NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding a
Significant Modification and the Renewal of a
Part 70 Operating Permit

for Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant in Wells County

Part 70 Operating Permit Renewal No.: T179-41632-00033
Significant Source Modification No.: 179-41817-00033

The Indiana Department of Environmental Management (IDEM) has received an application from Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant, located at 1441 South Adams St., Bluffton, Indiana 46714, for a significant source modification and renewal of its Part 70 Operating Permit issued on April 8, 2015. If approved by IDEM’s Office of Air Quality (OAQ), this proposed permit would allow Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant to make certain changes at its existing source. Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant has applied to expand production capacity. To facilitate this increase, the fermentation scrubber will be upgraded to increase efficiency (i.e., less demand for fresh water and chemical additives) while providing equivalent or better emission control under the increased production scenario. This upgrade will be accommodated with a recirculation pump that is designed to recover scrubber bottoms and inject it back into the feed header from the beer well to the scrubber. The recirculation pump will allow for variation in scrubber operation, increasing the operational capacity of the fermentation system and allowing for an increase in the overall production rate of denatured ethanol.

This draft permit does not contain any new equipment that would emit air pollutants; however, 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). This notice fulfills the public notice procedures to which those conditions are subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow for these changes.

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

Wells County Public Library
200 W. Washington Street
Bluffton, IN 46714

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.

An Equal Opportunity Employer
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 T179-41632-00033 and SSM 179-41817-00033 in all correspondence.

**Comments should be sent to:**

Andrew Belt  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for Andrew Belt or (317) 232-3217  
Or dial directly: (317) 232-3217  
Fax: (317) 232-6749 attn: Andrew Belt  
E-mail: abelt@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, 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 Andrew Belt of my staff at the above address.

Brian Williams, Section Chief
Permits Branch
Office of Air Quality
Mr. Charles Liapes  
Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
1441 South Adams St.  
Bluffton, IN 46714  

Re: 179-41817-00033  
Significant Source Modification

Dear Mr. Liapes:

Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant was issued Part 70 Operating Permit Renewal No. T179-35207-00033 on April 8, 2015 for a stationary grain elevator and ethanol production plant located at 1441 South Adams St., Bluffton, Indiana 46714. An application to modify the source was received on July 3, 2019. Pursuant to the provisions of 326 IAC 2-7-10.5, a Significant Source Modification is hereby approved as described in the attached Technical Support Document.

Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

(a) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

1. Seven (7) fermenters, identified as EU012 through EU018.
2. One (1) beer well, identified as EU021.
3. One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS4</td>
<td>Scrubber cleaning (per preventative maintenance plan procedure)</td>
</tr>
</tbody>
</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.
DRAFT

(b) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:

1. Two (2) slurry tanks, identified as EU010 and EU011.
2. Two (2) yeast propagation tanks, identified as EU019 and EU020.
3. One (1) beer column, identified as EU022.
4. One (1) rectifier column, identified as EU023.
5. One (1) side stripper, identified as EU024.
6. Three (3) sets of three (3) molecular sieves, identified as EU025.
7. Two (2) sets of four (4) evaporators, identified as EU026.

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

(c) Ethanol and denaturant storage tanks, including the following:

1. One (1) off spec tank for 190-proof ethanol, identified as T65, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons.
2. One (1) tank for 200-proof ethanol, identified as T63, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of 200-proof ethanol.
3. One (1) denatured ethanol tank, identified as T61, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.
4. One (1) denatured ethanol tank, identified as T62, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.
5. One (1) denaturant tank, identified as T64, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 are considered affected facilities.

(d) One (1) DDGS cooling drum, identified as EU033, constructed in 2007, permitted in 2015, and approved in 2019 for modification, with a maximum throughput rate of 66 tons/hr of DDGS, using baghouse C70 as control, with emissions routed to the TO/HRSG systems, and exhausting to stack S70.
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(e) One (1) ethanol loading system, identified as EU037, constructed in 2007, modified in 2010, and approved in 2019 for modification, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr, and exhausting to stack S50.

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

(f) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) corn oil loadout station, constructed in 2010 and approved in 2019 for modification, identified as corn oil loadout, with a maximum throughput rate of 2,500,000 gallons per year.

The following construction conditions are applicable to the proposed modification:

General Construction Conditions

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

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

Effective Date of the Permit

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

Commenced Construction

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(j), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

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

Approval to Construct

6. Pursuant to 326 IAC 2-7-10.5(h)(2), this Significant Source Modification authorizes the construction of the new emission unit(s), when the Significant Source Modification has been issued.
DRAFT

Pursuant to 326 IAC 2-7-10.5(m), the emission units constructed under this approval shall not be placed into operation prior to revision of the source’s Part 70 Operating Permit to incorporate the required operation conditions.

Pursuant to 326 IAC 2-7-12, operation of the new emission unit(s) is not approved until the Significant Permit Modification has been issued. Operating conditions shall be incorporated into the Part 70 Operating Permit as a Significant Permit Modification in accordance with 326 IAC 2-7-10.5(m)(2) and 326 IAC 2-7-12 (Permit Modification).

For the purposes of this permitting action, the Significant Permit Modification has been combined with the current Part 70 Operating Permit Renewal. Therefore, operation is not approved until the Part 70 Operating Permit Renewal has been issued.

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 Andrew Belt, 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) 232-3217 or (800) 451-6027, and ask for Andrew Belt or (317) 232-3217.

Sincerely,

Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Attachments: Significant Source Modification and Technical Support Document

cc: File - Wells County
Wells County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
Significant Source Modification

to a Part 70 Source

OFFICE OF AIR QUALITY

Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
1441 South Adams St.
Bluffton, Indiana 46714

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

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. This permit also addresses certain new source review requirements for new and/or existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

<table>
<thead>
<tr>
<th>Significant Source Modification No.:</th>
<th>179-41817-00033</th>
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<tr>
<td>Master Agency Interest ID.:</td>
<td>57466</td>
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<th>Issued by:</th>
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<tr>
<td>Brian Williams, Section Chief</td>
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<tr>
<td>Permits Branch</td>
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<tr>
<td>Office of Air Quality</td>
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| Issuance Date:                       |
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SECTION A

SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary grain elevator and ethanol production plant.

| Source Address: | 1441 South Adams St., Bluffton, Indiana 46714 |
| General Source Phone Number: | (260) 846-0011 |
| SIC Code: | 2869 (Industrial Organic Chemicals, Not Elsewhere Classified) |
| County Location: | Wells |
| 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 |

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

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

(a) One (1) grain receiving and handling operation, constructed in 2007, using baghouse C20 as control, exhausting to stack S20, and consisting of the following:

(1) Three (3) grain receiving pits, identified as EU001, each with a maximum throughput rate of 20,000 bushels of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, modified in 2013, each with a maximum throughput rate of 20,000 bushels of corn per hour, with the conveying system.

(3) Two (2) grain silos, identified as EU003, each with a total maximum capacity of 500,000 bushels, and each with a maximum throughput rate of 40,000 bushels of corn per hour.

(b) One (1) permanent grain storage bin, identified as EU003a, constructed in 2013, with a maximum capacity of 576,222 bushels of corn and a maximum throughput rate of 40,000 bushels of corn per hour, with emissions uncontrolled.

(c) Two (2) corn scalpers, identified as EU004, each with a maximum throughput rate of 140 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.

(d) One (1) day storage/surge bin, with a total maximum capacity of 47,871 bushels, identified as EU005, with a capacity of 171 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.
(e) Four (4) hammermills, identified as EU006, EU007, EU008, and EU009, constructed in 2007 and modified in 2010, each with a maximum throughput rate of 42 tons of corn per hour, using baghouse C30 as control, and exhausting through stack S30.

(f) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with an equivalent hourly throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

(1) Seven (7) fermenters, identified as EU012 through EU018.

(2) One (1) beer well, identified as EU021.

(3) One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS4</td>
<td>Scrubber cleaning (per preventative maintenance plan procedure)</td>
</tr>
</tbody>
</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(g) Two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, constructed in 2007 and modified in 2010, with a maximum heat input capacity of 143 MMBtu/hr, each, using natural gas as fuel, and exhausting to stack S10.

Under 40 CFR 60, Subpart Db, the TO/HRSG systems are considered affected facilities.

(h) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:

(1) Two (2) slurry tanks, identified as EU010 and EU011.

(2) Two (2) yeast propagation tanks, identified as EU019 and EU020.

(3) One (1) beer column, identified as EU022.

(4) One (1) rectifier column, identified as EU023.

(5) One (1) side stripper, identified as EU024.
(6) Three (3) sets of three (3) molecular sieves, identified as EU025.

(7) Two (2) sets of four (4) evaporators, identified as EU026.

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

(i) Two (2) sets of three (3) centrifuges, identified as EU027 and EU028, constructed in 2007, and using thermal oxidizers C9203 and C9303 as control.

(j) Four (4) natural gas-fired DDGS dryers, identified as EU029 through EU032, constructed in 2007 and modified in 2010, each with a maximum heat input rate of 45 MMBtu/hr, with a total maximum throughput rate of 56 tons of DDGS per hour, using multicyclones C029 through C032 as control, with emissions venting to thermal oxidizers C9203 and C9303, and exhausting to stack S10.

(k) One (1) DDGS cooling drum, identified as EU033, constructed in 2007, permitted in 2015, and approved in 2019 for modification, with a maximum throughput rate of 66 tons/hr of DDGS, using baghouse C70 and the TO/HRSG systems as control, and exhausting to stack S70.

Note: A portion of the emission stream is continuously exhausted to stack S70.

(l) One (1) DDGS handling and storage operation, constructed in 2007, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) Two (2) DDGS storage silos, identified as EU034, using baghouse C90 as control, and exhausting to stack S90.

(2) One (1) DDGS storage building, identified as EU035, with emissions uncontrolled.

(m) One (1) DDGS loadout operation, identified as EU036, constructed in 2007 and modified in 2010, using baghouse C90 as control, exhausting to stack S90, and consisting of the following:

(1) One (1) DDGS conveyor with a maximum throughput rate of 550 tons/hr of DDGS.

(2) Two (2) DDGS truck/rail loadout spouts, each with a maximum throughput rate of 550 tons/hr of DDGS (only a single spout is able to operate at a time).

(n) One (1) ethanol loading system, identified as EU037, constructed in 2007, modified in 2010, and approved in 2019 for modification, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr, and exhausting to stack S50.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.
A.3 Specifically Regulated Insignificant Activities

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

(a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

   (1) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing equal to or less than five-tenths percent (0.5%) sulfur by weight, as follows:

      (A) Three (3) kerosene-fired space heaters, constructed in 2007, each with a maximum rated capacity of 0.165 MMBtu/hr.

(b) One (1) diesel-fired fire pump, identified as EU038, constructed in 2007, with a maximum power output rate of 300 HP, and exhausting to stack S100.

   Under 40 CFR 60, Subpart IIII, the diesel-fired fire pump EU038 is considered an affected facility.

   Under 40 CFR 63, Subpart ZZZZZ, the diesel-fired fire pump EU038 is considered an affected source.

(c) Fuel dispensing activities as follows:

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

      Under 40 CFR 63, Subpart CCCCCC, the gasoline fuel transfer dispensing operation is considered as an affected facility.

      (A) One (1) gasoline tank, constructed in 2008, identified as C10 with a maximum storage capacity of 560 gallons and a maximum throughput of less than 10,000 gallons per year.

(d) Paved roads and parking lots with limited public access.

(e) Ethanol and denaturant storage tanks, including the following:

   (1) One (1) off spec tank for 190-proof ethanol, identified as T65, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons.

   (2) One (1) tank for 200-proof ethanol, identified as T63, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of 200-proof ethanol.

   (3) One (1) denatured ethanol tank, identified as T61, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

   (4) One (1) denatured ethanol tank, identified as T62, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons
of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(5) One (1) denaturant tank, identified as T64, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 are considered affected facilities.

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

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

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

(b) Forced and induced draft cooling tower system not regulated under a NESHAP, identified as C80, with a maximum capacity of 3 MM gallons per year, constructed in 2007, and exhausting to stack S80.

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

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

(e) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) corrosion inhibitor tank, identified as C1, constructed in 2007, with a maximum capacity of 3,000 gallons of corrosion inhibitor.

(2) One (1) diesel storage tank, identified as C2, constructed in 2007, with a maximum storage capacity less than 2,000 gallons of diesel fuel.

(3) One (1) thin stillage tank with vent, identified as C3, constructed in 2007, with a maximum storage capacity of 374,000 gallons of thin stillage.

(4) One (1) syrup tank with vent, identified as C4, constructed in 2007, with a maximum storage capacity of 180,000 gallons of syrup.

(5) One (1) cook water tank with vent, identified as C5 constructed in 2007, with a maximum storage capacity of 374,000 gallons of cook water.

(6) Two (2) liquefaction tanks with one (1) vent, identified as C6/C7, constructed in 2007, with a maximum storage capacity of 128,400 gallons each of liquefied corn slurry.
(7) One (1) methanator feed tank, identified as C8, constructed in 2007, with a maximum storage capacity of 180,000 gallons of methanator feed water.

(8) One (1) whole stillage tank with vent, identified as C9, constructed in 2007, with a maximum storage capacity of 374,000 gallons of whole stillage.

(9) One (1) syrup feed tank, constructed in 2010, identified as TS-6851, with a maximum storage capacity of 3,500 gallons.

(10) Four (4) corn oil storage tanks, constructed in 2010, identified as TS-8901 through TS-8904, each with a maximum storage capacity of 9,200 gallons.

(11) One (1) corn oil storage tank, constructed in 2014, identified as TS-8905, with a maximum storage capacity of 30,000 gallons.

(12) One (1) syrup receiver tank, constructed in 2010, identified as TS-6852, with a maximum storage capacity of 560 gallons.

(13) One (1) corn oil receiver tank, constructed in 2010, identified as TS-6853, with a maximum storage capacity of 300 gallons.

(14) One (1) corn oil receiver tank, constructed in 2010, identified as TS-6854, with a maximum storage capacity of 200 gallons.

(15) One (1) corn oil loadout station, constructed in 2010 and approved in 2019 for modification, identified as corn oil loadout, with a maximum throughput rate of 2,500,000 gallons per year.

(16) One (1) corn storage pile, constructed in 2012, with a maximum capacity of 1,000,000 bushels of corn and a maximum throughput rate of 28,000 tons per year, with emissions uncontrolled.

(17) One (1) corn storage area, containing a maximum of two (2) piles, constructed in 2013, with a maximum capacity of 2,000,000 bushels of corn and a maximum throughput rate of 560 tons per hour, with emissions uncontrolled.

(f) Fuel dispensing activities as follows:

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

(A) One (1) diesel storage tank, identified as C2, with a maximum capacity of 360 gallons.

(B) One (1) diesel storage tank, constructed in 2008, identified as C11, with a maximum capacity of 1,050 gallons.

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, T179-41632-00033, 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 July 1 of each year to:

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

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

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

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

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

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

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

   The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

   A 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 T179-41632-00033 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

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

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

(1) That this permit contains a material mistake.

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

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

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

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region 5  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

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

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

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

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

(1) A brief description of the change within the source;
(2) The date on which the change will occur;
(3) Any change in emissions; and
(4) Any permit term or condition that is no longer applicable as a result of the change.

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

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
   The Permittee may make changes at the source within the range of alternative operating
   scenarios that are described in the terms and conditions of this permit in accordance with
   326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.

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

B.20 Source Modification Requirement [326 IAC 2-7-10.5]
   A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]
   Upon presentation of proper identification cards, credentials, and other documents as may be
   required by law, and subject to the Permittee’s right under all applicable laws and regulations to
   assert that the information collected by the agency is confidential and entitled to be treated as
   such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform
   the following:

   a) Enter upon the Permittee’s premises where a Part 70 source is located, or emissions
      related activity is conducted, or where records must be kept under the conditions of this
      permit;

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

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

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

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

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
   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.

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

   Indiana Department of Environmental Management
   Permit Administration and Support Section, Office of Air Quality
   100 North Senate Avenue
   MC 61-53 IGCN 1003
   Indianapolis, Indiana 46204-2251
Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

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

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

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

B.24 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

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

Entire Source

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

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

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

C.2 Opacity  [326 IAC 5-1]

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

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

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

C.3 Open Burning  [326 IAC 4-1] [IC 13-17-9]

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

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

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

C.5 Fugitive Dust Emissions  [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Fugitive Particulate Matter Emission Limitations  [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A. The provisions of 326 IAC 6-5 are not federally enforceable.

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

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.
C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

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

2. If there is a change in the following:

   (A) Asbestos removal or demolition start date;

   (B) Removal or demolition contractor; or

   (C) Waste disposal site.

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

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

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

C.9 Performance Testing [326 IAC 3-6]
(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

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

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

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

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

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

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

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

C.14 Risk Management Plan [326 IAC 2-7-5(11)] [40 CFR 68]
If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]
Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:
(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

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

1. initial inspection and evaluation;
2. recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
3. any necessary follow-up actions to return operation to normal or usual manner of operation.

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

1. monitoring results;
2. review of operation and maintenance procedures and records; and/or
3. inspection of the control device, associated capture system, and the process.

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

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

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

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

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

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

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

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

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

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

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

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

The statement must be submitted to:

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

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

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

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

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

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

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

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

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

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

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

(b) The address for report submittal is:

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

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

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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

Emissions Unit Description:

(a) One (1) grain receiving and handling operation, constructed in 2007, using baghouse C20 as control, exhausting to stack S20, and consisting of the following:

(1) Three (3) grain receiving pits, identified as EU001, each with a maximum throughput rate of 20,000 bushels of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, modified in 2013, each with a maximum throughput rate of 20,000 bushels of corn per hour, with the conveying system.

(3) Two (2) grain silos, identified as EU003, each with a total maximum capacity of 500,000 bushels, and each with a maximum throughput rate of 40,000 bushels of corn per hour.

(b) One (1) permanent grain storage bin, identified as EU003a, constructed in 2013, with a maximum capacity of 576,222 bushels of corn and a maximum throughput rate of 40,000 bushels of corn per hour, with emissions uncontrolled.

(c) Two (2) corn scalpers, identified as EU004, each with a maximum throughput rate of 140 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.

(d) One (1) day storage/surge bin, with a total maximum capacity of 47,871 bushels, identified as EU005, with a capacity of 171 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.

(e) Four (4) hammermills, identified as EU006, EU007, EU008, and EU009, constructed in 2007 and modified in 2010, each with a maximum throughput rate of 42 tons of corn per hour, using baghouse C30 as control, and exhausting through stack S30.

(l) One (1) DDGS handling and storage operation, constructed in 2007, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) Two (2) DDGS storage silos, identified as EU034, using baghouse C90 as control, and exhausting to stack S90.

(2) One (1) DDGS storage building, identified as EU035, with emissions uncontrolled.

(m) One (1) DDGS loadout operation, identified as EU036, constructed in 2007 and modified in 2010, using baghouse C90 as control, exhausting to stack S90, and consisting of the following:

(1) One (1) DDGS conveyor with a maximum throughput rate of 550 tons/hr of DDGS.

(2) Two (2) DDGS truck/rail loadout spouts, each with a maximum throughput rate of 550 tons/hr of DDGS (only a single spout is able to operate at a time).

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)
Emission Limitations and Standards [326 IAC 2-7-5(1)]

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

(a) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the PM, PM10, and PM2.5 emissions from the following emission units shall be less than the following emission limits:

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit Description</th>
<th>Baghouse ID</th>
<th>PM Emission Limit (lbs/hr)</th>
<th>PM10 Emission Limit (lbs/hr)</th>
<th>PM2.5 Emission Limit (lbs/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003, EU004, EU005</td>
<td>Grain Receiving and Handling (Conveyors, Storage Bins, Corn Scalpers, and Surge Bin)</td>
<td>C20</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>EU006, EU007, EU008, EU009</td>
<td>Hammermills #1- #4</td>
<td>C30</td>
<td>1.44</td>
<td>1.44</td>
<td>1.44</td>
</tr>
<tr>
<td>EU034, EU036</td>
<td>DDGS storage silo, DDGS loadout operations</td>
<td>C90</td>
<td>9.3</td>
<td>9.3</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Note: PM10 = PM2.5

(b) The total grain received shall be less than 1,622,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The Permittee shall use a choked flow system during grain receiving and handling.

