count</th>
<th>Emission Factor (kg/hr/source)</th>
<th>Potential to Emit (lb/hr)</th>
<th>(tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valves</td>
<td>Gas/vapor</td>
<td>1</td>
<td>5.97E-03</td>
<td>1.32E-02</td>
<td>5.77E-02</td>
</tr>
<tr>
<td>Light liquid</td>
<td></td>
<td>10</td>
<td>4.03E-03</td>
<td>8.89E-02</td>
<td>0.39</td>
</tr>
<tr>
<td>Connectors</td>
<td>Gas/vapor</td>
<td>6</td>
<td>1.83E-03</td>
<td>2.42E-02</td>
<td>0.11</td>
</tr>
<tr>
<td>Light liquid</td>
<td></td>
<td>31</td>
<td>1.83E-03</td>
<td>0.13</td>
<td>0.55</td>
</tr>
<tr>
<td>Pump &amp; agitator seals</td>
<td>Light liquid</td>
<td>1</td>
<td>1.99E-02</td>
<td>4.39E-02</td>
<td>0.19</td>
</tr>
<tr>
<td>Pressure relief valves</td>
<td>Gas/vapor</td>
<td>1</td>
<td>1.04E-01</td>
<td>0.23</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Total** 0.52 2.30

**Notes:**
1. Component count based on fraction of components in loadout service provided in February 22, 2019 email and count of 50 LDAR components in new skid provided by equipment supplier reported in March 7, 2019 email.
2. Emission factor source *Protocol for Equipment Leak Emission Estimates*, EPA-453/R-95-017, November 1995), Table 2-1
3. Source estimates an average LDAR control efficiency of 85% using SOCMI screening range emission factors and contracted inspection results.

### 4. E85 Skid Hazardous Air Pollutants for Modification T141-40928-00033

<table>
<thead>
<tr>
<th>HAP</th>
<th>Weight Percent</th>
<th>PTE Uncontrolled (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>0.27%</td>
<td>6.20E-03</td>
</tr>
<tr>
<td>Cumene</td>
<td>0.08%</td>
<td>1.72E-03</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>0.21%</td>
<td>4.82E-03</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>0.15%</td>
<td>3.45E-03</td>
</tr>
<tr>
<td>Toluene</td>
<td>1.05%</td>
<td>2.41E-02</td>
</tr>
<tr>
<td>2,2,4-TMP</td>
<td>0.60%</td>
<td>1.38E-02</td>
</tr>
<tr>
<td>Styrenes</td>
<td>1.09%</td>
<td>2.41E-02</td>
</tr>
</tbody>
</table>

**Total** 3.41% 7.82E-02

**Notes:**
2. HAP content of product ethanol after distillation is considered negligible.
### Appendix A: Emission Calculations

**Fugitive Dust Emissions - Paved Roads**

**IDEM PTE**

**Company Name:** South Bend Ethanol LLC  
**Address City IN Zip:** 3201 W. Calvert, South Bend, IN 46613  
**Minor Source Modification No.:** 141-41210-00033  
**Significant Permit Modification:** 141-42172-00033  
**Reviewer:** Travis Flock  

#### 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 Information (provided by source)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Maximum number of vehicles per day</th>
<th>Number of one way trips per vehicle</th>
<th>Maximum trips per day (trip/day)</th>
<th>Maximum Weight Loaded (ton/trip)</th>
<th>Total Weight driven per day (ton/day)</th>
<th>Maximum one way distance (miles/day)</th>
<th>Maximum one way miles (miles/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn Oil Truck Leaving (full)</td>
<td>1.68</td>
<td>1.0</td>
<td>1.7</td>
<td>40.0</td>
<td>67.2</td>
<td>2640</td>
<td>0.500</td>
</tr>
<tr>
<td>Corn Oil Truck Entering (empty)</td>
<td>1.68</td>
<td>1.0</td>
<td>1.7</td>
<td>15.0</td>
<td>25.2</td>
<td>2640</td>
<td>0.500</td>
</tr>
<tr>
<td>Denaturant</td>
<td>0.70</td>
<td>1.0</td>
<td>0.7</td>
<td>40.0</td>
<td>28.0</td>
<td>2640</td>
<td>0.500</td>
</tr>
<tr>
<td>Denaturant</td>
<td>0.70</td>
<td>1.0</td>
<td>0.7</td>
<td>15.0</td>
<td>10.6</td>
<td>2640</td>
<td>0.500</td>
</tr>
<tr>
<td>Denaturant Ethanol</td>
<td>35.20</td>
<td>1.0</td>
<td>35.2</td>
<td>40.0</td>
<td>1498.0</td>
<td>2640</td>
<td>0.500</td>
</tr>
<tr>
<td>Denaturant Ethanol</td>
<td>35.20</td>
<td>1.0</td>
<td>35.2</td>
<td>15.0</td>
<td>528.0</td>
<td>2640</td>
<td>0.500</td>
</tr>
<tr>
<td>DDGS Leaving (Full)</td>
<td>37.42</td>
<td>1.0</td>
<td>37.4</td>
<td>40.0</td>
<td>1498.0</td>
<td>2640</td>
<td>0.500</td>
</tr>
<tr>
<td>DDGS entering (empty)</td>
<td>37.42</td>
<td>1.0</td>
<td>37.4</td>
<td>15.0</td>
<td>561.3</td>
<td>2640</td>
<td>0.500</td>
</tr>
</tbody>
</table>