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

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

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each process shall be limited by the following:

\[ E = 55.0 P^{0.11} - 40 \]

where \( E \) = rate of emission in pounds per hour and \( P \) = process weight rate in tons per hour
<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit Description</th>
<th>Max. Throughput Rate (tons/hr)</th>
<th>Particulate Emission Limit (lbs/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003</td>
<td>Grain Receiving and Handling (Conveyors, and Storage Bins)</td>
<td>560</td>
<td>70.32</td>
</tr>
<tr>
<td>EU004, EU005</td>
<td>Corn Scalpers (each)</td>
<td>140</td>
<td>54.72</td>
</tr>
<tr>
<td>EU005</td>
<td>Surge Bin</td>
<td>171</td>
<td>56.83</td>
</tr>
<tr>
<td>EU006</td>
<td>Hammermill #1</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU007</td>
<td>Hammermill #2</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU008</td>
<td>Hammermill #3</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU009</td>
<td>Hammermill #4</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU034</td>
<td>DDGS storage silos</td>
<td>220</td>
<td>59.55</td>
</tr>
<tr>
<td>EU036</td>
<td>DDGS loadout operation</td>
<td>550</td>
<td>70.10</td>
</tr>
<tr>
<td>EU035</td>
<td>DDGS storage building</td>
<td>220</td>
<td>59.55</td>
</tr>
<tr>
<td>EU003a</td>
<td>Grain Bin</td>
<td>1,120</td>
<td>79.06</td>
</tr>
</tbody>
</table>

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

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

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

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

D.1.4 Particulate Matter and Particulate Matter Control

(a) In order to comply with Conditions D.1.1 and D.1.2, each of the following emission units shall be controlled by the associated baghouse, as listed in the table below, at all times these units are in operation:

<table>
<thead>
<tr>
<th>Emission Unit ID</th>
<th>Emission Unit Description</th>
<th>Baghouse ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003, EU004, EU005</td>
<td>Grain Receiving and Handling (Conveyors, Storage Bins, Corn Scalpers, and Surge Bin)</td>
<td>C20</td>
</tr>
<tr>
<td>EU006, EU007, EU008, EU009</td>
<td>Hammermills #1- #4</td>
<td>C30</td>
</tr>
<tr>
<td>EU034, EU036</td>
<td>DDGS storage silo, DDGS Loadout</td>
<td>C90</td>
</tr>
</tbody>
</table>

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

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM10, and PM2.5 testing on baghouses C20, C30, and C90, utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

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

D.1.6 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the grain receiving and handling, hammermills, and DDGS handling and loadout operation stack exhausts (Stacks S20, S30, and S90, respectively) 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 and Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.7 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 emissions 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, dust traces or triboflows.
Record Keeping and Reporting Requirements  [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.1(b), the Permittee shall maintain monthly records of the amount of grain received at this plant.

(b) To document the compliance status with Condition D.1.6 the Permittee shall maintain daily records of the visible emission notations of the grain receiving and handling operations (EU001 through EU005), the hammermills (EU006 through EU009), and the DDGS handling and loadout operations (EU034 through EU036) stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (e.g., the process did not operate that day).

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

D.1.9 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.1.1(b) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (35).
SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with an equivalent throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

1. Seven (7) fermenters, identified as EU012 through EU018.
2. One (1) beer well, identified as EU021.
3. One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS4</td>
<td>Scrubber cleaning (per preventative maintenance plan procedure)</td>
</tr>
</tbody>
</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

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

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

D.2.1 PSD Minor Limits [326 IAC 2-2]

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

(a) VOC emissions from the fermentation process shall not exceed 23.4 pounds per hour.

Compliance with the VOC limit, in combination with the potential to emit VOC from other units, shall limit the VOC emissions from the entire source 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.
D.2.2 Hazardous Air Pollutant (HAP) Minor Limit [326 IAC 2-4.1]
In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) Acetaldehyde emissions from the fermentation process shall not exceed 1.37 lbs/hr.

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

D.2.3 VOC Emissions (Fuel Grade Ethanol at Dry Mills) [326 IAC 8-5-6]
Pursuant to 326 IAC 8-5-6, the Permittee shall comply with the following:

(a) The VOC emissions from the fermentation process shall be controlled by wet scrubber (C40).

(b) The wet scrubber (C40) shall operate with an overall VOC control efficiency of not less than ninety-eight percent (98%) or in a manner resulting in a VOC concentration of not more than twenty (20) parts per million (ppm).

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]
A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.

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

D.2.5 VOC and HAP Control

(a) In order to comply with Conditions D.2.1, D.2.2, and D.2.3, wet scrubber (C40) shall be in operation and control emissions from the fermentation process at all times the fermentation process is in operation.

(b) If compliance is demonstrated using the twenty (20) parts per million (ppm) VOC limit specified in Condition D.2.3(b), all VOC emissions from the fermentation process shall be routed to the wet scrubber, and that there are no open vents to the atmosphere between the fermentation process and the wet scrubber.

(c) Scrubber cleaning will be conducted only as prescribed in the preventative maintenance plan required under D.2.4.

D.2.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]
No later than 120 days after startup of the recirculation pump or not later than five (5) years from the most recent compliant stack test, whichever occurs first, in order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, the Permittee shall perform VOC and acetaldehyde testing, for each of the five (5) operating scenarios, for scrubber C40 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.2.7 Parametric Monitoring [326 IAC 8-5-6][40 CFR 64]

(a) The Permittee shall monitor and record the pressure drop of wet scrubber C40 at least once per day when the associated processes are in operation. The range for the normal, AOS1, AOS2, and AOS3 scenarios for this unit is a pressure drop between 1.0 and 20.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.

(b) 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, per operating scenario, will be established via stack testing. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

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

D.2.8 Scrubber Water Flow Rate [326 IAC 8-5-6][40 CFR 64]

(a) The Permittee shall monitor and record the flow rate of the scrubber C40 at least once per day when the associated processes are in operation. From the date of startup of the recirculation pump until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimums in the following table:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
<th>Beer Feed Rate (gal/min)</th>
<th>Minimum Scrubber Flow Rate (gallons/minute (gpm))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump off</td>
<td>greater than 1,200</td>
<td>84.7</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump on</td>
<td>greater than 1,200</td>
<td>84.7</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump off</td>
<td>less than or equal to 1,200</td>
<td>84.7</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump on</td>
<td>less than or equal to 1,200</td>
<td>84.7</td>
</tr>
</tbody>
</table>

(b) The Permittee shall determine the minimum flow rate, chemical additive injection rate, and type of additive for each operating scenario from the latest valid stack test that demonstrates compliance with the limits in Condition D.2.1 and D.2.2, and the requirements of 326 IAC 8-5-6 in Condition D.2.3.

(c) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate applicable to the operating scenario 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.
D.2.9 HAP Control Additive Flow Rate Monitoring [40 CFR 64]

(a) The Permittee shall monitor and record the HAP control additive flow rate at wet scrubber C40 at least once per day when the associated processes are in operation. From the date of startup of the recirculation pump until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimums in the following table:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
<th>Beer Feed Rate (gal/min)</th>
<th>Minimum Scrubber Flow Rate (mL/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump off</td>
<td>greater than 1,200</td>
<td>504 mL/min</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump on</td>
<td>greater than 1,200</td>
<td>504 mL/min</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump off</td>
<td>less than or equal to 1,200</td>
<td>504 mL/min</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump on</td>
<td>less than or equal to 1,200</td>
<td>504 mL/min</td>
</tr>
</tbody>
</table>

(b) When for any one reading, the HAP control additive flow rate at wet scrubber C40 is outside the normal range for the applicable operating scenario, the Permittee shall take a reasonable response. The normal range for this unit, per operating scenario, will be established via stack testing. Section C – Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A HAP control additive flow rate 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.2.10 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

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

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

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

D.2.11 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document the compliance status with Conditions D.2.7 and D.2.8, and pursuant to 326 IAC 8-5-6, the Permittee shall maintain daily records of pressure drop and flow rate for scrubber C40 and the operating scenario. The Permittee shall include in its daily record
when a pressure drop and flow rate reading is not taken and the reason for the lack of the reading (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.2.7(c), the Permittee shall maintain records of when the instruments used for determining the pressure drop and flow rate are calibrated or replaced.

(c) To document the compliance status with Condition D.2.9, the Permittee shall maintain records of the one-hour average injection rate of HAP control additive that is being injected into scrubber C40. The Permittee shall include in its daily record the operating scenario being employed.

(d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.
SECTION D.3  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(g) Two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, constructed in 2007 and modified in 2010, with a maximum heat input capacity of 143 MMBtu/hr, each, using natural gas as fuel, and exhausting to stack S10.

Under 40 CFR 60, Subpart Db, the TO/HRSG systems are considered affected facilities.

(h) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:

(1) Two (2) slurry tanks, identified as EU010 and EU011.
(2) Two (2) yeast propagation tanks, identified as EU019 and EU020.
(3) One (1) beer column, identified as EU022.
(4) One (1) rectifier column, identified as EU023.
(5) One (1) side stripper, identified as EU024.
(6) Three (3) sets of three (3) molecular sieves, identified as EU025.
(7) Two (2) sets of four (4) evaporators, identified as EU026.

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

(j) Four (4) natural gas-fired DDGS dryers, identified as EU029 through EU032, constructed in 2007 and modified in 2010, each with a maximum heat input rate of 45 MMBtu/hr, with a total maximum throughput rate of 56 tons of DDGS per hour, using multicyclones C029 through C032 as control, with emissions venting to thermal oxidizers C9203 and C9303, and exhausting to stack S10.

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

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

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

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

(a) PM emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.

(b) PM10 emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.
(c) PM2.5 emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.

(d) VOC emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 13.0 lbs/hr.

(e) CO emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 38.7 lbs/hr.

(f) The total DDGS produced shall be less than 490,560 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

D.3.2 Hazardous Air Pollutant (HAP) Minor Limit [326 IAC 2-4.1]

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

(a) Acetaldehyde emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.38 lbs/hr.

(b) Acrolein emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.33 lb/hr.

(c) Formaldehyde emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.52 lbs/hr.

(d) Methanol emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.33 lb/hr.

(e) Total HAP emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 1.56 lbs/hr.

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

D.3.3 VOC Emissions (Fuel Grade Ethanol at Dry Mills) [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6, the Permittee shall comply with the following:

(a) The VOC emissions from the DDGS Dryers and distillation process shall be controlled by thermal oxidizers (C9203 and C9303).

(b) A thermal oxidizer (C9203 and C9303) with an overall control efficiency of not less than ninety-eight percent (98%) or resulting in a volatile organic compound concentration of not more than ten (10) parts per million (ppm).
D.3.4 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emissions for Source of Indirect Heating), particulate emissions from the TO/HRSG systems shall be limited to 0.25 pounds per million British thermal units (lb/MMBtu) heat input, each.

D.3.5 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, particulate emissions from each of the DDGS dryers (EU029 through EU032) shall be less than 45.64 pounds per hour when operating at a maximum throughput rate of 56 tons per hour.

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

\[ E = 55.0 \times P^{0.11} - 40 \]

where \( E \) = rate of emission in pounds per hour; and \( P \) = process weight rate in tons per hour.

D.3.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their 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.3.7 VOC and HAP Control

(a) In order to comply with Conditions D.3.1, D.3.2 and D.3.3, at least one of the two (2) thermal oxidizers (C9203 and C9303) shall be in operation and control emissions from the DDGS dryers (EU029 through EU032) and the distillation process at all times of operation.

(b) If compliance is demonstrated with the 10 ppmv VOC outlet concentration specified in Condition D.3.3(d):

(1) all VOC emissions from the emission units in these processes shall be routed to the TO/HRSG systems,

(2) that there are no open vents to the atmosphere between the mashing, cooking, liquefaction, distillation and dehydration processes and the TO/HRSG systems, and

(3) that the DDGS dryers shall maintain negative pressure.

D.3.8 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 3-5][326 IAC 2-7-6(1),(6)][40 CFR 60, Subpart Db]

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), continuous emission monitoring systems for thermal oxidizers C9203 and C9303 shall be calibrated, maintained, and operated for measuring NOx, which meet all applicable performance specifications of 326 IAC 3-5-2.

(b) All continuous emissions monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
D.3.9  Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.3.1, D.3.2, D.3.3, D.3.4, and D.3.5, the Permittee shall perform PM, PM10, PM2.5, VOC, CO, acetaldehyde, acrolein, formaldehyde, and methanol testing on stack (S10), utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

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

D.3.10  NOx Continuous Emissions Monitoring (CEMS) Equipment Downtime

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

D.3.11  Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the stack exhaust from the thermal oxidizers (C9203 and C9303) stack (S10) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.3.12  Thermal Oxidizer Temperature [326 IAC 8-5-6][40 CFR 64]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on each of the two (2) thermal oxidizers (C9203 and C9303) for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes.

(b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.3.1, D.3.2, D.3.3, D.3.4, and D.3.5.

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

**D.3.13 Thermal Oxidizer Parametric Monitoring** [326 IAC 8-5-6][40 CFR 64]

(a) The Permittee shall determine the appropriate duct pressure or fan amperage from the latest valid stack test that demonstrates the compliance status with limits in Conditions D.3.1, D.3.2, D.3.3, D.3.4, and D.3.5.

(b) On and after the date the stack tests are available, the duct pressure or fan amperage shall be maintained within the respective normal range as established during the latest compliance stack test.

(c) The Permittee shall monitor and record the duct pressure or fan amperage at least once per day when either thermal oxidizer is in operation.

(d) 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. Failure to take response shall be considered a deviation from this permit.

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

**D.3.14 Record Keeping Requirements** [326 IAC 8-5-6]

(a) To document the compliance status with Condition D.3.11, the Permittee shall maintain records of daily visible emission notations of the stack S10. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.3.12, and pursuant to 326 IAC 8-5-6, the Permittee shall maintain continuous temperature records for the thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(c) To document the compliance status with Condition D.3.13, and pursuant to 326 IAC 8-5-6, the Permittee shall maintain daily records of the duct pressure or fan amperage for the thermal oxidizers (C9203 and C9303). The Permittee shall include in its daily record when a pressure or fan amperage reading is not taken and the reason for the lack of the reading (e.g. the process did not operate that day).

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

**D.3.15 Record Keeping Requirements for CEMS** [326 IAC 2-7-5(3)(A)(iii)] [326 IAC 3-5-6]

(a) The Permittee shall record the output of the continuous monitoring system(s) pounds per hour and shall perform the required record keeping pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

(b) In the event that a breakdown of the NOx continuous emission monitoring systems (CEMS) occurs, the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.
Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.3.16 Reporting Requirements [326 IAC 2-7-5(3)(A)(iii)][326 IAC 3-5]

(a) Pursuant to 326 IAC 3-5-5(f)(1), the Permittee shall prepare and submit to IDEM, OAQ a written report for performance audits as follows:

(1) Owners or operators of emissions units required to conduct a:

   (A) cylinder gas audit;
   (B) relative accuracy test audit; or
   (C) continuous opacity monitor calibration error audit;

   on continuous emission monitors shall prepare a written report of the results of the performance audit for each calendar quarter, or for other periods required by the department. The owner or operator shall submit quarterly reports to the department within thirty (30) calendar days after the end of each quarter for cylinder gas audits and continuous opacity monitor calibration error audits and within forty-five (45) calendar days after the completion of the test for relative accuracy test audits.

(2) The report must contain the information required by 326 IAC 3-5-5(f)(2).

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).

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

(1) date of downtime;
(2) time of commencement;
(3) duration of each downtime;
(4) reasons for each downtime; and
(5) nature of system repairs and adjustments.

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.4  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(k) One (1) DDGS cooling drum, identified as EU033, constructed in 2007, permitted in 2015, and approved in 2019 for modification, with a maximum throughput rate of 66 tons/hr of DDGS, using baghouse C70 and the TO/HRSG systems as control, and exhausting to stack S70.

Note: A portion of the emission stream is continuously exhausted to stack S70.

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

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

D.4.1 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following for the DDGS cooling drum (EU033):

(a) PM emissions shall be less than 2.6 lbs/hr.
(b) PM_{10} emissions shall be less than 2.6 lbs/hr.
(c) PM_{2.5} emissions shall be less than 2.6 lb/hr.
(d) The VOC emissions from baghouse stack S70 shall be less than 0.1 pounds per ton of DDGS produced in the DDGS cooling drum (EU033).
(e) The total DDGS produced shall be less than 490,560 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits, in combination with the potential to emit PM, PM_{10}, PM_{2.5}, and VOC from other units at the source, shall limit the PM, PM_{10}, PM_{2.5}, and VOC emissions from the entire source to less than 250 tons per twelve consecutive month period each and render the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable.

D.4.2 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, particulate emissions from the one (1) DDGS cooling drum, identified as EU033, shall be less than 47.20 pounds per hour when operating at the maximum process throughput rate of 66 per hour.

The pound per hour limitation was calculated using the following equation:

\[ E = 55.0 P^{0.11} - 40 \]

where \( E \) = rate of emission in pounds per hour; and \( P \) = process weight rate in tons per hour.

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their 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.4.4 Particulate Control

(a) In order to comply with Conditions D.4.1(a), D.4.1(b), D.4.1(c), and D.4.2, Baghouse C70 shall be in operation and control emissions from the DDGS cooling drum (EU033) at all times that this unit is in operation.

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

D.4.5 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.4.1 and D.4.2, the Permittee shall perform PM, PM10, PM2.5, and VOC testing for baghouse C70, utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

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

D.4.6 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the DDGS cooling drum stack exhaust (S70) 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 and Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.4.7 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 emissions 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, dust traces or triboflows.

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

D.4.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.1(e), the Permittee shall maintain monthly records of the amount of DDGS produced.

(b) To document the compliance status with Condition D.4.6, the Permittee shall maintain daily records of the visible emission notations of the DDGS cooling drum stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (e.g., the process did not operate that day).

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

D.4.9 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.4.1(e) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (35).
SECTION D.5  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(n) One (1) ethanol loading system, identified as EU037, constructed in 2007, modified in 2010, and approved in 2019 for modification, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr, and exhausting to stack S50.

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

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

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

D.5.1 PSD Minor Limits [326 IAC 2-2]

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

(a) The denatured ethanol load-out from the ethanol loading system (EU037) shall not exceed 165,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) VOC emissions from VCU CE009 shall not exceed 0.061 lbs/kgal of denatured ethanol loaded.

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

D.5.2 Hazardous Air Pollutant (HAP) Minor Limit [326 IAC 2-4.1]

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

(a) Hexane emissions from VCU CE009 shall not exceed 0.00303 lbs/kgal of denatured ethanol loaded.

(b) Toluene emissions from VCU CE009 shall not exceed 0.000363 lbs/kgal of denatured ethanol loaded.

(c) Total HAPs emissions from VCU CE009 shall not exceed 0.00355 lbs/kgal of denatured ethanol loaded.

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

D.5.3 VOC Emissions (Fuel Grade Ethanol at Dry Mills) [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6, the Permittee shall comply with the following:

(a) The VOC emissions from the ethanol loadout shall be collected and controlled by an enclosed vapor combustion unit (VCU) (C50) when loading denatured ethanol.

(b) An enclosed vapor combustion unit (VCU) (C50) with an overall control efficiency of not less than ninety-eight percent (98%).

D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for this facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.

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

D.5.5 VOC and HAP Control

In order to comply with Conditions D.5.1 and D.5.2, enclosed vapor combustion unit (VCU) (C50) shall be in operation and control emissions from the ethanol loading rack (EU037) at all times when this rack is in operation.

D.5.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.5.1 and D.5.3, the Permittee shall perform VOC testing for the enclosed vapor combustion unit (VCU) (C50), 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) Not later than 120 days after issuance of this permit, SSM No. 179-41817-00033, in order to demonstrate compliance with Conditions D.5.2, the Permittee shall perform hexane and toluene testing for the enclosed vapor combustion unit (VCU) (C50), 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.5.7 VCU Flame [326 IAC 8-5-6][40 CFR 64]

In order to comply with Conditions D.5.1 and D.5.3, and pursuant to 326 IAC 8-5-6, the Permittee shall:

(a) Maintain an enclosed vapor combustion unit (VCU) pilot flame when the associated emission unit is in operation and continuously monitor the presence of an enclosed vapor combustion unit (VCU) 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 loading rack (EU037) is in operation.

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

D.5.8 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document the compliance status with Condition D.5.1, the Permittee shall maintain monthly records of the total amount of denatured ethanol loaded out from loading rack EU037.

(b) To document the compliance status with Condition D.5.7, the Permittee shall maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when loading rack EU037 is in operation.

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

D.5.9 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.5.1 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1 (35).
SECTION D.6  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

(a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

   (1) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing equal to or less than five-tenths percent (0.5%) sulfur by weight, as follows:

      (A) Three (3) kerosene-fired space heaters, constructed in 2007, each with a maximum rated capacity of 0.165 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.6.1 Particulate Emissions Limitation [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the three (3) kerosene-fired space heaters shall be limited to 0.25 pounds per MMBtu heat input, total.

D.6.2 Preventive Maintenance Plan  [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.
Emissions Unit Description:

Insignificant Activities:

(e) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(5) One (1) denaturant tank, identified as T64, constructed in 2007, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 are considered affected facilities.

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

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

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

Pursuant to 326 IAC 8-4-3(b)(1) (Petroleum Liquid Storage Facilities), tank 64 is subject to the following:

(a) The facility must be retrofitted with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall unless the source has been retrofitted with equally effective alternative control which has been approved.

(b) The facility is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials.

(c) All openings, except stub drains, are equipped with covers, lids, or seals such that:

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

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

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

D.7.2 Volatile Organic Compounds (VOC) [326 IAC 8-4-3(d)]

Pursuant to 326 IAC 8-4-3(d) (Petroleum Liquid Storage Facilities), the Permittee shall maintain the following records for a period of two (2) years for tank T64:

(a) The types of volatile petroleum liquid stored;
(b) The maximum true vapor pressure of the liquids as stored; and

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

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

D.7.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.7.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.7.2, the Permittee shall maintain the following records for a period of two (2) years for tank T64:

(1) The types of volatile petroleum liquid stored;

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

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

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.
SECTION E.1  NSPS

Emissions Unit Description:

(g) Two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, constructed in 2007 and modified in 2010, with a maximum heat input capacity of 143 MMBtu/hr, each, using natural gas as fuel, and exhausting to stack S10.

Under 40 CFR 60, Subpart Db, the TO/HRSG systems are considered affected facilities.

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

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

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

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

1. 40 CFR 60.40b(a), (g), and (j)
2. 40 CFR 60.41b
3. 40 CFR 60.42b(e), (g), and (k)
4. 40 CFR 60.44b(a), (e), (f), (h), (i), (l)(1), and (l)(2)
5. 40 CFR 60.45b(a), (b), (c)(1), (f), (g), and (h)
6. 40 CFR 60.46b(a), (c), (e)(1), and (e)(4)
7. 40 CFR 60.47b
8. 40 CFR 60.48b(b)(1), (c), (d), (e)(2), (e)(3), (f), and (g)
9. 40 CFR 60.49b(a), (a)(1) through (a)(3), (b) through (d), (g), (h)(2), (h)(4), (i), (j), (k), (o), (v), and (w)
SECTION E.2 NSPS

Emissions Unit Description:

Insignificant Activities:

(e) Ethanol and denaturant storage tanks, including the following:

1. One (1) off spec tank for 190-proof ethanol, identified as T65, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons.

2. One (1) tank for 200-proof ethanol, identified as T63, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of 200-proof ethanol.

3. One (1) denatured ethanol tank, identified as T61, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

4. One (1) denatured ethanol tank, identified as T62, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

5. One (1) denaturant tank, identified as T64, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 are considered affected facilities.

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

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

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

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

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
E.2.2 Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 NSPS [326 IAC 12] [40 CFR Part 60, Subpart Kb]

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

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

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

E.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.
Emissions Unit Description:

(f) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with an equivalent hourly throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

1. Seven (7) fermenters, identified as EU012 through EU018.
2. One (1) beer well, identified as EU021.
3. One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS4</td>
<td>Scrubber cleaning (per preventative maintenance plan procedure)</td>
</tr>
</tbody>
</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(h) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:

1. Two (2) slurry tanks, identified as EU010 and EU011.
2. Two (2) yeast propagation tanks, identified as EU019 and EU020.
3. One (1) beer column, identified as EU022.
4. One (1) rectifier column, identified as EU023.
5. One (1) side stripper, identified as EU024.
6. Three (3) sets of three (3) molecular sieves, identified as EU025.
7. Two (2) sets of four (4) evaporators, identified as EU026.

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

(n) One (1) ethanol loading system, identified as EU037, constructed in 2007 and modified in 2010, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr, and exhausting to stack S50.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process 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.3.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

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

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

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

E.3.2 Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 NSPS [326 IAC 12] [40 CFR Part 60, Subpart VVa]

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

(1) 40 CFR 60.480a
(2) 40 CFR 60.481a
(3) 40 CFR 60.482-1a
(4) 40 CFR 60.482-2a
(5) 40 CFR 60.482-3a
(6) 40 CFR 60.482-4a
(7) 40 CFR 60.482-5a
(8) 40 CFR 60.482-6a
(9) 40 CFR 60.482-7a
(10) 40 CFR 60.482-8a
(11) 40 CFR 60.482-9a
(12) 40 CFR 60.482-10a
(13) 40 CFR 60.482-11a
(14) 40 CFR 60.483-1a
(15) 40 CFR 60.483-2a
(16) 40 CFR 60.484a
(17) 40 CFR 60.485a
(18) 40 CFR 60.486a
(19) 40 CFR 60.487a
(20) 40 CFR 60.488a
(21) 40 CFR 60.489a
SECTION E.4 NSPS

Emissions Unit Description:

Insignificant Activities:

(b) One (1) diesel-fired fire pump, identified as EU038, constructed in 2007, with a maximum power output rate of 300 HP, and exhausting to stack S100.

Under 40 CFR 60, Subpart III, the diesel-fired fire pump EU038 is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, the diesel-fired fire pump EU038 is considered an affected source.

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

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

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

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

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

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

E.4.2 Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12] [40 CFR Part 60, Subpart III]

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

(1) 40 CFR 60.4200(a)(1)(ii), (a)(2)(ii), and (a)(3)
(2) 40 CFR 60.4201(a)
(3) 40 CFR 60.4204(b)
(4) 40 CFR 60.4205(c)
(5) 40 CFR 60.4206
(6) 40 CFR 60.4207(a), (b) and (c)
(7) 40 CFR 60.4208
(8) 40 CFR 60.4209
(9) 40 CFR 60.4211(a) and (c)
(10) 40 CFR 60.4212(a), (b) and (c)
(11) 40 CFR 60.4214(b) and (c)
(12) 40 CFR 60.4218
(13) 40 CFR 60.4219
(14) Table 3 to Subpart III
(15) Table 4 to Subpart III
(16) Table 5 to Subpart III
(17) Table 6 to Subpart III
(18) Table 8 to Subpart III

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

E.4.3 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.
SECTION E.5  NESHAP

Emissions Unit Description:

Insignificant Activities:

(b) One (1) diesel-fired fire pump, identified as EU038, constructed in 2007, with a maximum power output rate of 300 HP, and exhausting to stack S100.

Under 40 CFR 60, Subpart IIII, the diesel-fired fire pump EU038 is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, the diesel-fired fire pump EU038 is considered an affected source.

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

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


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

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

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

E.5.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

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

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
(4) 40 CFR 63.6595(a)(6)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675
SECTION E.6  NESHAP

**Emissions Unit Description:**

**Insignificant Activities:**

(c) Fuel dispensing activities as follows:

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

Under 40 CFR 63, Subpart CCCCCC, the gasoline fuel transfer dispensing operation is considered as an affected facility.

(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 emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart CCCCCC.

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

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

E.6.2 Gasoline-Dispensing Facilities NESHAP [40 CFR Part 63, Subpart CCCCCC]

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

(1) 40 CFR 63.11110
(2) 40 CFR 63.111111(a), (b), (e), (h), (i), and (j)
(3) 40 CFR 63.11112(a) and (b)
(4) 40 CFR 63.11113(a)(2)
(5) 40 CFR 63.11115
(6) 40 CFR 63.11116
(7) 40 CFR 63.11125(d)
(8) 40 CFR 63.11130
(9) 40 CFR 63.11131
(10) Table 3 to Subpart CCCCCC
Emission Limitations and Standards  [326 IAC 2-7-5(1)]

E.6.3 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.
## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
### OFFICE OF AIR QUALITY
#### COMPLIANCE AND ENFORCEMENT BRANCH
#### PART 70 OPERATING PERMIT
#### CERTIFICATION

<table>
<thead>
<tr>
<th>Source Name:</th>
<th>Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Address:</td>
<td>1441 South Adams St., Bluffton, Indiana 46714</td>
</tr>
<tr>
<td>Part 70 Permit No.:</td>
<td>T179-41632-00033</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Signature:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed Name:</td>
<td></td>
</tr>
<tr>
<td>Title/Position:</td>
<td></td>
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<tr>
<td>Phone:</td>
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<tr>
<td>Date:</td>
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</tr>
</tbody>
</table>
This form consists of 2 pages

<table>
<thead>
<tr>
<th>Facility/Equipment/Operation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Equipment:</td>
</tr>
<tr>
<td>Permit Condition or Operation Limitation in Permit:</td>
</tr>
<tr>
<td>Description of the Emergency:</td>
</tr>
<tr>
<td>Describe the cause of the Emergency:</td>
</tr>
</tbody>
</table>

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

| 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 Quarterly Report

Source Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
Source Address: 1441 South Adams St., Bluffton, Indiana 46714  
Part 70 Permit No.: T179-41632-00033  
Facility: Grain Receiving and Handling  
Parameter: The total grain received  
Limit: Shall be less than 1,622,000 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>
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</thead>
<tbody>
<tr>
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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: _______________________________
INFORMATION DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, Indiana 46714
Part 70 Permit No.: T179-41632-00033
Facility: DDGS Dryers (EU029 through EU032)
Parameter: The total DDGS produced
Limit: Shall be less than 490,560 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

<table>
<thead>
<tr>
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<th>YEAR: ______________</th>
</tr>
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<table>
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<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
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</tbody>
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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: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, Indiana 46714
Part 70 Permit No.: T179-41632-00033
Facility: Ethanol Loading System (EU037)
Parameter: The denatured ethanol load-out
Limit: Shall not exceed 165,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

<table>
<thead>
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<table>
<thead>
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<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 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, Indiana 46714
Part 70 Permit No.: T179-41632-00033

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>
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<th>Duration of Deviation:</th>
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<tr>
<td>Probable Cause of Deviation:</td>
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<tr>
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<td>Probable Cause of Deviation:</td>
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<td>Probable Cause of Deviation:</td>
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<td>Response Steps Taken:</td>
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<td>Response Steps Taken:</td>
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<td>Probable Cause of Deviation:</td>
<td></td>
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<tr>
<td>Response Steps Taken:</td>
<td></td>
</tr>
</tbody>
</table>

Form Completed by: ____________________________

Title / Position: ______________________________

Date: ________________________________

Phone: ________________________________
Source Description and Location

Source Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Location: 1441 South Adams St., Bluffton, Indiana 46714
County: Wells
SIC Code: 2869 (Industrial Organic Chemicals, Not Elsewhere Classified)
Permit Renewal No.: T179-41632-00033
Significant Source Modification No.: 179-41817-00033
Permit Reviewer: Andrew Belt

On July 3, 2019, Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant submitted an application to the Office of Air Quality (OAQ) requesting to renew its operating permit. OAQ has reviewed the operating permit renewal application from Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant relating to the operation of a stationary grain elevator and ethanol production plant. Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant was issued its first Part 70 Operating Permit Renewal (T179-35207-00033) on April 8, 2015.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T179-35207-00033 on April 8, 2015. The source has since received the following approvals:

(a) Administrative Amendment No. 179-38018-00033, issued on February 1, 2017; and
(b) Administrative Amendment No. 179-40835-00033, issued on January 1, 2018.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) grain receiving and handling operation, constructed in 2007, using baghouse C20 as control, exhausting to stack S20, and consisting of the following:

   (1) Three (3) grain receiving pits, identified as EU001, each with a maximum throughput rate of 20,000 bushels of corn per hour.

   (2) Two (2) grain legs and conveying system, identified as EU002, modified in 2013, each with a maximum throughput rate of 20,000 bushels of corn per hour, with the conveying system.

   (3) Two (2) grain silos, identified as EU003, each with a total maximum capacity of 500,000 bushels, and each with a maximum throughput rate of 40,000 bushels of corn per hour.
(b) One (1) permanent grain storage bin, identified as EU003a, constructed in 2013, with a maximum capacity of 576,222 bushels of corn and a maximum throughput rate of 40,000 bushels of corn per hour, with emissions uncontrolled.

(c) Two (2) corn scalpers, identified as EU004, each with a maximum throughput rate of 140 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.

(d) One (1) day storage/surge bin, with a total maximum capacity of 47,871 bushels, identified as EU005, with a capacity of 171 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.

(e) Four (4) hammermills, identified as EU006, EU007, EU008, and EU009, constructed in 2007 and modified in 2010, each with a maximum throughput rate of 42 tons of corn per hour, using baghouse C30 as control, and exhausting through stack S30.

(f) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with an equivalent hourly throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

(1) Seven (7) fermenters, identified as EU012 through EU018.

(2) One (1) beer well, identified as EU021.

(3) One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
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</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS4</td>
<td>Scrubber cleaning (per preventative maintenance plan procedure)</td>
</tr>
</tbody>
</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(g) Two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, constructed in 2007 and modified in 2010, with a maximum heat input capacity of 143 MMBtu/hr, each, using natural gas as fuel, and exhausting to stack S10.

Under 40 CFR 60, Subpart Db, the TO/HRSG systems are considered affected facilities.

(h) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:
(1) Two (2) slurry tanks, identified as EU010 and EU011.
(2) Two (2) yeast propagation tanks, identified as EU019 and EU020.
(3) One (1) beer column, identified as EU022.
(4) One (1) rectifier column, identified as EU023.
(5) One (1) side stripper, identified as EU024.
(6) Three (3) sets of three (3) molecular sieves, identified as EU025.
(7) Two (2) sets of four (4) evaporators, identified as EU026.

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

(i) Two (2) sets of three (3) centrifuges, identified as EU027 and EU028, constructed in 2007, and using thermal oxidizers C9203 and C9303 as control.

(j) Four (4) natural gas-fired DDGS dryers, identified as EU029 through EU032, constructed in 2007 and modified in 2010, each with a maximum heat input rate of 45 MMBtu/hr, with a total maximum throughput rate of 56 tons of DDGS per hour, using multicyclones C029 through C032 as control, with emissions venting to thermal oxidizers C9203 and C9303, and exhausting to stack S10.

(k) One (1) DDGS cooling drum, identified as EU033, constructed in 2007, permitted in 2015, and approved in 2019 for modification, with a maximum throughput rate of 66 tons/hr of DDGS, using baghouse C70 and the TO/HRSG systems as control, and exhausting to stack S70.

Note: A portion of the emission stream is continuously exhausted to stack S70.

(l) One (1) DDGS handling and storage operation, constructed in 2007, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

   (1) Two (2) DDGS storage silos, identified as EU034, using baghouse C90 as control, and exhausting to stack S90.

   (2) One (1) DDGS storage building, identified as EU035, with emissions uncontrolled.

(m) One (1) DDGS loadout operation, identified as EU036, constructed in 2007 and modified in 2010, using baghouse C90 as control, exhausting to stack S90, and consisting of the following:

   (1) One (1) DDGS conveyor with a maximum throughput rate of 550 tons/hr of DDGS.

   (2) Two (2) DDGS truck/rail loadout spouts, each with a maximum throughput rate of 550 tons/hr of DDGS (only a single spout is able to operate at a time).

(n) One (1) ethanol loading system, identified as EU037, constructed in 2007, modified in 2010, and approved in 2019 for modification, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr, and exhausting to stack S50.
Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

### Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

(a) One (1) fermentation process, with a maximum throughput rate of 16,695 gallons per hour (as ethanol), using scrubber C40 as control, approved in 2007 for construction and in 2010 for modification, and exhausting to stack S40. This process consists of the following:

   (1) One degassing bottle, permitted in 2017, discharging CO₂ and VOC to the beerwell

### Insignificant Activities

The source also consists of the following specifically regulated insignificant activities:

(a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

   (1) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing equal to or less than five-tenths percent (0.5%) sulfur by weight, as follows:

      (A) Three (3) kerosene-fired space heaters, constructed in 2007, each with a maximum rated capacity of 0.165 MMBtu/hr.

(b) One (1) diesel-fired fire pump, identified as EU038, constructed in 2007, with a maximum power output rate of 300 HP, and exhausting to stack S100.

   Under 40 CFR 60, Subpart III, the diesel-fired fire pump EU038 is considered an affected facility. Under 40 CFR 63, Subpart ZZZZ, the diesel-fired fire pump EU038 is considered an affected source.

(c) Fuel dispensing activities as follows:

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

      Under 40 CFR 63, Subpart CCCCCC, the gasoline fuel transfer dispensing operation is considered as an affected facility.

      (A) One (1) gasoline tank, constructed in 2008, identified as C10 with a maximum storage capacity of 560 gallons and a maximum throughput of less than 10,000 gallons per year.

(d) Paved roads and parking lots with limited public access.

(e) Ethanol and denaturant storage tanks, including the following:

   (1) One (1) off spec tank for 190-proof ethanol, identified as T65, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons.

   (2) One (1) tank for 200-proof ethanol, identified as T63, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of 200-proof ethanol.
(3) One (1) denatured ethanol tank, identified as T61, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(4) One (1) denatured ethanol tank, identified as T62, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(5) One (1) denaturant tank, identified as T64, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 are considered affected facilities.

The source also consists of the following insignificant activities:

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

(b) Forced and induced draft cooling tower system not regulated under a NESHAP, identified as C80, with a maximum capacity of 3 MM gallons per year, constructed in 2007, and exhausting to stack S80.

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

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

(e) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) corrosion inhibitor tank, identified as CI, constructed in 2007, with a maximum capacity of 3,000 gallons of corrosion inhibitor.

(2) One (1) diesel storage tank, identified as C2, constructed in 2007, with a maximum storage capacity less than 2,000 gallons of diesel fuel.

(3) One (1) thin stillage tank with vent, identified as C3, constructed in 2007, with a maximum storage capacity of 374,000 gallons of thin stillage.

(4) One (1) syrup tank with vent, identified as C4, constructed in 2007, with a maximum storage capacity of 180,000 gallons of syrup.

(5) One (1) cook water tank with vent, identified as C5 constructed in 2007, with a maximum storage capacity of 374,000 gallons of cook water.

(6) Two (2) liquefaction tanks with one (1) vent, identified as C6/C7, constructed in 2007, with a maximum storage capacity of 128,400 gallons each of liquefied corn slurry.

(7) One (1) methanator feed tank, identified as C8, constructed in 2007, with a maximum storage capacity of 180,000 gallons of methanator feed water.
(8) One (1) whole stillage tank with vent, identified as C9, constructed in 2007, with a maximum storage capacity of 374,000 gallons of whole stillage.

(9) One (1) syrup feed tank, constructed in 2010, identified as TS-6851, with a maximum storage capacity of 3,500 gallons.

(10) Four (4) corn oil storage tanks, constructed in 2010, identified as TS-8901 through TS-8904, each with a maximum storage capacity of 9,200 gallons.

(11) One (1) corn oil storage tank, constructed in 2014, identified as TS-8905, with a maximum storage capacity of 30,000 gallons.

(12) One (1) syrup receiver tank, constructed in 2010, identified as TS-6852, with a maximum storage capacity of 560 gallons.