#### Methodology

- **Maximum one-way distance (mi/trip)**: SUM(Maximum one-way miles (miles/day) / SUM(Maximum trips per day (trip/day))
- **Average Vehicle Weight Per Trip (ton/trip)**: Average Vehicle Weight Per Trip (ton/day) / SUM(Maximum trips per day (trip/day))
- **Unmitigated Emission Factor, Ef = 0.353 0.071 0.0173 lb/mile**
- **Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]**
- **Dust Control Efficiency = 50% 50% 50% (pursuant to control measures outlined in fugitive dust control plan)**

#### Calculations

**Unmitigated PTE of PM**

- **Road Dust Emission Factor**: 
  
  \[
  PM = k \cdot sL \cdot W \cdot \text{Average Vehicle Weight Per Trip} \cdot \text{Average Miles Per Trip}
  \]

  where
  - \( k = 0.97 \) 0.96 0.96
  - \( sL = 1.1 \) 1.1 1.1
  - \( W = 27.5 \) 27.5 27.5

**Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]**

- **Mitigated PTE of PM**: 
  
  \[
  \text{Mitigated PTE} = \text{Unmitigated PTE} \cdot \text{Mitigated Emission Factor}
  \]

\[ \text{Unmitigated PTE of PM} = 418.8 \text{ tons/yr} \]

\[ \text{Mitigated PTE of PM} = 205.4 \text{ tons/yr} \]

**Addresses and Company Name**

- **Address**: 3201 W. Calvert, South Bend, IN 46613  
- **Company Name**: South Bend Ethanol LLC  
- **Permit Number**: 141-41210-00033  
- **Reviewer**: Travis Flock  

**IDEM PTE**

- **Total Unmitigated PTE of PM**: 418.8 tons/yr
- **Total Mitigated PTE of PM**: 205.4 tons/yr

---

**Abbreviations**

- PM = Particulate Matter  
- PM10 = Particulate Matter (<10 um)  
- PM2.5 = Particulate Matter (<2.5 um)  
- PTE = Potential to Emit
January 6, 2020

Katrina Gilbank  
South Bend Ethanol LLC  
3201 W Calvert St  
South Bend, IN  46613

Re: Public Notice  
South Bend Ethanol LLC  
Permit Level: Title V Significant Permit Modification  
Permit Number: 141-42172-00033

Dear Ms. Gilbank:

Enclosed is a copy of your draft Title V Significant Permit Modification, Technical Support Document, emission calculations, and the Public Notice.

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](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 St. Joseph County Public Library, 304 South Main Street in South Bend, IN 46601. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Travis Flock, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 3-1782 or dial (317) 233-1782.

Sincerely,

Ashley Estes  
Ashley Estes  
Permits Branch  
Office of Air Quality

Enclosures  
PN Applicant Cover Letter 4/12/19
January 6, 2020

To: St Joseph County 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: South Bend Ethanol, LLC
Permit Number: 141-42172-00033

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 Smiddle-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
Notice of Public Comment

January 6, 2020
South Bend Ethanol, LLC
141-42172-00033

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 Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.

Enclosure
PN AAA Cover Letter 4/12/2019
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<th>Insured Value</th>
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<th>S.D. Fee</th>
<th>S.H. Fee</th>
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<tbody>
<tr>
<td>1 Katrina Gilbank</td>
<td>South Bend Ethanol LLC 3201 W Calvert St South Bend IN 46613 (Source CAATS)</td>
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<tr>
<td>2 Boris Bystrov</td>
<td>Vice President South Bend Ethanol LLC 3201 W Calvert St South Bend IN 46613 (RO CAATS)</td>
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<tr>
<td>3 Mr. Wayne Falda</td>
<td>South Bend Tribune 255 W Colfax Ave South Bend IN 46626 (Affected Party)</td>
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<td>4 South Bend City Council</td>
<td>227 West Jefferson Blvd. South Bend IN 46601 (Local Official)</td>
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<tr>
<td>5 St. Joseph County Board</td>
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<td>6 Mark Espich</td>
<td>St. Joseph County Health Department 227 W Jefferson Blvd South Bend IN 46601 (Health Department)</td>
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<tr>
<td>7 St. Joseph County Public</td>
<td>Library 304 South Main Street South Bend IN 46601 (Library)</td>
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<td>8 Jeff Mayes</td>
<td>News-Dispatch 422 Franklin St Michigan City IN 46360 (Library)</td>
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<tr>
<td>9 Mr. Roger Schneider</td>
<td>The Goshen News 114 S. Main St Goshen IN 46526 (Affected Party)</td>
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<tr>
<td>10 Raymond Carr</td>
<td>Messer LLC 3809 W Calvert St South Bend IN 46613 (Source – addl contact)</td>
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