(13) One (1) corn oil receiver tank, constructed in 2010, identified as TS-6853, with a maximum storage capacity of 300 gallons.

(14) One (1) corn oil receiver tank, constructed in 2010, identified as TS-6854, with a maximum storage capacity of 200 gallons.

(15) One (1) corn oil loadout station, constructed in 2010 and approved in 2019 for modification, identified as corn oil loadout, with a maximum throughput rate of 2,500,000 gallons per year.

(16) One (1) corn storage pile, constructed in 2012, with a maximum capacity of 1,000,000 bushels of corn and a maximum throughput rate of 28,000 tons per year, with emissions uncontrolled.

(17) One (1) corn storage area, containing a maximum of two (2) piles, constructed in 2013, with a maximum capacity of 2,000,000 bushels of corn and a maximum throughput rate of 560 tons per hour, with emissions uncontrolled.

(f) Fuel dispensing activities as follows:

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

(A) One (1) diesel storage tank, identified as C2, with a maximum capacity of 360 gallons.

(B) One (1) diesel storage tank, constructed in 2008, identified as C11, with a maximum capacity of 1,050 gallons.

<table>
<thead>
<tr>
<th>Enforcement Issue</th>
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There are no enforcement actions pending.

<table>
<thead>
<tr>
<th>Emission Calculations</th>
</tr>
</thead>
</table>

See Appendix A of this Technical Support Document for detailed emission calculations.
## County Attainment Status

The source is located in Wells County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
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<tbody>
<tr>
<td>SO₂</td>
<td>Better than national standards.</td>
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<tr>
<td>CO</td>
<td>Unclassifiable or attainment effective November 15, 1990.</td>
</tr>
<tr>
<td>O₃</td>
<td>Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.¹</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective April 5, 2005, for the annual PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Unclassifiable effective November 15, 1990.</td>
</tr>
<tr>
<td>NO₂</td>
<td>Cannot be classified or better than national standards.</td>
</tr>
<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011.</td>
</tr>
</tbody>
</table>

¹Unclassifiable 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 (NOₓ) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOₓ emissions are considered when evaluating the rule applicability relating to ozone. Wells County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOₓ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### (b) PM₂.₅

Wells County has been classified as attainment for PM₂.₅. Therefore, direct PM₂.₅, SO₂, and NOₓ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### (c) Other Criteria Pollutants

Wells 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

Since this type of operation is not one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B), and there is no applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

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.

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

### Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at [http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf](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.

### Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

<table>
<thead>
<tr>
<th>Unrestricted Potential Emissions (ton/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM1</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>2905.74</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title V Major Source Thresholds</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PSD Major Source Thresholds</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
</tr>
</tbody>
</table>

1Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant."

2PM2.5 listed is direct PM2.5.

3Single highest source-wide HAP (acrolein).

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

Appendix A of this TSD reflects the detailed unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of PM10, PM2.5, NOX, VOC, and CO is equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. The source will be issued a Part 70 Operating Permit Renewal.

### Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.
Description of Proposed Modification to an Existing Source

The Office of Air Quality (OAQ) has reviewed an application, submitted by Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant on July 3, 2019, relating to expanding production capacity. To facilitate this increase, the fermentation scrubber will be upgraded to increase efficiency (i.e., less demand for fresh water and chemical additives) while providing equivalent or better emission control under the increased production scenario. This upgrade will be accommodated with a recirculation pump that is designed to recover scrubber bottoms and inject it back into the feed header from the beer well to the scrubber. The recirculation pump will allow for variation in scrubber operation, increasing the operational capacity of the fermentation system and allowing for an increase in the overall production rate of denatured ethanol.

The following is a list of the modified emission units and pollution control device(s):

(a) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

1. Seven (7) fermenters, identified as EU012 through EU018.
2. One (1) beer well, identified as EU021.
3. One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS4</td>
<td>Scrubber cleaning (per preventative maintenance plan procedure)</td>
</tr>
</tbody>
</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(b) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:

1. Two (2) slurry tanks, identified as EU010 and EU011.
2. Two (2) yeast propagation tanks, identified as EU019 and EU020.
3. One (1) beer column, identified as EU022.
4. One (1) rectifier column, identified as EU023.
5. One (1) side stripper, identified as EU024.
(6) Three (3) sets of three (3) molecular sieves, identified as EU025.

(7) Two (2) sets of four (4) evaporators, identified as EU026.

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

(c) One (1) DDGS cooling drum, identified as EU033, constructed in 2007, permitted in 2015, and approved in 2019 for modification, with a maximum throughput rate of 66 tons/hr of DDGS, using baghouse C70 and the TO/HRSG systems as control, and exhausting to stack S70.

d) One (1) ethanol loading system, identified as EU037, constructed in 2007, modified in 2010, and approved in 2019 for modification, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr, and exhausting to stack S50.

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

e) Ethanol and denaturant storage tanks, including the following:

(1) One (1) off spec tank for 190-proof ethanol, identified as T65, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons.

(2) One (1) tank for 200-proof ethanol, identified as T63, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of 200-proof ethanol.

(3) One (1) denatured ethanol tank, identified as T61, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(4) One (1) denatured ethanol tank, identified as T62, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(5) One (1) denaturant tank, identified as T64, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 are considered affected facilities.

(f) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
One (1) corn oil loadout station, constructed in 2010 and approved in 2019 for modification, identified as corn oil loadout, with a maximum throughput rate of 2,500,000 gallons per year.

Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(12), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>SO$_2$</th>
<th>NO$_x$</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP</th>
<th>Total HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTE Before Modification (Fermentation Process (EU010 - EU021))</td>
<td>48.75</td>
<td>56.25</td>
<td>56.25</td>
<td>-</td>
<td>-</td>
<td>3,408.75</td>
<td>-</td>
<td>12.48</td>
<td>13.95</td>
</tr>
<tr>
<td>PTE After Modification (Fermentation Process (EU010 - EU021))</td>
<td>50.21</td>
<td>50.21</td>
<td>50.21</td>
<td>-</td>
<td>-</td>
<td>1,786.31</td>
<td>-</td>
<td>4.47</td>
<td>5.16</td>
</tr>
<tr>
<td>PTE Increase (Fermentation Process (EU010 - EU021))</td>
<td>1.46</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PTE Before Modification (Distillation, Dryers, and TOs (C9203 and C9303))</td>
<td>490.56</td>
<td>490.56</td>
<td>490.56</td>
<td>111.54</td>
<td>367.15</td>
<td>2,452.80</td>
<td>2,452.80</td>
<td>56.41</td>
<td>275.62</td>
</tr>
<tr>
<td>PTE After Modification (Distillation, Dryers, and TOs (C9203 and C9303))</td>
<td>703.88</td>
<td>703.88</td>
<td>703.88</td>
<td>1.61</td>
<td>204.11</td>
<td>1,321.66</td>
<td>1,763.45</td>
<td>31.21</td>
<td>111.89</td>
</tr>
<tr>
<td>PTE Increase (Distillation, Dryers, and TOs (C9203 and C9303))</td>
<td>213.32</td>
<td>213.32</td>
<td>213.32</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PTE Before Modification (DDGS Cooler Bypass (C70))</td>
<td>750.86</td>
<td>750.86</td>
<td>750.86</td>
<td>-</td>
<td>-</td>
<td>28.91</td>
<td>-</td>
<td>0.74</td>
<td>1.40</td>
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<tr>
<td>PTE After Modification (DDGS Cooler Bypass (C70))</td>
<td>750.86</td>
<td>750.86</td>
<td>750.86</td>
<td>-</td>
<td>-</td>
<td>13.36</td>
<td>-</td>
<td>0.74</td>
<td>1.40</td>
</tr>
<tr>
<td>PTE Increase (DDGS Cooler Bypass (C70))</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
## PTE Increase of the Modified Emission Unit(s)/Process(es) (ton/year)

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM₁₀</th>
<th>PM₂.₅¹</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP²</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTE Before Modification (Ethanol Loadout and Flare (C50))</td>
<td>8.16E-04</td>
<td>3.26E-03</td>
<td>3.26E-03</td>
<td>2.58E-04</td>
<td>3.74</td>
<td>321.63</td>
<td>20.13</td>
<td>-</td>
<td>103.70</td>
</tr>
<tr>
<td>PTE After Modification (Ethanol Loadout and Flare (C50))</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>3.79</td>
<td>2,563.31</td>
<td>1.20</td>
<td>-</td>
<td>149.11</td>
</tr>
<tr>
<td>PTE Increase (Ethanol Loadout and Flare (C50))</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.05</td>
<td>2,241.68</td>
<td>0.00</td>
<td>0.00</td>
<td>45.41</td>
</tr>
<tr>
<td>PTE Before Modification (Storage Tanks (T61 - T65))</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2.98</td>
<td>-</td>
<td>3.24E-04</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>PTE After Modification (Storage Tanks (T61 - T65))</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>41.44</td>
<td>-</td>
<td>5.74E-03</td>
<td>0.96</td>
<td></td>
</tr>
<tr>
<td>PTE Increase (Storage Tanks (T61 - T65))</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>38.46</td>
<td>0.00</td>
<td>5.41E-03</td>
<td>0.88</td>
</tr>
<tr>
<td>PTE Before Modification (Corn Oil Loadout)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.02</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PTE After Modification (Corn Oil Loadout)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.05</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PTE Increase (Corn Oil Loadout)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total PTE Increase of the Modified Emission Unit(s)/Process</td>
<td>214.78</td>
<td>213.32</td>
<td>213.32</td>
<td>0.00</td>
<td>0.05</td>
<td>2,280.17</td>
<td>0.00</td>
<td>0.00</td>
<td>46.29</td>
</tr>
</tbody>
</table>

¹PM₂.₅ listed is direct PM₂.₅.
²Single 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(g)(4), a Significant Source Modification is required because this modification has the potential to emit PM, PM₁₀, direct PM₂.₅, and VOC at equal to or greater than twenty-five (25) tons per year.

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

(b) Approval to Operate

Pursuant to 326 IAC 2-7-12(d)(1), this change to the permit is being made through a Significant Permit Modification because this modification does not qualify as a Minor Permit Modification or as an Administrative Amendment.
For the purposes of this permitting action, the Significant Permit Modification has been combined with the current Part 70 Operating Permit Renewal. Therefore, operation is not approved until the Part 70 Operating Permit Renewal has been issued.

### Permit Level Determination – PSD

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

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM&lt;sub&gt;10&lt;/sub&gt;</th>
<th>PM&lt;sub&gt;2.5&lt;/sub&gt;</th>
<th>SO&lt;sub&gt;2&lt;/sub&gt;</th>
<th>NO&lt;sub&gt;X&lt;/sub&gt;</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fermentation Process (EU010 - EU021)</td>
<td>50.21</td>
<td>50.21</td>
<td>50.21</td>
<td>-</td>
<td>-</td>
<td>102.49</td>
<td>-</td>
</tr>
<tr>
<td>Distillation, Dryers and TOs (C9203 and C9303)</td>
<td>72.27</td>
<td>72.27</td>
<td>72.27</td>
<td>1.61</td>
<td>204.11</td>
<td>56.94</td>
<td>169.51</td>
</tr>
<tr>
<td>DDGS Cooler Bypass (C70)</td>
<td>11.39</td>
<td>11.39</td>
<td>11.39</td>
<td>-</td>
<td>-</td>
<td>11.33</td>
<td>-</td>
</tr>
<tr>
<td>Ethanol Loadout and Flare (C50)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.79</td>
<td>5.03</td>
<td>1.20</td>
<td>-</td>
</tr>
<tr>
<td>Storage Tanks (T61 - T65)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>41.44</td>
<td>-</td>
</tr>
<tr>
<td>Corn Oil Loadout</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.05</td>
<td>-</td>
</tr>
<tr>
<td>Total for Modification</td>
<td>133.86</td>
<td>133.86</td>
<td>133.86</td>
<td>1.61</td>
<td>207.90</td>
<td>217.28</td>
<td>170.71</td>
</tr>
</tbody>
</table>

1PM<sub>2.5</sub> listed is direct PM<sub>2.5</sub>.

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 modification. See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) for more information regarding the limit(s).

(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.

### Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

| Potential To Emit of the Entire Source After Issuance of Renewal (tons/year) |
|-----------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                              | PM<sup>1</sup> | PM<sub>10</sub> | PM<sub>2.5</sub><sup>1,2</sup> | SO<sub>2</sub> | NO<sub>X</sub> | VOC | CO | Single HAP<sup>3</sup> | Total HAPs |
| Total PTE of Entire Source Excluding Fugitive Emissions* | 212.33 | 197.17 | 192.95 | 2.90 | 210.55 | 218.19 | 171.29 | 9.78 | 17.77 |
| Title V Major Source Thresholds              | NA    | 100  | 100  | 100  | 100  | 100  | 10  | 25  |
### Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)

<table>
<thead>
<tr>
<th>PM¹</th>
<th>PM_{10}¹</th>
<th>PM_{2.5}^{1,2}</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

¹Under 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."

²PM_{2.5} listed is direct PM_{2.5}.

³Single highest source-wide HAP (acetaldehyde).

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

Appendix A of this TSD reflects the detailed potential to emit of the entire source after issuance.

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

(a) This existing 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 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. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

#### Federal Rule Applicability

Federal rule applicability for this source has been reviewed as follows:

**New Source Performance Standards (NSPS):**

(a) The two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, are subject to the New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Db and 326 IAC 12, because these are steam generating units that commenced construction after June 19, 1984, and each has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 million British thermal units per hour (MMBtu/hr).

The two (2) thermal oxidizers are subject to the following portions of Subpart Db.

1. 40 CFR 60.40b(a), (g), and (j)
2. 40 CFR 60.41b
3. 40 CFR 60.42b(e), (g), and (k)
4. 40 CFR 60.44b(a), (e), (f), (h), (i), (l)(1), and (l)(2)
5. 40 CFR 60.45b(a), (b), (c)(1), (f), (g), and (h)
6. 40 CFR 60.46b(a), (c), (e)(1), and (e)(4)
7. 40 CFR 60.47b
8. 40 CFR 60.48b(b)(1), (c), (d), (e)(2), (e)(3), (f), and (g)
9. 40 CFR 60.49b(a), (a)(1) through (a)(3), (b) through (d), (g), (h)(2), (h)(4), (i), (j), (k), (o), (v), and (w)
The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the thermal oxidizers with heat recovery steam generator (TO/HRSG) systems except as otherwise specified in 40 CFR 60, Subpart Db.

(b) The five (5) storage tanks, identified as T61, T62, T63, T64, and T65, are subject to the New Source Performance Standards for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984, 40 CFR 60, Subpart Kb and 326 IAC 12, because each is a storage vessel with a capacity greater than or equal to 75 cubic meters (m3) that is used to store volatile organic liquids (VOL) for which construction commenced after July 23, 1984.

The five (5) storage tanks, identified as T61, T62, T63, T64, and T65, are subject to the following portions of Subpart Kb.

1. 40 CFR 60.110b
2. 40 CFR 60.111b
3. 40 CFR 60.112b(a)(1)
4. 40 CFR 60.113b(a)
5. 40 CFR 60.115b(a)
6. 40 CFR 60.116b(a) through (e)
7. 40 CFR 60.117b

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

(c) The one (1) fermentation process, the one (1) distillation process, and the one (1) ethanol loading system, identified as EU037, are subject to the New Source Performance Standards for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, 40 CFR 60, Subpart VVa and 326 IAC 12, because these are affected facilities in the synthetic organic chemicals manufacturing industry that commenced construction after November 7, 2006 and are involved in the production of ethanol, which is a listed chemical under 40 CFR 60.489.

The one (1) fermentation process, the one (1) distillation process, and the one (1) ethanol loading system, identified as EU037, is subject to the following portions of Subpart VVa.

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

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the fermentation process, the distillation process, and the ethanol loading system except as otherwise specified in 40 CFR 60, Subpart VVa.

(d) The diesel-fired fire pump, identified as EU038, is subject to the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII and 326 IAC 12, because it is a stationary compression ignition (CI) internal combustion engine (ICE) that commenced construction after July 11, 2005.

The diesel-fired fire pump, identified as EU038, is subject to the following portions of Subpart IIII.

(1) 40 CFR 60.4200(a)(1)(ii), (a)(2)(ii), and (a)(3)
(2) 40 CFR 60.4201(a)
(3) 40 CFR 60.4204(b)
(4) 40 CFR 60.4205(c)
(5) 40 CFR 60.4206
(6) 40 CFR 60.4207(a), (b) and (c)
(7) 40 CFR 60.4208
(8) 40 CFR 60.4209
(9) 40 CFR 60.4211(a) and (c)
(10) 40 CFR 60.4212(a), (b) and (c)
(11) 40 CFR 60.4214(b) and (c)
(12) 40 CFR 60.4218
(13) 40 CFR 60.4219
(14) Table 3 to Subpart IIII
(15) Table 4 to Subpart IIII
(16) Table 5 to Subpart IIII
(17) Table 6 to Subpart IIII
(18) Table 8 to Subpart IIII

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

Based on this evaluation, this source is subject to 40 CFR 60, Subpart IIII. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 60.4211(f)(2)(ii) - (iii) of NSPS Subpart IIII. Therefore, these paragraphs no longer have any legal effect and any engine that is operated for purposes specified in these paragraphs becomes a non-emergency engine and must comply with all applicable requirements for a non-emergency engine.

For additional information, please refer to the USEPA’s Guidance Memo: [https://www.epa.gov/sites/production/files/2016-06/documents/ricevacaturguidance041516.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/ricevacaturguidance041516.pdf)

Since the federal rule has not been updated to remove these vacated requirements, the text below shows the vacated language as strikethrough text. At this time, IDEM is not making any changes to the permit’s attachment due to this vacatur. However, the permit will not reference the vacated requirements, as applicable.

40 CFR 60.4211(f)(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

The requirements of the New Source Performance Standard for Fossil-Fuel-Fired Steam Generators, 40 CFR 60, Subpart D and 326 IAC 12, are not included in the permit for the two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, because each has a maximum heat input rate of less than 250 MMBtu/hr.

The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc and 326 IAC 12, are not included in the permit for the two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, because each has a maximum heat input rate of less than 100 MMBtu/hr.

The requirements of the New Source Performance Standard for Grain Elevators, 40 CFR 60, Subpart DD and 326 IAC 12, are not included in the permit for this source, because the source does not have a grain elevator which has a permanent storage capacity of more than 88,100 m³ (ca. 2.5 million U.S. bushels)

The requirements of the New Source Performance Standard for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006, 40 CFR 60, Subpart VV and 326 IAC 12, are not included in the permit for the one (1) fermentation process, the one (1) distillation process, and the one (1) ethanol loading system, identified as EU037, because these facilities commenced construction after November 7, 2006.

The requirements of the New Source Performance Standard for Bulk Gasoline Terminals, 40 CFR 60, Subpart XX and 326 IAC 12, are not included in the permit for this source, because the source is not a bulk gasoline terminal, as defined in 40 CFR 60.501.

The requirements of the New Source Performance Standard for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, 40 CFR 60, Subpart NNN and 326 IAC 12, are not included in the permit for this source, because, while ethanol is one of the chemicals listed in 40 CFR 60.667, according to the EPA memo from Mr. George T. Czerniak dated December 6, 2002, the manufacture of ethanol using a fermentation process (biological synthesis) was excluded from the scope of 40 CFR 60, Subpart NNN.

The requirements of the New Source Performance Standard for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor
Processes, 40 CFR 60, Subpart RRR and 326 IAC 12, are not included in the permit for this source, because, while ethanol is one of the chemicals listed in 40 CFR 60.707, according to the EPA memo from Mr. George T. Czerniak dated December 6, 2002, the manufacture of ethanol using a fermentation process (biological synthesis) was excluded from the scope of 40 CFR 60, Subpart RRR.

(l) The requirements of the New Source Performance Standard for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ and 326 IAC 12, are not included in the permit for the diesel-fired fire pump, identified as EU038, because it is not a stationary spark ignition (SI) internal combustion engines (ICE).

(m) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(b) The diesel-fired fire pump, identified as EU038, is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ, which is incorporated by reference as 326 IAC 20-82, because it is a stationary RICE at a major source of HAP emissions that commenced construction after June 12, 2006.

The diesel-fired fire pump, identified as EU038, is subject to the following portions of Subpart ZZZZ:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(2)(ii) and (c)(1)
(4) 40 CFR 63.6595(a)(6)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675

Pursuant to 40 CFR 63.6665, the diesel-fired fire pump, identified as EU038, does not have to meet the requirements of 40 CFR 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at an area source of HAP emissions.

Based on this evaluation, this source is subject to 40 CFR 63, Subpart ZZZZ. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 63.6640(f)(2)(ii) - (iii) of NESHAP Subpart ZZZZ. Therefore, these paragraphs no longer have any legal effect and any engine that is operated for purposes specified in these paragraphs becomes a non-emergency engine and must comply with all applicable requirements for a non-emergency engine.

For additional information, please refer to the USEPA’s Guidance Memo:

Since the federal rule has not been updated to remove these vacated requirements, the text below shows the vacated language as strikethrough text. At this time, IDEM is not making any changes to the permit’s attachment due to this vacatur. However, the permit will not reference the vacated requirements, as applicable.

40 CFR 63.6640(f)(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(b) The gasoline fuel transfer dispensing operation is subject to the National Emission Standards for Hazardous Air Pollutants for Gasoline-Dispensing Facilities, 40 CFR 63, Subpart CCCCCC, because it is a gasoline dispensing facility (GDF) located at an area source of HAP emissions.

The gasoline fuel transfer dispensing operation is subject to the following portions of Subpart CCCCCC:

(1) 40 CFR 63.111110
(2) 40 CFR 63.111111(a), (b), (e), (h), (i), and (j)
(3) 40 CFR 63.111112(a) and (b)
(4) 40 CFR 63.111113(a)(2)
(5) 40 CFR 63.111115
(6) 40 CFR 63.111116
(7) 40 CFR 63.111125(d)
(8) 40 CFR 63.111330
(9) 40 CFR 63.111331
(10) Table 3 to Subpart CCCCCC

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the gasoline fuel transfer dispensing operation except as otherwise specified in 40 CFR 63, Subpart CCCCCC.

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, 40 CFR 63, Subpart F and 326 IAC 20-11 are not included in the permit for this source, because it manufactures ethanol as a primary product, which is not one or more of the chemicals listed in 40 CFR 63.100(b)(1)(i) and (b)(1)(ii).

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, 40 CFR 63, Subpart G and 326 IAC 20-11 are not included in the permit for this source, because it manufactures ethanol as a primary product, which is not one or more of the chemicals listed in 40 CFR 63.100(b)(1)(i) and (b)(1)(ii).

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Organic Hazardous Air Pollutants for Equipment Leaks, 40 CFR 63, Subpart H and 326 IAC
20-11 are not included in the permit for this source, because it manufactures ethanol as a primary product, which is not one or more of the chemicals listed in 40 CFR 63.100(b)(1)(i) and (b)(1)(ii).

\( f \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks, 40 CFR 63, Subpart I are not included in the permit for this source, because it does not manufacture any of the materials listed in 40 CFR 63.190(b)(1) through (b)(6).

\( g \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial Process Cooling Towers, 40 CFR 63, Subpart Q and 326 IAC 20-4 are not included in the permit for this source, because the source will take limits to remain an area source for HAP emissions.

\( h \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations), 40 CFR 63, Subpart R and 326 IAC 20-10 are not included in the permit for this source, because the source will take limits to remain an area source for HAP emissions.

\( i \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Tanks—Level 1, 40 CFR 63, Subpart OO and 326 IAC 20-35 are not included in the permit for this source, because there are no subparts of 40 CFR 60, 61, or 63 applicable to this source that reference Subpart OO.

\( j \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process, 40 CFR 63, Subpart SS and 326 IAC 20-39 are not included in the permit for this source, because there are no subparts of 40 CFR Part 63 that reference the use of Subpart SS.

\( k \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Equipment Leaks—Control Level 1, 40 CFR 63, Subpart TT and 326 IAC 20-40 are not included in the permit for this source, because there are no subparts of 40 CFR Part 63 that reference the use of Subpart TT.

\( l \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Equipment Leaks—Control Level 2 Standards, 40 CFR 63, Subpart UU and 326 IAC 20-41 are not included in the permit for this source, because there are no subparts of 40 CFR Part 63 that reference the use of Subpart UU.

\( m \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Storage Vessels (Tanks) - Control Level 2, 40 CFR 63, Subpart WW and 326 IAC 20-43 are not included in the permit for this source, because there are no subparts of 40 CFR Part 63 that reference the use of Subpart WW.

\( n \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Organic Liquids Distribution (Non-Gasoline), 40 CFR 63, Subpart EEEE and 326 IAC 20-83, are not included in the permit for this source, because the source will take limits to remain an area source for HAP emissions.

\( o \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Miscellaneous Organic Chemical Manufacturing, 40 CFR 63, Subpart FFFF and 326 IAC 20-84 are not included in the permit for this source, because the source will take limits to remain an area source for HAP emissions.

\( p \) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities, 40
CFR 63, Subpart BBBBBBB are not included in the permit for this source, since the source is not a bulk gasoline terminal, as defined in 40 CFR 63.11100.

(q) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Chemical Manufacturing Area Sources, 40 CFR 63, Subpart VVVVVV are not included in the permit for this source, because this source does not use as feedstock, any material that contains quinoline, manganese, and/or trivalent chromium at an individual concentration greater than 1.0 percent by weight, or any other Table 1 HAP at an individual concentration greater than 0.1 percent by weight. This is based on national test data submitted by the Iowa Renewable Fuels Association and verified by the Iowa Department of Natural Resources.

(r) There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included in the permit.

Compliance Assurance Monitoring (CAM):

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing 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 each 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>Grain Receiving and Handling / PM*</td>
<td>BH</td>
<td>326 IAC 6-3-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Grain Receiving and Handling / PM</td>
<td>BH</td>
<td>326 IAC 2-2</td>
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<td>-</td>
<td>N ²</td>
<td>-</td>
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<tr>
<td>Grain Receiving and Handling / PM10</td>
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<td>326 IAC 2-2</td>
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<td>N</td>
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<td>Grain Receiving and Handling / PM2.5</td>
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<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Grain Bin (EU003a) / PM*</td>
<td>BH</td>
<td>326 IAC 6-3-2</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Grain Bin (EU003a) / PM</td>
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<td>-</td>
<td>N ²</td>
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<tr>
<td>Grain Bin (EU003a) / PM10</td>
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<td>&lt;100</td>
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<td>N</td>
</tr>
<tr>
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<td>&lt;100</td>
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</tr>
<tr>
<td>Hammermills (EU006-EU009) / PM*</td>
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<td>&lt;100</td>
<td>Y</td>
<td>N</td>
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<tr>
<td>Hammermills (EU006-EU009) / PM</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>-</td>
<td>-</td>
<td>N ²</td>
<td>-</td>
</tr>
<tr>
<td>Emission Unit/Pollutant</td>
<td>Control Device</td>
<td>Applicable Emission Limitation</td>
<td>Uncontrolled PTE (tons/year)</td>
<td>Controlled PTE (tons/year)</td>
<td>CAM Applicable (Y/N)</td>
<td>Large Unit (Y/N)</td>
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<tr>
<td>Hammermills (EU006-EU009) / PM10</td>
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<td>&lt;100</td>
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<td>Hammermills (EU006-EU009) / PM2.5</td>
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<td>&gt;100</td>
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<td>N</td>
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<tr>
<td>Distillation and Dryers / PM*</td>
<td>TO/HRSG</td>
<td>326 IAC 6-3-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / PM</td>
<td>TO/HRSG</td>
<td>326 IAC 2-2</td>
<td>-</td>
<td>-</td>
<td>N  2</td>
<td>-</td>
</tr>
<tr>
<td>Distillation and Dryers / PM10</td>
<td>TO/HRSG</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / PM2.5</td>
<td>TO/HRSG</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / VOC</td>
<td>TO/HRSG</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / Acetaldehyde</td>
<td>TO/HRSG</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / Acrolein</td>
<td>TO/HRSG</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / Formaldehyde</td>
<td>TO/HRSG</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / Methanol</td>
<td>TO/HRSG</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Cooling Drum (EU033) / PM*</td>
<td>BH</td>
<td>326 IAC 6-3-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Cooling Drum (EU033) / PM</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>-</td>
<td>-</td>
<td>N  2</td>
<td>-</td>
</tr>
<tr>
<td>DDGS Cooling Drum (EU033) / PM10</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Cooling Drum (EU033) / PM2.5</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Loadout Operation (EU036) / PM*</td>
<td>BH</td>
<td>326 IAC 6-3-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Loadout Operation (EU036) / PM</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>-</td>
<td>-</td>
<td>N  2</td>
<td>-</td>
</tr>
<tr>
<td>DDGS Loadout Operation (EU036) / PM10</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Loadout Operation (EU036) / PM2.5</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Ethanol Loading System (EU037) / VOC</td>
<td>VCU</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Ethanol Loading System (EU037) / Hexane</td>
<td>VCU</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Ethanol Loading System (EU037) / Toluene</td>
<td>VCU</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. The 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. Under the Part 70 Permit program (40 CFR 70), PM is not a regulated pollutant.

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.
Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are applicable to the one (1) grain receiving and handling operation, the one (1) permanent grain storage bin, identified as EU003a, the four (4) hammermills, identified as EU006, EU007, EU008, and EU009, the one (1) fermentation process, the one (1) distillation process, the one (1) DDGS cooling drum, identified as EU033, the one (1) DDGS loadout operation, identified as EU036, and the one (1) ethanol loading system, identified as EU037, for PM, PM10, PM2.5, VOC, acetaldehyde, acrolein, formaldehyde, methanol, hexane, and toluene. A CAM plan was submitted as part of a previous permit application and the Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements.

### State Rule Applicability - Entire Source

State rule applicability for this source 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 1-5-2 (Emergency Reduction Plans)**
The source is subject to 326 IAC 1-5-2.

**326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)**
PSD and Emission Offset applicability is discussed under the Potential to Emit After Issuance section of this document.

**PSD Minor Source Limits**

**Grain Receiving and Handling, Grain Bin, and Hammermills**

(a) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM, PM10, and PM2.5 emissions from the following emission units shall be less than the following emission limits:

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit Description</th>
<th>Baghouse ID</th>
<th>PM Emission Limit (lbs/hr)</th>
<th>PM10 Emission Limit (lbs/hr)</th>
<th>PM2.5 Emission Limit (lbs/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003, EU004, EU005</td>
<td>Grain Receiving and Handling (Conveyors, Storage Bins, Corn Scalpers, and Surge Bin)</td>
<td>C20</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>EU006, EU007, EU008, EU009</td>
<td>Hammermills #1- #4</td>
<td>C30</td>
<td>1.44</td>
<td>1.44</td>
<td>1.44</td>
</tr>
<tr>
<td>Unit ID</td>
<td>Unit Description</td>
<td>Baghouse ID</td>
<td>PM Emission Limit (lbs/hr)</td>
<td>PM10 Emission Limit (lbs/hr)</td>
<td>PM2.5 Emission Limit (lbs/hr)</td>
</tr>
<tr>
<td>---------</td>
<td>------------------</td>
<td>-------------</td>
<td>----------------------------</td>
<td>----------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>EU034, EU036</td>
<td>DDGS storage silo, DDGS loadout operations</td>
<td>C90</td>
<td>9.3</td>
<td>9.3</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Note: PM10 = PM2.5

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit Description</th>
<th>Baghouse ID</th>
<th>PM Emission Limit (lbs/ton grain)</th>
<th>PM10 Emission Limit (lbs/ton grain)</th>
<th>PM2.5 Emission Limit (lbs/ton grain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU003a</td>
<td>Permanent Grain Storage Bin</td>
<td>n/a</td>
<td>0.025</td>
<td>0.0063</td>
<td>0.0011</td>
</tr>
</tbody>
</table>

(b) The total grain received shall be less than 1,622,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The Permittee shall use a choked flow system during grain receiving and handling.

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

**Fermentation Process**

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

(a) VOC emissions from the fermentation process shall not exceed 23.4 pounds per hour.

Compliance with the VOC limit, in combination with the potential to emit VOC from other units, shall limit the VOC emissions from the entire source 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.

**Distillation, Dryers, and Thermal Oxidizers**

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

(a) PM emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.

(b) PM10 emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.

(c) PM2.5 emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.

(d) VOC emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 13.0 lbs/hr.

(e) CO emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 38.7 lbs/hr.
(f) The total DDGS produced shall be less than 490,560 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

**DDGS Cooling Drum**

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following for the DDGS cooling drum (EU033):

(a) PM emissions shall be less than 2.6 lbs/hr.
(b) PM<sub>10</sub> emissions shall be less than 2.6 lbs/hr.
(c) PM<sub>2.5</sub> emissions shall be less than 2.6 lb/hr.
(d) The VOC emissions from baghouse stack S70 shall be less than 0.1 pounds per ton of DDGS produced in the DDGS cooling drum (EU033).
(e) The total DDGS produced shall be less than 490,560 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits, in combination with the potential to emit PM, PM10, PM2.5, and VOC from other units at the source, shall limit the PM, PM10, PM2.5, and VOC emissions from the entire source to less than 250 tons per twelve consecutive month period each and render the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable.

**Ethanol Loading System**

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

(a) The denatured ethanol load-out from the ethanol loading system (EU037) shall not exceed 165,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) VOC emissions from VCU CE009 shall not exceed 0.061 lbs/kgal of denatured ethanol loaded.

Compliance with these limits, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide total potential to emit of VOC to less than 250 tons per twelve (12) consecutive month 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(jj) 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 operation of this source will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

**Fermentation Process**

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

(a) Acetaldehyde emissions from the fermentation process shall not exceed 1.37 lbs/hr.

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

**Distillation, Dryers, and Thermal Oxidizers**

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

(a) Acetaldehyde emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.38 lbs/hr.
(b) Acrolein emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.33 lb/hr.
(c) Formaldehyde emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.52 lbs/hr.
(d) Methanol emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.33 lb/hr.
(e) Total HAP emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 1.56 lbs/hr.

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

**Ethanol Loading System**

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

(a) Hexane emissions from VCU CE009 shall not exceed 0.00303 lbs/kgal of denatured ethanol loaded.
(b) Toluene emissions from VCU CE009 shall not exceed 0.000363 lbs/kgal of denatured ethanol loaded.
(c) Total HAPs emissions from VCU CE009 shall not exceed 0.00355 lbs/kgal of denatured ethanol loaded.
Compliance with the HAP limit, in combination with the potential to emit HAP from other units, shall limit the HAP emissions from the entire source to less than ten (10) tons for any single HAP and less than twenty-five (25) for total HAPs per twelve (12) consecutive month period and render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable and shall render the source minor under Section 112 of the Clean Air Act (CAA).

326 IAC 2-6 (Emission Reporting)
This source, not located in Lake, Porter, or LaPorte County, is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM10 is less than 250 tons per year; and the potential to emit of CO, NOx, and SO2 is less than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 and every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 2-7-6(5) (Annual Compliance 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).

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source was constructed after December 13, 1985 and has potential fugitive particulate emissions of twenty-five (25) tons per year or more. Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan that is included as Attachment A to the permit.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a), this source (located in Wells County) is not subject to the requirements of 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8-1-1(a), this source (located in Wells County) is not subject to the requirements of 326 IAC 6.8 because it is not located in Lake County.
Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

\[ E = 4.10 P^{0.67} \]

where \( E \) = rate of emission in pounds per hour and
\( P \) = process weight rate in tons per hour

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit Description</th>
<th>Max. Throughput Rate (tons/hr)</th>
<th>Particulate Emission Limit (lbs/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003</td>
<td>Grain Receiving and Handling (Conveyors, and Storage Bins)</td>
<td>560</td>
<td>70.32</td>
</tr>
<tr>
<td>EU004, EU005</td>
<td>Corn Scalpers (each)</td>
<td>140</td>
<td>54.72</td>
</tr>
<tr>
<td>EU005</td>
<td>Surge Bin</td>
<td>171</td>
<td>56.83</td>
</tr>
<tr>
<td>EU006</td>
<td>Hammermill #1</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU007</td>
<td>Hammermill #2</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU008</td>
<td>Hammermill #3</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU009</td>
<td>Hammermill #4</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU034</td>
<td>DDGS storage silos</td>
<td>220</td>
<td>59.55</td>
</tr>
<tr>
<td>EU036</td>
<td>DDGS loadout operation</td>
<td>550</td>
<td>70.10</td>
</tr>
<tr>
<td>EU035</td>
<td>DDGS storage building</td>
<td>220</td>
<td>59.55</td>
</tr>
<tr>
<td>EU003a</td>
<td>Grain Bin</td>
<td>1,120</td>
<td>79.06</td>
</tr>
</tbody>
</table>

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

**Fermentation Process**

**326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 1-2-59, the one (1) fermentation process is exempt from the requirements of 326 IAC 6-3-2, since liquid and gaseous fuels and combustion air are not considered as part of the process weight rate.

**326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

The one (1) fermentation process is not subject to the requirements of 326 IAC 8-1-6 because it is regulated by other rules in 326 IAC 8. The one (1) fermentation process is subject to the requirements of 326 IAC 8-5-6.

**326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)**

Pursuant to 326 IAC 8-5-6(a), the source is subject to the requirements of 326 IAC 8-5-6, when the source is using whole kernel corn in the production of their ethanol. Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following when using only whole kernel corn to produce a meal that is then used in the production of fuel grade ethanol:

(a) The VOC emissions from the fermentation process shall be controlled by wet scrubber C40.

(b) A wet scrubber (C40) with an overall control efficiency of not less than ninety-eight percent (98%) or resulting in a volatile organic compound concentration of not more than twenty (20) parts per million (ppm).
Distillation, Dryers, and Thermal Oxidizers

326 IAC 3-5 (Continuous Emission Monitoring System)
The two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, are subject to the monitoring requirements of 326 IAC 3-5 because each is a fossil fuel-fired steam generator of greater than one hundred million (100,000,000) British thermal units (Btu) per hour heat input capacity. The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment for NOx emissions.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

\[ Pt = \frac{1.09}{Q^{0.26}} \]

Where:

- \( Pt \) = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).
- \( Q \) = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility’s permit application, except when some lower capacity is contained in the facility’s operation permit; in which case, the capacity specified in the operation.

<table>
<thead>
<tr>
<th>Indirect Heating Units Which Began Operation After September 21, 1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
</tr>
<tr>
<td>TO/HRSG Systems</td>
</tr>
<tr>
<td>Where: ( Q ) =</td>
</tr>
<tr>
<td>Note: Emission units shown in strikethrough were subsequently removed from the source. The effect of removing these units on ( Q ) is shown in the year the boiler was removed.</td>
</tr>
</tbody>
</table>

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, particulate emissions from each of the DDGS dryers (EU029 through EU032) shall be less than 45.64 pounds per hour when operating at a maximum throughput rate of 56 tons per hour.

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

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

\[ E = 55.0 P^{0.11} - 40 \]

where \( E \) = rate of emission in pounds per hour; and

\( P \) = process weight rate in tons per hour
326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The one (1) fermentation process is not subject to the requirements of 326 IAC 8-1-6 because it is regulated by other rules in 326 IAC 8. The one (1) fermentation process is subject to the requirements of 326 IAC 8-5-6.

326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)
Pursuant to 326 IAC 8-5-6(a), the source is subject to the requirements of 326 IAC 8-5-6, when the source is using whole kernel corn in the production of their ethanol. Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following when using only whole kernel corn to produce a meal that is then used in the production of fuel grade ethanol:

(a) The VOC emissions from the DDGS Dryers and distillation process shall be controlled by thermal oxidizers (C9203 and C9303).

(b) A thermal oxidizer (C9203 and C9303) with an overall control efficiency of not less than ninety-eight percent (98%) or resulting in a volatile organic compound concentration of not more than ten (10) parts per million (ppm).

DDGS Cooling Drum and Loadout Operation

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, particulate emissions from the one (1) DDGS cooling drum, identified as EU033, shall be less than 47.20 pounds per hour when operating at the maximum process throughput rate of 66 per hour.

The pound per hour limitation was calculated using the following equation:

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

\[ E = 55.0 P^{0.11} - 40 \]

where \( E \) = rate of emission in pounds per hour; and
\( P \) = process weight rate in tons per hour

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The one (1) DDGS cooling drum, identified as EU033, is not subject to the requirements of 326 IAC 8-1-6, because it has potential VOC emissions of less than twenty-five (25) tons per year.

Ethanol Loading System

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The one (1) ethanol loading system, identified as EU037, is not subject to the requirements of 326 IAC 8-1-6 because it is regulated by other rules in 326 IAC 8. The one (1) ethanol loading system, identified as EU037, is subject to the requirements of 326 IAC 8-5-6.

326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)
Pursuant to 326 IAC 8-5-6(a), the source is subject to the requirements of 326 IAC 8-5-6, when the source is using whole kernel corn in the production of their ethanol. Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following when using only whole kernel corn to produce a meal that is then used in the production of fuel grade ethanol:

(a) The VOC emissions from the ethanol loadout shall be collected and controlled by an enclosed vapor combustion unit (VCU) (C50) when loading denatured ethanol.

(b) An enclosed vapor combustion unit (VCU) (C50) with an overall control efficiency of not less than ninety-eight percent (98%).
Diesel-Fired Fire Pump

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The one (1) diesel-fired fire pump, identified as EU038, is not subject to the requirements of 326 IAC 6-2 since it is not a source of indirect heating.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 1-2-59, the one (1) diesel-fired fire pump, identified as EU038, is exempt from the requirements of 326 IAC 6-3-2, since liquid and gaseous fuels and combustion air are not considered as part of the process weight rate.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
The one (1) diesel-fired fire pump, identified as EU038, is not subject to the requirements of 326 IAC 7-1.1, because it has unlimited SO₂ potential emissions of less than twenty-five (25) tons per year, and ten (10) pounds per hour.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The one (1) diesel-fired fire pump, identified as EU038, is not subject to the requirements of 326 IAC 8-1-6, because it has potential VOC emissions of less than twenty-five (25) tons per year.

Space Heaters

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

\[ Pt = \frac{1.09}{Q^{0.26}} \]

Where:

- \( Pt \) = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).
- \( Q \) = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility’s permit application, except when some lower capacity is contained in the facility’s operation permit; in which case, the capacity specified in the operation.

<table>
<thead>
<tr>
<th>Indirect Heating Units Which Began Operation After September 21, 1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Kerosene-Fired Space Heaters</td>
</tr>
</tbody>
</table>
### Indirect Heating Units Which Began Operation After September 21, 1983

<table>
<thead>
<tr>
<th>Facility</th>
<th>Construction Date (Removal Date)</th>
<th>Operating Capacity (MMBtu/hr)</th>
<th>Q (MMBtu/hr)</th>
<th>Calculated Pt Limitation, Pt (lb/MMBtu)</th>
<th>Particulate Limitation, Pt (lb/MMBtu)</th>
<th>PM PTE based on AP-42 (lb/MMBtu)</th>
</tr>
</thead>
</table>

Where: \( Q = \) includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed.

Note: Emission units shown in strikethrough were subsequently removed from the source. The effect of removing these units on “Q” is shown in the year the boiler was removed.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 1-2-59, the three (3) kerosene-fired space heaters, are exempt from the requirements of 326 IAC 6-3, since liquid and gaseous fuels and combustion air are not considered as part of the process weight rate.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
The three (3) kerosene-fired space heaters, are not subject to the requirements of 326 IAC 7-1.1, because the unlimited SO₂ potential emissions are less than twenty-five (25) tons/year, and ten (10) pounds/hour.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The three (3) kerosene-fired space heaters, are not subject to the requirements of 326 IAC 8-1-6, because the unlimited VOC potential emissions are less than twenty-five (25) tons per year.

Storage Tanks

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
(a) The one (1) denaturant tank, identified as T64, is not subject to the requirements of 326 IAC 8-1-6 because is regulated by other rules in 326 IAC 8. The one (1) denaturant tank, identified as T64, is subject to the requirements of 326 IAC 8-4-3.

(b) The four (4) storage tanks, identified as T61, T62, T63, and T65 are not subject to the requirements of 326 IAC 8-1-6 because the unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
The one (1) denaturant tank, identified as T64, is subject to the requirements of 326 IAC 8-4-3, because the vessel, with a maximum capacity of 200,000 gallons, contains natural gasoline, which is a petroleum liquid.

(a) Pursuant to 326 IAC 8-4-3(b)(1) (Petroleum Liquid Storage Facilities), tank T64 is subject to the following:

1. The facility must be retrofitted with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall unless the source has been retrofitted with equally effective alternative control which has been approved.

2. The facility is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials.

3. All openings, except stub drains, are 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.

(b) Pursuant to 326 IAC 8-4-3(d) (Petroleum Liquid Storage Facilities), the Permittee shall maintain the following records for a period of two (2) years for tank T64:

(1) The types of volatile petroleum liquid stored;

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

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

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

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**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 source are as follows:

**Section D.1**

(1) In order to comply with 326 IAC 2-2 and 326 IAC 6-3-2, each of the following emission units shall be controlled by the associated baghouse, as listed in the table below, at all times these units are in operation:
<table>
<thead>
<tr>
<th>Emission Unit ID</th>
<th>Emission Unit Description</th>
<th>Baghouse ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003, EU004, EU005</td>
<td>Grain Receiving and Handling (Conveyors, Storage Bins, Corn Scalpers, and Surge Bin)</td>
<td>C20</td>
</tr>
<tr>
<td>EU006, EU007, EU008, EU009</td>
<td>Hammermills #1- #4</td>
<td>C30</td>
</tr>
<tr>
<td>EU034, EU036</td>
<td>DDGS storage silo, DDGS Loadout</td>
<td>C90</td>
</tr>
</tbody>
</table>

(2) 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.

Section D.2

(1) In order to comply with 326 IAC 2-2, 326 IAC 2-4.1, and 326 IAC 8-5-6, wet scrubber C40 shall be in operation and control emissions from the fermentation process at all times the fermentation process is in operation.

(2) If compliance is demonstrated using the twenty (20) parts per million (ppm) VOC limit specified in 326 IAC 8-5-6, all VOC emissions from the fermentation process shall be routed to the wet scrubber, and that there are no open vents to the atmosphere between the fermentation process and the wet scrubber.

(3) Scrubber cleaning will be conducted only as prescribed in the preventative maintenance plan required under 326 IAC 2-7-5(12).

Section D.3

(1) In order to comply with 326 IAC 2-2, 326 IAC 2-4.1, and 326 IAC 8-5-6, at least one of the two (2) thermal oxidizers (C9203 and C9303) shall be in operation and control emissions from the DDGS dryers (EU029 through EU032) and the distillation process at all times of operation.

(2) If compliance is demonstrated with the 10 ppmv VOC outlet concentration specified in 326 IAC 8-5-6:

(A) all VOC emissions from the emission units in these processes shall be routed to the TO/HRSG systems,

(B) that there are no open vents to the atmosphere between the mashing, cooking, liquefaction, distillation and dehydration processes and the TO/HRSG systems, and

(C) that the DDGS dryers shall maintain negative pressure.
Section D.4

(1) In order to comply with 326 IAC 2-2 and 326 IAC 6-3-2, Baghouse C70 shall be in operation and control emissions from the DDGS cooling drum (EU033) at all times that this unit is in operation.

(2) 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.

Section D.5

(1) In order to comply with 326 IAC 2-2, 326 IAC 2-4.1 and 326 IAC 8-5-6, enclosed vapor combustion unit (VCU) (C50) shall be in operation and control emissions from the ethanol loading rack (EU037) at all times when this rack is in operation.

Testing Requirements:

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Control Device</th>
<th>Scenario ID</th>
<th>Timeframe for Testing or Date of Initial Valid Demonstration</th>
<th>Pollutant/Parameter</th>
<th>Frequency of Testing</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain Receiving and Handling, Hammermills, DDGS Handling, Storage, and Loadout Operations</td>
<td>Baghouses C20, C30, and C90</td>
<td>N/A</td>
<td>every five years</td>
<td>PM</td>
<td>every five years</td>
<td>326 IAC 2-2 326 IAC 6-3-2</td>
</tr>
<tr>
<td>Fermentation Process</td>
<td>Scrubber C40</td>
<td>Normal</td>
<td>120°</td>
<td>VOC</td>
<td>every five years</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acetaldehyde</td>
<td>every five years</td>
<td>326 IAC 2-4.1</td>
</tr>
<tr>
<td></td>
<td>AOS1</td>
<td>120°</td>
<td>VOC</td>
<td>every five years</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acetaldehyde</td>
<td>every five years</td>
<td>326 IAC 2-4.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AOS2</td>
<td>120°</td>
<td>VOC</td>
<td>every five years</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acetaldehyde</td>
<td>every five years</td>
<td>326 IAC 2-4.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AOS3</td>
<td>120°</td>
<td>VOC</td>
<td>every five years</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acetaldehyde</td>
<td>every five years</td>
<td>326 IAC 2-4.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AOS4</td>
<td>120°</td>
<td>VOC</td>
<td>every five years</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acetaldehyde</td>
<td>every five years</td>
<td>326 IAC 2-4.1</td>
<td></td>
</tr>
<tr>
<td>Thermal</td>
<td>Stack S10</td>
<td>N/A</td>
<td>every five years</td>
<td>PM</td>
<td>every five</td>
<td>326 IAC 2-2</td>
</tr>
</tbody>
</table>
**Oxidizers, Distillation Process, and DDGS Dryers**

<table>
<thead>
<tr>
<th>Pollutant Monitored</th>
<th>Sampling Frequency</th>
<th>Applicable Rule or Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM10 and PM2.5</td>
<td>every five years</td>
<td>326 IAC 6-2-4, 326 IAC 6-3-2</td>
</tr>
<tr>
<td>VOC</td>
<td>every five years</td>
<td>326 IAC 2-2</td>
</tr>
<tr>
<td>CO</td>
<td>every five years</td>
<td>326 IAC 2-2</td>
</tr>
<tr>
<td>Acetaldehyde, Acrolein, Formaldehyde, and Methanol</td>
<td>every five years</td>
<td>326 IAC 2-4.1</td>
</tr>
</tbody>
</table>

**DDGS Cooling Drum**

- **Baghouse C70**
  - Sampling Frequency: every five years
  - Applicable Rule: PM
  - 326 IAC 2-2, 326 IAC 6-3-2

- **Enclosed Vapor Combustor Unit (VCU) C50**
  - Sampling Frequency: every five years
  - Pollutant Monitored: VOC, 120* Hexane and Toluene
  - Applicable Rule: 326 IAC 2-2, 326 IAC 8-5-6

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*No later than 120 days from the issuance of this renewal.

1The source last performed this testing on November 10, 2015.
2The source last performed this testing on March 29, 2016.
3The source last performed this testing on November 11, 2015.
4The source last performed this testing on September 4, 2015.
5The source last performed this testing on February 10, 2016.

**Continuous Emissions Monitoring System (CEMS) and Continuous Opacity Monitoring (COM) Requirements:**

<table>
<thead>
<tr>
<th>Control Device</th>
<th>Type of Continuous Monitor (Pollutant Monitored)</th>
<th>Applicable Rule or Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Oxidizers</td>
<td>CEMS (NOx)</td>
<td>326 IAC 3-5, 326 IAC 2-7-6(1),(6), 40 CFR 60 (NSPS)</td>
</tr>
</tbody>
</table>

(b) The Compliance Monitoring Requirements applicable to this source are as follows:

<table>
<thead>
<tr>
<th>Control Device</th>
<th>Scenario ID</th>
<th>Type of Parametric Monitoring</th>
<th>Frequency</th>
<th>Range or Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stacks S20, S30, and S90</td>
<td>N/A</td>
<td>Visible emission notations</td>
<td>Daily</td>
<td>Verify whether emissions are normal or abnormal</td>
</tr>
<tr>
<td>Scrubber C40</td>
<td>Normal</td>
<td>Pressure drop monitoring</td>
<td>Daily</td>
<td>Within normal range of 1.0 to 20.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test</td>
</tr>
<tr>
<td>Control Device</td>
<td>Scenario ID</td>
<td>Type of Parametric Monitoring</td>
<td>Frequency</td>
<td>Range or Specification</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
<td>------------------------------</td>
<td>-----------</td>
<td>-----------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber water flow rate monitoring</td>
<td>Daily</td>
<td>At or above 84.7 gallons/minute from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber HAP control additive flow rate monitoring</td>
<td>Daily</td>
<td>At or above 504 mL/min from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td>AOS1</td>
<td></td>
<td>Pressure drop monitoring</td>
<td>Daily</td>
<td>Within normal range of 1.0 to 20.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber water flow rate monitoring</td>
<td>Daily</td>
<td>At or above 84.7 gallons/minute from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber HAP control additive flow rate monitoring</td>
<td>Daily</td>
<td>At or above 504 mL/min from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td>AOS2</td>
<td></td>
<td>Pressure drop monitoring</td>
<td>Daily</td>
<td>Within normal range of 1.0 to 20.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber water flow rate monitoring</td>
<td>Daily</td>
<td>At or above 84.7 gallons/minute from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber HAP control additive flow rate monitoring</td>
<td>Daily</td>
<td>At or above 504 mL/min from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td>Control Device</td>
<td>Scenario ID</td>
<td>Type of Parametric Monitoring</td>
<td>Frequency</td>
<td>Range or Specification</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------------</td>
<td>---------------------------------------------------------</td>
<td>------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure drop monitoring</td>
<td>Daily</td>
<td>Within normal range of 1.0 to 20.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test.</td>
</tr>
<tr>
<td>AOS3</td>
<td></td>
<td>Scrubber water flow rate monitoring</td>
<td>Daily</td>
<td>At or above 84.7 gallons/minute from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber HAP control additive flow rate monitoring</td>
<td>Daily</td>
<td>At or above 504 mL/min from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td>Stack S10</td>
<td>N/A</td>
<td>Visible emission notations</td>
<td>Daily</td>
<td>Verify whether emissions are normal or abnormal.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3-hour average oxidizer temperature monitoring</td>
<td>Continuous</td>
<td>At or above 1,517°F from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td>Thermal Oxidizers (C9203 and C9303)</td>
<td>N/A</td>
<td>Duct pressure or fan amperage monitoring</td>
<td>Continuous</td>
<td>Within normal range from permit issuance until stack test results are available, then within the normal range established in the most recent compliant stack test.</td>
</tr>
<tr>
<td>Stack S70</td>
<td>N/A</td>
<td>Visible emission notations</td>
<td>Daily</td>
<td>Verify whether emissions are normal or abnormal.</td>
</tr>
<tr>
<td>Enclosed Vapor Combustion Unit (VCU) C50</td>
<td>N/A</td>
<td>Presence of flame</td>
<td>Continuous</td>
<td>Presence of flame.</td>
</tr>
</tbody>
</table>

These monitoring conditions are necessary because the stacks S20, S30, and S90 for the grain receiving and handling operations (EU001 through EU005), the hammermills (EU006 through EU009), and the DDGS handling and loadout operations (EU034 through EU036), the scrubber C40 for the fermentation process, the stack S10 for the thermal oxidizers (C9203 and C9303), the thermal oxidizers (C9203 and C9303) for the distillation process, the stack S70 for the DDGS cooling drum (EU033), and the enclosed vapor combustion unit (VCU) C50 for the ethanol loading system (EU037) must operate properly to assure compliance with 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)), 326 IAC 6-3 (Particulate Emissions Limitations for Manufacturing Processes), and 326 IAC 8-5-6 (Fuel Grade Ethanol at Dry Mills).
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 were made to conditions contained previously issued permits/approvals (these changes may include Title I changes):

1. IDEM, OAQ has updated the emission unit descriptions in Conditions A.2 and A.4.
2. IDEM, OAQ has updated emission limits and compliance requirements in Sections D.1, D.2, D.3, D.4, and D.5.

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 July 3, 2019. Additional information was received on August 13, 2019.

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 179-41817-00033.

The operation of this stationary grain elevator and ethanol production plant shall be subject to the conditions of the attached proposed Part 70 Operating Permit Renewal No. T179-41632-00033.

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

IDEM Contact

(a) If you have any questions regarding this permit, please contact Andrew Belt, 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) 232-3217 or (800) 451-6027, and ask for Andrew Belt or (317) 232-3217.

(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: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

<table>
<thead>
<tr>
<th>Emission Unit (Control)</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
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<td>420.48</td>
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<tr>
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<td>50.21</td>
<td>-</td>
<td>-</td>
<td>1,786.31</td>
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<td>703.88</td>
<td>703.88</td>
<td>1.61</td>
<td>204.11</td>
<td>1,321.66</td>
<td>1,763.45</td>
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<td>750.86</td>
<td>750.86</td>
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<td>136.66</td>
<td>136.66</td>
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<tr>
<td>Wet Cake Storage*</td>
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<td>-</td>
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<td>See Note</td>
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<tr>
<td>Ethanol Loading System (EU037)**</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>3.79</td>
<td>2,563.31</td>
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<td>Diesel-Fired Fire Pump (EU038)</td>
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<td>0.17</td>
<td>0.17</td>
<td>0.15</td>
<td>2.33</td>
<td>0.19</td>
<td>0.50</td>
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<td>0.01</td>
<td>0.08</td>
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<td>Storage Tanks</td>
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<td>-</td>
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<td>-</td>
<td>-</td>
<td>41.44</td>
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<td>Insignificant process tanks</td>
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<td>-</td>
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<td>-</td>
<td>0.71</td>
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<tr>
<td>Corn Oil Loadout</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>0.05</td>
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<tr>
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<td>2,788.50</td>
<td>2.90</td>
<td>210.55</td>
<td>5,727.04</td>
<td>1,765.23</td>
</tr>
</tbody>
</table>

Fugitives

| Uncaptured Grain Receiving and Handling**** | 122.47 | 40.49 | 6.88  | -    | -    | -    | -    |
| Uncaptured DDGS Handling and Loadout***** | 3.58  | 0.87  | 0.87  | -    | -    | -    | -    |
| Equipment Leaks | -    | -    | -    | -    | -    | 51.18 | -    |
| Additional Corn Storage and Corn Storage Pile**** | 4.31  | 0.65  | 0.31  | -    | -    | -    | -    |
| Paved Roads | 10.94 | 2.19  | 0.54  | -    | -    | -    | -    |
| **Total Fugitives** | 141.30 | 44.20 | 8.59  | 2.90 | 210.55 | 51.18 | -    |
| **Source Total** | 3,047.04 | 2,858.21 | 2,797.09 | 2.90 | 210.55 | 5,778.22 | 1,765.23 |

Notes:
* This plant is capable of producing both DDGS and MDGS. Emissions from DDGS production is the worst case scenario. Therefore, the PTE of wet cake storage is not included in the PTE for the entire source.
** Emissions are based on 8,760 hrs/yr
*** The insignificant process tanks were calculated by the Permittee and have been verified by IDEM.
**** Uncontrolled VOC emissions from the DDGS Cooling Drum are unknown. Controlled VOC emissions from the DDGS Cooling Drum are shown.
***** Effective July 2, 2007, U.S. EPA revised the definition of a “major stationary source” under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a “major source” under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term “chemical process plants” within the statutory definition of “major emitting facility” in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulosic biomass as a feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NSR, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol plant, or the ethanol plant has a "nested" source category. Green Plains Bluffton, LLC does not have a "nested" source category; therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NSR, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.
## Appendix A: Emission Calculations

### PTE Summary

- **Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
- **Source Address:** 1441 South Adams St., Bluffton, IN 46714  
- **Significant Source Modification No.:** 179-41817-00033  
- **Part 70 Operating Permit Renewal No.:** T179-41632-00033  
- **Reviewer:** Andrew Belt

### Potential to Emit After Control (ton/yr)

<table>
<thead>
<tr>
<th>Emission Unit (Control)</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO₂</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
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<td>7.21</td>
<td>7.21</td>
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<tr>
<td>Grain Bin (EU003a)</td>
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<tr>
<td>Hammermills (EU006-EU009)</td>
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<td>4.20</td>
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<tr>
<td>Fermentation Process****</td>
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<td>1.00</td>
<td>1.00</td>
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<td>102.49</td>
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<td>Distillation, Dryers, and TOs (C9203 and C9303)</td>
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<td>70.39</td>
<td>70.39</td>
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<td>1.37</td>
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<td>-</td>
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<tr>
<td>Wet Cake Storage*</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Ethanol Loading System (EU037)**</td>
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<td>-</td>
<td>3.79</td>
<td>51.27</td>
<td>1.20</td>
<td>-</td>
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<tr>
<td>Diesel-Fired Fire Pump (EU038)</td>
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<td>0.17</td>
<td>0.17</td>
<td>0.15</td>
<td>2.33</td>
<td>0.19</td>
<td>0.50</td>
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<td>Space Heaters</td>
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<td>0.03</td>
<td>1.14</td>
<td>0.32</td>
<td>0.01</td>
<td>0.08</td>
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<td>Storage Tanks</td>
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<td>41.44</td>
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<tr>
<td>Insignificant process tanks</td>
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<td>-</td>
<td>-</td>
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<td>0.71</td>
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</tr>
<tr>
<td>Corn Oil Loadout</td>
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<td>-</td>
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<td><strong>Total Non-Fugitive Emissions</strong></td>
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### Fugitives

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<tr>
<th>Emission Unit (Control)</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO₂</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
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</thead>
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<tr>
<td>Uncaptured Grain Receiving and Handling*****</td>
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<td>-</td>
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<td>-</td>
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<td>-</td>
<td>8.85</td>
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<td>0.31</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
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<td>-</td>
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<td>210.55</td>
<td>244.79</td>
<td>81.14</td>
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</table>

**Notes:**

* This plant is capable of producing both DDGS and MDGS. Emissions from DDGS production is the worst case scenario. Therefore, the PTE of wet cake storage is not included in the PTE for the entire source.

** Emissions are based on 8,760 hrs/yr

*** The insignificant process tanks were calculated by the Permittee and have been verified by IDEM.

**** Uncontrolled VOC emissions from the DDGS Cooler Bypass (C70) are unknown. Controlled VOC emissions from the DDGS Cooler Bypass (C70) are shown

***** Effective July 2, 2007, U.S. EPA revised the definition of a “major stationary source” under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a “major source” under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term “chemical process plants” within the statutory definition of “major emitting facility” in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulosic biomass as a feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NSR, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol plant, or the ethanol plant has a “nested” source category. Green Plains Bluffton, LLC does not have a “nested” source category; therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NSR, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.
**Appendix A: Emission Calculations**

**PTE Summary**

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Address:</td>
<td>1441 South Adams St., Bluffton, IN 46714</td>
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<tr>
<td>Significant Source Modification No.:</td>
<td>179-41817-00033</td>
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<td>Part 70 Operating Permit Renewal No.:</td>
<td>T179-41632-00033</td>
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<td>Reviewer:</td>
<td>Andrew Belt</td>
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### Potential to Emit After Issuance (ton/yr)

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<th>SO2</th>
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<th>CO</th>
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<td>Grain Bin (EU003a)</td>
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<td>0.89</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Hammermills (EU006- EU009)</td>
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<td>6.31</td>
<td>6.31</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fermentation Process*****</td>
<td>50.21</td>
<td>50.21</td>
<td>50.21</td>
<td>-</td>
<td>-</td>
<td>102.49</td>
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<td>Distillation, Dryers, and TOs (C9203 and C9303)</td>
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<td>72.27</td>
<td>72.27</td>
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<td>11.39</td>
<td>-</td>
<td>-</td>
<td>11.33</td>
<td>-</td>
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<tr>
<td>DDGS Loadout Operation (EU036)</td>
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<td>40.73</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>Wet Cake Storage*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>See Note</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Ethanol Loading System (EU037)**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.79</td>
<td>5.03</td>
<td>1.20</td>
</tr>
<tr>
<td>Diesel-Fired Fire Pump (EU038)</td>
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<td>0.17</td>
<td>0.17</td>
<td>0.15</td>
<td>2.33</td>
<td>0.19</td>
<td>0.50</td>
</tr>
<tr>
<td>Space Heaters</td>
<td>0.03</td>
<td>0.04</td>
<td>0.03</td>
<td>1.14</td>
<td>0.32</td>
<td>0.01</td>
<td>0.08</td>
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<tr>
<td>Storage Tanks</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>41.44</td>
<td>-</td>
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<td>Insignificant process tanks</td>
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<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn Oil Loadout</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.05</td>
<td>-</td>
</tr>
</tbody>
</table>

**Total Limited for 326 IAC 2-2 (PSD) applicability**

| | 212.33 | 197.17 | 192.95 | 2.90 | 210.55 | 218.19 | 171.29 |

**Fugitives**

| Uncaptured Grain Receiving and Handling***** | 42.14 | 11.97 | 2.02 | - | - | - | - |
| Uncaptured DDGS Handling and Loadout***** | 3.58 | 0.87 | 0.87 | - | - | - | - |
| Equipment Leaks | - | - | - | - | - | 8.85 | - |
| Additional Corn Storage and Corn Storage Pile***** | 4.31 | 0.65 | 0.31 | - | - | - | - |
| Paved Roads | 10.94 | 2.19 | 0.54 | - | - | - | - |

**Total Fugitives**

| 60.36 | 15.68 | 3.74 | - | - | 8.85 | - |

**Source Total**

| 273.29 | 212.84 | 196.68 | 2.90 | 210.55 | 227.04 | 171.29 |

Notes:

* This plant is capable of producing both DDGS and MDGS. Emissions from DDGS production is the worst case scenario. Therefore, the PTE of wet cake storage is not included in the PTE for the entire source.

** Emissions are based on 8,760 hrs/yr

*** The insignificant process tanks were calculated by the Permittee and have been verified by IDEM.

**** Uncontrolled VOC emissions from the DDGS Cooler Bypass (C70) are unknown. Controlled VOC emissions from the DDGS Cooler Bypass (C70) are shown.

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### HAPs Summary

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

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

<table>
<thead>
<tr>
<th>Pollutant</th>
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*This plant is capable to produce both DDGS and MDDGS. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.  
**Effective July 2, 2007, U.S. EPA revised the definition of a "major stationary source" under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a "major source" under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term "chemical process plants" within the statutory definition of "major emitting facility" in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulose biomass as a feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NER, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol client, or the ethanol plant has a "nested" source category. Green Plans Bluffton, LLC does not have a "nested" source category, therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NER, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.*
### Appendix A: Emission Calculations

#### HAPS Summary

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** 179-41852-00033  
**Reviewer:** Andrew Belt

#### Pollutant Fermentation (C40) 
Distillation, Dryers and TOs (C9203 and C9303) 
Process Emissions 
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**Total:** 2.95E-03 1.40E-03 2.01E-03 5.96E-03 1.55E-04 16.70E-05 8.02E-05

---

*This plant is capable to produce both DDGS and MGDG. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.*

*Effective July 2, 2007, U.S. EPA revised the definition of a "major stationary source" under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a "major source" under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term "chemical process plants" within the statutory definition of "major emitting facility" in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that utilizes the use of such things as corn, sugar beets, sugar cane or cellulosic biomass as a feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NSR, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol plant, or the ethanol plant has a "nested" source category; therefore, the entire source does not fall under any of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NSR, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.*
## Appendix A: Emission Calculations
### HAPs Summary

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

### Limited Potential to Emit (ton/yr)

<table>
<thead>
<tr>
<th>Pollutant Description</th>
<th>Distillation, Dryers and Toxs (C9203 and C9303)</th>
<th>DDGS Cooler Bypass (C70)</th>
<th>Ethanol Loadout and Flare (C56)</th>
<th>Storage Tanks</th>
<th>Equipment Leaks</th>
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</tbody>
</table>

| Total                  | 6.74                                          | 5.93                      | 1.40                            | 2.01E-03     | 5.95            | 1.55                   | 1.08E-04 |

* This plant is capable to produce both DDGS and MDDGS. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.

**Effective July 2, 2007, U.S. EPA revised the definition of a “major stationary source” under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a “major source” under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term “chemical process plants” within the statutory definition of “major emitting facility” in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulotic biomass as a feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NSR, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol plant, or the ethanol plant has a “nested” source category. Green Planins Bluffton, LLC does not have a “nested” source category; therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NSR, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.
Appendix A: Emissions Calculations

Modification Summary

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

<table>
<thead>
<tr>
<th>Process Description**</th>
<th>PM (tons/yr)</th>
<th>PM10 (tons/yr)</th>
<th>PM2.5 (tons/yr)</th>
<th>SO2 (tons/yr)</th>
<th>NOx (tons/yr)</th>
<th>VOC (tons/yr)</th>
<th>CO (tons/yr)</th>
<th>Highest Single HAP* (tons/yr)</th>
<th>Total HAPs (tons/yr)</th>
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</thead>
<tbody>
<tr>
<td>Fermentation Process (EU010 - EU021) (Before Modification)</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<td>Distillation, Dryers, and TOs (C9203 and C9303) (Before Modification)</td>
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<td>213.32</td>
<td>213.32</td>
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<td>0.00</td>
<td>0.00</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<td>0.00</td>
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<tr>
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<td>0.00</td>
<td>0.00</td>
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<td>0.00</td>
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<td>0.01</td>
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<td>Corn Oil Loadout</td>
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Notes:
*Highest single HAP is acetylsalicylic acid.

Uncontrolled Potential to Emit (PTE)

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<tr>
<th>Process Description</th>
<th>Criteria Pollutants</th>
<th>Hazardous Air Pollutants</th>
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<tr>
<td>Fermentation Process (EU010 - EU021) (Before Modification)</td>
<td>PM (tons/yr)</td>
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Uncontrolled Potential to Emit (PTE)

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<th>Process Description</th>
<th>Criteria Pollutants</th>
<th>Hazardous Air Pollutants</th>
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<tr>
<td>Distillation, Dryers and TOs (C9203 and C9303) (Before Modification)</td>
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<td>Distillation, Dryers and TOs (C9203 and C9303) (After Modification)</td>
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### Process Description

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<th>PM2.5 (tons/yr)</th>
<th>SO2 (tons/yr)</th>
<th>NOx (tons/yr)</th>
<th>VOC (tons/yr)</th>
<th>CO (tons/yr)</th>
<th>Highest Single HAP* (tons/yr)</th>
<th>Total HAPs (tons/yr)</th>
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<tbody>
<tr>
<td>DDGS Cooler Bypass (C70) (Before Modification)</td>
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<td>750.86</td>
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<td>DDGS Cooler Bypass (C70) (After Modification)</td>
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<th>PM2.5 (tons/yr)</th>
<th>SO2 (tons/yr)</th>
<th>NOx (tons/yr)</th>
<th>VOC (tons/yr)</th>
<th>CO (tons/yr)</th>
<th>Highest Single HAP* (tons/yr)</th>
<th>Total HAPs (tons/yr)</th>
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<tr>
<td>Ethanol Loadout and Flare (C50) (Before Modification)</td>
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<th>NOx (tons/yr)</th>
<th>VOC (tons/yr)</th>
<th>CO (tons/yr)</th>
<th>Highest Single HAP* (tons/yr)</th>
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<tr>
<td>Storage Tanks (T61 - T65) (Before Modification)</td>
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<th>NOx (tons/yr)</th>
<th>VOC (tons/yr)</th>
<th>CO (tons/yr)</th>
<th>Highest Single HAP* (tons/yr)</th>
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<tbody>
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<td>Corn Oil Loadout (Before Modification)</td>
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Appendix A: Emission Calculations

Emission Factors Summary

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: T179-41632-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

TO/WHRB Emission Factors from Stack Testing

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Stack Test Emission Rate</th>
<th>Avg DDGS Throughput (tons/hr)</th>
<th>Avg Ethanol Production Rate (gpm)</th>
<th>Avg Ethanol Production Rate (mmGal/hr)</th>
<th>Final EF (lbs/ton DDGS)</th>
<th>Final EF (lbs/mmGal)</th>
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<td>CO</td>
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<td></td>
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<td>Acetaldehyde</td>
<td>&lt;0.118 lbs/hr</td>
<td>34</td>
<td>218.6</td>
<td>0.013116</td>
<td>0.0038</td>
<td>9.90</td>
</tr>
<tr>
<td>Acrolein</td>
<td>&lt;0.150 lbs/hr</td>
<td></td>
<td></td>
<td></td>
<td>0.0049</td>
<td>12.58</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>&lt;0.050 lbs/hr</td>
<td></td>
<td></td>
<td></td>
<td>0.0016</td>
<td>4.19</td>
</tr>
<tr>
<td>Methanol</td>
<td>&lt;0.105 lbs/hr</td>
<td></td>
<td></td>
<td></td>
<td>0.0034</td>
<td>8.81</td>
</tr>
<tr>
<td>Total HAP</td>
<td>&lt;0.497 lbs/hr</td>
<td></td>
<td></td>
<td></td>
<td>0.016</td>
<td>41.68</td>
</tr>
</tbody>
</table>


Note 2: Average DDGS throughput and ethanol production rate during TO stack testing provided by Valero Bluffton, as recorded by the facility's DCS system on November 10, 2015.

TO/WHRB Emission Factors from Reference Material

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Emission Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx [3]</td>
<td>190 lbs/mmSCF</td>
</tr>
<tr>
<td>SO2 [4]</td>
<td>19.98 lbs/mmGal Ethanol</td>
</tr>
</tbody>
</table>

Note 3: Emission Factors for NOx based on AP-42 emission factors for natural gas boilers: Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1). Limited NOx emission factor based on 40 CFR 60, Subpart Db limit.

Note 4: Emission factor based on July 2015 stack testing on the thermal oxidizer/heat recovery steam generators at the Valero Linden facility. During the stack test, the 200-proof ethanol production rate was 14,864 gallons per hour and the DDGS production rate was 43.5 tons per hour. As this emission factor is based on actual stack test results, a safety factor of 10% has been incorporated.

Fermentation/Scrubber Emission Factors from Stack Testing

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Stack Test EF [5]</th>
<th>Avg Ethanol Production Rate (gpm)</th>
<th>Avg Ethanol Production Rate (mmGal/hr)</th>
<th>Final EF (lbs/mmGal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>5.48 lbs/hr</td>
<td></td>
<td></td>
<td>433.046</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>0.453 lbs/hr</td>
<td></td>
<td></td>
<td>35.797</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>0.339 lbs/hr</td>
<td></td>
<td></td>
<td>26.789</td>
</tr>
<tr>
<td>VOC Control Efficiency</td>
<td>99.4 %</td>
<td>232</td>
<td>0.01392</td>
<td>NA</td>
</tr>
<tr>
<td>Acrolein</td>
<td>&lt;0.035 lbs/hr</td>
<td></td>
<td></td>
<td>2.766</td>
</tr>
<tr>
<td>Methanol</td>
<td>&lt;0.06 lbs/hr</td>
<td></td>
<td></td>
<td>4.741</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>&lt;0.019 lbs/hr</td>
<td></td>
<td></td>
<td>1.501</td>
</tr>
<tr>
<td>PM10/PM2.5</td>
<td>0.17 lbs/hr</td>
<td>256.1</td>
<td>0.01536</td>
<td>12.17</td>
</tr>
</tbody>
</table>


Note 6: Average Ethanol Production Rate listed is taken from Table 1 of the March 22, 2016 stack test report, and represents the average of the rates recorded during the 3 test runs.

Note 7: Controlled emission factors based on October 5, 2016 stack testing of scrubber outlet at Valero Linden facility; during the stack test the 200-proof ethanol production rate was 15,364 gallons per hour. Overall equivalent HAP emissions are routed to TO/HRS for mashing, cooking and liquefaction operations.
### Appendix A: Emission Calculations

Emission Factors Summary

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

#### Flare Emission Factors

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Stack Test EF (gpm)</th>
<th>Avg Ethanol Production Rate (gpm)</th>
<th>Avg Ethanol Production Rate (mmGal/hr)</th>
<th>Final EF (lbs/mmGal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>0.358 lbs/hr</td>
<td>0.029</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOC Control Efficiency</td>
<td>99.9 %</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>&lt;0.017 lbs/hr</td>
<td>225</td>
<td>13.5</td>
<td>0.001</td>
</tr>
<tr>
<td>Xylene</td>
<td>&lt;0.033 lbs/hr</td>
<td></td>
<td></td>
<td>0.003</td>
</tr>
<tr>
<td>Total HAP</td>
<td>&lt;0.050 lbs/hr</td>
<td></td>
<td></td>
<td>0.004</td>
</tr>
</tbody>
</table>


**Note 9:** Average Ethanol Production Rate is taken from the Executive Summary table of the March 10, 2016 stack test report, and represents the average of the rates recorded during the 3 runs of testing on the flare (February 11, 2016).

#### DDGS Cooling Drum Emission Factors

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Stack Test EF (tons/hr)</th>
<th>Avg DDGS Throughput (tons/hr)</th>
<th>Final EF (lbs/ton DDGS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM/PM10/PM2.5</td>
<td>0.042 lbs/ton DDGS</td>
<td>40.7</td>
<td>0.0011</td>
</tr>
<tr>
<td>VOC</td>
<td>0.042 lbs/ton DDGS</td>
<td>40.7</td>
<td>0.046</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>&lt;0.026 lbs/ton DDGS</td>
<td>45.03</td>
<td>0.00064</td>
</tr>
</tbody>
</table>

**Note 10:** PM and VOC emission factors and associated DDGS throughput are based on the December 9, 2015 stack test report from American Engineering Testing, Inc.


**Note 12:** The listed DDGS Throughput represents an average of the throughputs recorded during the 3 runs of each respective test.

#### DDGS Cooling Drum Emission Factors from Reference Material

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Emission Factor (lbs/ton DDGS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrolein</td>
<td>0.0013</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.0007</td>
</tr>
<tr>
<td>Methanol</td>
<td>0.0007</td>
</tr>
</tbody>
</table>

**Note 13:** Acrolein, Formaldehyde, and Methanol emission rates were estimated by the source based on stack testing results from a similar engineered site (Glacial Lakes Energy, MN) and scaled linearly based on production capacity.
**Appendix A: Emission Calculations**

**Natural Gas HAPs Combustion Emissions Summary**

- **Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
  **Source Address:** 1441 South Adams St., Bluffton, IN 46714  
  **Significant Source Modification No.:** 179-41817-00033  
  **Part 70 Operating Permit Renewal No.:** T179-41632-00033  
  **Reviewer:** Andrew Belt

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor* (lb/MMSCF/hr)</th>
<th>Potential to Emit Emissions (lb/hr)</th>
<th>Potential to Emit Emissions (ton/yr)</th>
<th>Emission Factors</th>
<th>Potential to Emit Emissions (lb/hr)</th>
<th>Potential to Emit Emissions (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.26 MMSCF/hr</td>
<td>0.18 MMSCF/hr</td>
<td>0.01 MMSCF/hr</td>
<td></td>
<td>0.26 MMSCF/hr</td>
<td>0.18 MMSCF/hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.10</td>
<td>0.32</td>
<td></td>
<td>1.40</td>
<td>0.10</td>
</tr>
</tbody>
</table>

- **2-Methylnaphthalene** 2.40E-05 6.4E-06 2.8E-05 1.9E-05 2.92E-07 1.28E-06 4.77E-05  
- **3-Methylchioranthrene** 1.80E-06 4.8E-07 2.1E-06 1.4E-06 2.19E-08 9.58E-08 3.57E-06  
- **7,12-Dimethylbenz(a)anthracene** 1.60E-05 4.2E-06 1.9E-05 1.2E-05 1.95E-07 8.52E-07 3.18E-06  
- **Acenaphthene** 1.80E-06 4.8E-07 2.1E-06 1.4E-06 2.19E-08 9.58E-08 3.57E-06  
- **Acenaphthylene** 1.80E-06 4.8E-07 2.1E-06 1.4E-06 2.19E-08 9.58E-08 3.57E-06  
- **Anthracene** 2.40E-06 6.4E-07 2.8E-06 1.9E-06 2.92E-07 1.28E-06 4.77E-06  
- **Benz(a)anthracene** 2.60E-06 6.4E-07 2.8E-06 1.9E-06 2.92E-07 1.28E-06 4.77E-06  
- **Benzene** 2.10E-03 5.6E-04 2.4E-03 1.6E-03 2.55E-05 1.12E-04 4.17E-03  
- **Benzo(a)pyrene** 2.00E-06 5.3E-05 2.3E-04 1.5E-04 2.43E-06 1.06E-04 3.97E-04  
- **Benzo(b)fluoranthene** 2.00E-06 5.3E-05 2.3E-04 1.5E-04 2.43E-06 1.06E-04 3.97E-04  
- **Chromene** 1.60E-06 4.2E-07 1.9E-06 1.2E-06 1.95E-08 8.52E-08 3.18E-06  
- **Dibenzo(a,h)anthracene** 1.60E-06 4.2E-07 1.9E-06 1.2E-06 1.95E-08 8.52E-08 3.18E-06  
- **Dichlorobenzene** 1.20E-06 3.2E-07 1.4E-06 9.3E-07 1.46E-08 6.39E-08 2.38E-06  
- **Fluoranthene** 3.00E-06 7.9E-07 3.5E-06 5.3E-07 3.65E-08 1.60E-07 5.96E-06  
- **Fluorene** 2.80E-06 7.4E-07 3.2E-06 4.9E-07 3.40E-08 1.49E-07 5.56E-06  
- **Formaldehyde** 7.50E-02 - - - - 9.12E-04 3.99E-03 #VALUE!  
- **Hexane** 1.80E+00 4.8E-01 2.1E+00 1.4E+00 2.19E-02 9.58E-02 3.57E+00  
- **Indeno(1,2,3-cd)pyrene** 1.80E-06 4.8E-07 2.1E-06 1.4E-06 2.19E-08 9.58E-08 3.57E-06  
- **Naphthalene** 6.10E-04 1.6E-04 7.1E-04 1.1E-04 4.7E-07 7.42E-06 3.25E-05 1.21E-03  
- **Phenanathrene** 1.70E-05 4.5E-06 2.0E-05 3.0E-06 1.35E-05 2.07E-07 9.05E-07 3.38E-05  
- **Pyrene** 5.00E-07 1.3E-06 5.8E-06 8.8E-07 3.9E-06 6.08E-08 2.66E-07 9.93E-06  
- **Toluene** 3.40E-03 9.0E-04 3.9E-03 6.0E-04 2.6E-03 4.13E-05 1.81E-04 6.75E-03  
- **Arsenic** 2.00E-04 5.3E-05 2.3E-04 3.5E-05 1.5E-04 2.43E-06 1.06E-04 3.97E-04  
- **Beryllium** 1.20E-05 3.2E-06 1.4E-05 2.1E-06 9.3E-06 1.46E-07 6.39E-07 2.38E-05  
- **Cadmium** 1.10E-03 2.9E-04 1.3E-03 1.9E-04 8.5E-04 1.34E-05 5.86E-05 2.18E-03  
- **Chromium** 1.40E-03 3.7E-04 1.8E-03 2.5E-04 1.1E-03 1.70E-05 7.45E-05 2.78E-03  
- **Cobalt** 8.40E-05 2.2E-05 9.7E-05 1.5E-05 6.5E-05 1.02E-06 4.47E-06 1.67E-04  
- **Manganese** 3.80E-04 1.0E-04 4.4E-04 6.7E-05 2.9E-04 4.62E-06 2.02E-05 7.55E-04  
- **Mercury** 2.60E-06 6.9E-05 3.0E-04 4.6E-05 2.0E-04 3.16E-06 1.38E-05 5.16E-04  
- **Nickel** 2.10E-03 5.6E-04 2.4E-03 3.7E-04 1.6E-03 2.55E-05 1.12E-04 4.17E-03  
- **Selenium** 2.40E-05 6.4E-06 2.8E-05 4.2E-06 1.9E-05 2.92E-07 1.28E-06 4.77E-05  

*Emission Factors are from AP-42, 5th Edition, Section 1.4, "Natural Gas Combustion," 7/98*

*Note: Formaldehyde emissions form the TOs and DDGS Dryers are included with process emission calculations.*
### 1. Potential to Emit PM/PM10/PM2.5 - Captured Emissions:

<table>
<thead>
<tr>
<th>Baghouse ID</th>
<th>Process Description</th>
<th>Control Device</th>
<th>Throughput (tons/year)</th>
<th>PTE of PM/PM10/PM2.5 after Control (lbs/hr)</th>
<th>PTE of PM/PM10/PM2.5 before Control (tons/yr)</th>
<th>% Control Efficiency</th>
<th>Emission after Control (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C30/S30</td>
<td>Grain Receiving and Handling (28,000 - 11,410)</td>
<td>Baghouses</td>
<td>48,000</td>
<td>6.31</td>
<td>99%</td>
<td>721</td>
<td>10.95</td>
</tr>
<tr>
<td>C30/S30</td>
<td>Hammermill (380,000 - 11,410)</td>
<td>Baghouses</td>
<td>38,000</td>
<td>4.39</td>
<td>99%</td>
<td>420</td>
<td>6.31</td>
</tr>
</tbody>
</table>

### 2. Potential to Emit PM/PM10/PM2.5 - Uncaptured Emissions

#### 2.1 Methodology

**Note:** Emission factors are from AP-42, Chapter 9.9.1 - Grain Elevators, Table 9.9.1-1 (04/03). Conservatively assume a 90% control efficiency (based on EF for cyclone control).

**Note 2:** Assumes 56 lb/bushel for corn.

**Note 3:** Uncaptured emissions are accounted for here. Capture efficiency reflects that 95% of emissions will be captured and controlled through the Grain Unloading baghouse. Source also uses a choked air flow system for control.

#### 2.1.1 Unit Description

<table>
<thead>
<tr>
<th>Unit Description</th>
<th>Grain Throughput (tons/year)</th>
<th>Limited Grain Throughput (tons/yr)</th>
<th>Uncaptured PM10 Emissions (tons/yr)</th>
<th>Uncaptured PM2.5 Emissions (tons/yr)</th>
<th>Emission after Control (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain Receiving</td>
<td>80,000</td>
<td>14,716.8</td>
<td>91.98</td>
<td>23.30</td>
<td>39.24</td>
</tr>
<tr>
<td>Grain Handling</td>
<td>40,000</td>
<td>9,811.30</td>
<td>9.86</td>
<td>2.47</td>
<td>1.20</td>
</tr>
<tr>
<td>Grain Storage</td>
<td>80,000</td>
<td>16,622.45</td>
<td>1.04</td>
<td>1.04</td>
<td>0.54</td>
</tr>
<tr>
<td>Grain Surge Bin</td>
<td>N/A</td>
<td>1,478.90</td>
<td>0.07</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td>Grain Bin</td>
<td>40,000</td>
<td>9,811.30</td>
<td>0.06</td>
<td>0.07</td>
<td>0.11</td>
</tr>
</tbody>
</table>

#### 2.1.2 Total

| Total | 245.11 | 71.29 | 12.08 | 62.41 | 17.98 | 3.20 |

#### 2.2 Part 70 Determination

<table>
<thead>
<tr>
<th>Unit Description</th>
<th>Grain Throughput (tons/year)</th>
<th>Controlled PM10 Emissions (tons/yr)</th>
<th>Controlled PM2.5 Emissions (tons/yr)</th>
<th>Controlled PM Emissions (tons/yr)</th>
<th>PTE PM Emissions (tons/yr)</th>
<th>PTE PM/PM10/PM2.5 Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain Receiving</td>
<td>2,452,800.00</td>
<td>0.098</td>
<td>0.040</td>
<td>0.032</td>
<td>3.92</td>
<td>37.08</td>
</tr>
</tbody>
</table>

**Note:** Emission factors are from AP-42, Chapter 9.9.1 - Grain Elevators, Table 9.9.1-1 (04/03). Conservatively assume a 90% control efficiency for emission factor (based on EF for cyclone control).
## Appendix A: Emission Calculations

### VOC and HAP Emissions

#### Fermentation Process (EU012 - EU018, EU021)

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

### 1. Process Description:

Max. Throughput Rate: 165 MMgal/yr of ethanol  
Control Equipment: Wet Scrubber C40

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

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Rate after Control(^1) (lbs/MMgal)</th>
<th>PTE after Controls (lbs/hr)</th>
<th>PTE before Controls (tons/yr)</th>
<th>Control Efficiency(^2) (%)</th>
<th>Potential to Emit After Issuance(^3) (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VOC</strong></td>
<td>433.05</td>
<td>8.2</td>
<td>35.73</td>
<td>98%</td>
<td>102.49</td>
</tr>
<tr>
<td><strong>PM(^4)</strong></td>
<td>12.17</td>
<td>0.23</td>
<td>1.00</td>
<td>98%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>PM10(^4)</strong></td>
<td>12.17</td>
<td>0.23</td>
<td>1.00</td>
<td>98%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>PM2.5(^4)</strong></td>
<td>12.17</td>
<td>0.23</td>
<td>1.00</td>
<td>98%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>HAP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>26.79</td>
<td>0.50</td>
<td>2.21</td>
<td>50%</td>
<td>6.00</td>
</tr>
<tr>
<td>Acrolein</td>
<td>2.77</td>
<td>0.05</td>
<td>0.23</td>
<td>0%</td>
<td>N/A</td>
</tr>
<tr>
<td>Methanol</td>
<td>4.74</td>
<td>0.09</td>
<td>0.39</td>
<td>0%</td>
<td>N/A</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>1.50</td>
<td>0.028</td>
<td>0.12</td>
<td>0%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total HAPs</strong></td>
<td><strong>35.80</strong></td>
<td><strong>0.67</strong></td>
<td><strong>2.95</strong></td>
<td><strong>5.16</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
1. Emission factors provided by the source based on testing at similar ethanol production facilities (actual test data) plus includes a moderate margin of safety and are therefore considered to be conservative.  
2. Sodium bisulfite or ammonium bisulfite to be added to scrubber header to minimize emissions.  
3. The VOC emissions from the fermentation process shall be less than 23.4 lbs/hr. The acetaldehyde emissions from the fermentation process are limited to 1.37 lbs/hr.  
4. PM/PM10/PM2.5 emission factor based on expectation of higher condensable PM/PM10/PM2.5.

### Methodology

\[ \text{PTE after Control (lbs/hr)} = \text{Emission Rate after Control (lbs/MMgal) \times 150 MMgal/yr \times 1 yr/8760 hrs} \]
\[ \text{PTE after Control (tons/yr)} = \text{Emission Rate after Control (lbs/MMgal) \times 150 MMgal/yr \times 1 ton/2000 lbs} \]
\[ \text{PTE Before Controls (tons/yr)} = \frac{\text{PTE After Controls (tons/yr)}}{1 - \text{Control Efficiency} (\%)/100} \]
### Appendix A: Emissions Calculations

#### CIP Venting from Fermentation

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

<table>
<thead>
<tr>
<th>Fermenter fill time</th>
<th>8 hr</th>
<th>Operating days</th>
<th>365 days</th>
</tr>
</thead>
</table>

- Maximum Total No. of Ferm CIP Events (per day) | 3 |
- Maximum Total No. of Ferm CIP Events (annual) | 1095 |
- Ferm CIP Event Time (hrs) | 0.25 |
- Maximum Total Annual CIP Events (hrs) | 1095 |

<table>
<thead>
<tr>
<th>Emissions Per CIP Event</th>
<th>Mass (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Dioxide</td>
<td>1241</td>
</tr>
<tr>
<td>Water</td>
<td>26.06</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1.17</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>0.08</td>
</tr>
<tr>
<td>Methanol</td>
<td>2.54E-03</td>
</tr>
<tr>
<td>Acrolein</td>
<td>0.01</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emissions</th>
<th>lbs/hr/CIP event</th>
<th>lbs/day</th>
<th>TPY²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>1.17</td>
<td>3.52</td>
<td>0.64</td>
</tr>
<tr>
<td>Total VOC</td>
<td>1.32</td>
<td>3.96</td>
<td>0.72</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>0.08</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>Total HAP</td>
<td>0.14</td>
<td>0.43</td>
<td>0.08</td>
</tr>
<tr>
<td>CO₂</td>
<td>1241</td>
<td>3723</td>
<td>679</td>
</tr>
</tbody>
</table>

**Notes:**

1. This calculation assumes that 3 15-min CIP events occur in one day.
2. This calculation assumes the maximum number of CIP events (3) occur each day and the plant runs a total of 365 days/year. It also assumes the total emission (tpy) are averaged over the entire year (8760 hours)

**Methodology:**

2. Size varies with type of release. Worst case release is lift of the PSV from overpressure which results in area of 4.7 sq in
3. Pressure of 28 in H2O assumed (set point of relief valve). Will be over conservative for leaks
4. Airflow of 13,714 scfm October 2009 stack testing, assume air density (r) of 0.079 lb/ft³.
5. Data taken from performance testing conducted in Oct 2009. Total CO2 scrubber emissions of 5.63 lb/hr.
6. 98% acetaldehyde control assumed, lb/hr outlet rate from October 2009 stack testing.
7. Based on Valero Co-Fort Dodge Data
8. To account for increasing ethanol concentrations in the fermentation stage, the ethanol mass per CIP event has been multiplied by the ratio of the beer well ethanol concentration after implementation of the new enzyme (14.3%) to the concentration before the enzyme change (13.2%).
Appendix A: Emissions Calculations

Fuel Combustion & Process Generated Emissions From the Thermal Oxidizer & Dryer Systems Producing DDGS

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

NOx, SO2 0% MMBtu/hr MMBtu/hr 180
VOC 98% MMBtu/hr 286
CO 96%
PM10/PM2.5 90%
HAPs 97%

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor</th>
<th>Total Heat Input Capacity</th>
<th>Operating Hours</th>
<th>Dryers Heat Input Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.1</td>
<td>466</td>
<td>8,760</td>
<td>180</td>
</tr>
<tr>
<td>CO</td>
<td>0.32</td>
<td>160,891,500</td>
<td>490,560</td>
<td></td>
</tr>
<tr>
<td>SO2</td>
<td>19.98</td>
<td></td>
<td></td>
<td>286</td>
</tr>
<tr>
<td>VOC</td>
<td>0.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM10</td>
<td>0.29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM2.5</td>
<td>0.29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pollutant Emission Factor from Processing

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor</th>
<th>Total Process HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
<td>0.004</td>
<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>Acrolein</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>Methanol</td>
<td>0.003</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
Note 1: 2 Thermal Oxidizers [C9203 and C9303 (135MMBtu/hr each)] with 2 Waste Heat Recovery Boilers [B10 and B11] and 4 natural gas fired DDGS Dryers [EU029 through EU032 (45MMBtu/hr each)] System also controls emissions from the distillation process [EU022-EU026] and DDGS cooling drum [EU033].

Note 2: TO control efficiencies were provided by design manufacturer and were derived from test data for similar sources. Emission factors were derived from stack testing data for this facility, as detailed in the Emission Factors tab. Assume PM/PM10 emissions are equivalent. Under the Part 70 Permit program, particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered a “regulated pollutant”.

Note 3: 200-proof ethanol volume based on proposed 165 mmGal/yr denatured ethanol throughput. 165 mmGal/yr denatured ethanol × (100% - 2.49% gasoline content)/100% Note 4: NOx emission rate based on US EPA New Source Performance Standard Subpart Db NOx emission limit for natural gas and distillate oil combustion at the low heat release rate applied to the heat input capacity of the TO/HRSG systems. Valero acknowledges that the emission limit is inclusive of the fuel combustion emissions from the TO/HRSG and dryers as well as process NOx.

Note 5: Emission factor based on July 2015 stack testing on the thermal oxidizer/heat recovery steam generators at the Valero Linden facility. During the stack test, the 200-proof ethanol production rate was 14,864 gallons per hour and the DDGS production rate was 43.5 tons per hour. As this emission factor is based on actual stack test results, a safety factor of 10% has been incorporated.


Note 7: Limited PTE emission rates have been set according to Total HAP emission rate limit of 1.56 lbs/hr on stack S10, listed in current Valero Bluffton Operating Permit Section D.3.2 (referencing area source requirements under 40 CFR 63.2).

Methodology:
Uncontrolled PTE (tons/yr) = Uncontrolled Emission Factor (lbs/ton DDGS) x Annual DDGS Production Limit (tons/yr) = 2000 (lbs/ton).
Uncontrolled PTE (tons/yr) = Uncontrolled Emission Factor (lbs/gallon 200-proof) x Annual 200-Proof Production (gallons/yr) = 2000 (lbs/ton).
Uncontrolled PTE (lbs/hr) = Uncontrolled Emission Rate (tons/yr) x 8,760 (hrs/yr).
Controlled PTE (tons/yr) = Uncontrolled Emission Rate (tons/yr) x (1-Control Efficiency).
Controlled PTE (lbs/hr) = Uncontrolled Emission Rate (lbs/hr) x (1-Control Efficiency).
## PM/PM10/PM2.5 and VOC Emissions

### DDGS Cooler

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** T179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

### 1. Potential to Emit PM/PM10/PM2.5

<table>
<thead>
<tr>
<th>Baghouse ID/Stack ID</th>
<th>Process Description</th>
<th>Control Device</th>
<th>Outlet Grain Loading (gr/dscf)</th>
<th>Maximum Air Flow Rate (scfm)</th>
<th>PTE of PM/PM10/PM2.5 after Control (lbs/hr)</th>
<th>Control Efficiency (%)</th>
<th>PTE of PM/PM10/PM2.5 before Control (tons/yr)</th>
<th>*Limited PM/PM10/PM2.5 Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C70/S70</td>
<td>DDGS Cooler Bypass Baghouse</td>
<td>0.004</td>
<td>50,000</td>
<td>1.71</td>
<td>7.51</td>
<td>99%</td>
<td>750.86</td>
<td>11.39</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.51</td>
<td></td>
<td>750.86</td>
<td>11.39</td>
</tr>
</tbody>
</table>

Assume all PM emissions equal PM10 and PM2.5 emissions.

Note 1: Up to 50,000 cfm from Cooling Drum Baghouse is the combustion air for the TOs and 13,000-15,000 cfm normally goes to the atmosphere from the Cooling Drum Baghouse. To be conservative assume entire 50,000 cfm goes to the atmosphere.

* In order to render the requirements of 326 IAC 2-2 not applicable, the PM / PM10 / PM2.5 emission limits from baghouse C70 shall be less than 2.6 lbs/hr. The requested limits were increased by a factor of 1.5X to give the source additional flexibility.

### Methodology

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

PTE of PM/PM10/PM2.5 after Control (tons/yr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7000 lb/gr x 8760 hr/yr x 1 ton/2000 lbs

PTE of PM/PM10/PM2.5 before Control (tons/yr) = PTE of PM/PM10/PM2.5 after Control (tons/yr) / (1-Control Efficiency)

### 2. Potential to Emit VOC:

- **Maximum Throughput of Cooler:** 578,160 tons/yr
- **Annual DDGS Production Limit:** 490,560 tons/yr
- **VOC Emission Factor:** 0.0462 lbs/ton of DDGS (provided by the source based on recent facility stack testing with a margin of safety factor of 10%)

**Controlled PTE of VOC (tons/yr) = Maximum Throughput tons/yr x 0.1 lbs/ton x 1 ton/2000 lbs = 13.36 tons/yr**

**Limited PTE of VOC (tons/yr) = Annual DDGS Production Limit tons/yr x 0.1 lbs/ton x 1 ton/2000 lbs = 11.33 tons/yr**

### 3. Potential to Emit HAPs:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Rate (lbs/ton DDGS)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
<td>3.00E-03</td>
<td>0.32</td>
</tr>
<tr>
<td>Acrolein</td>
<td>1.30E-03</td>
<td>0.32</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.00E-04</td>
<td>0.17</td>
</tr>
<tr>
<td>Methanol</td>
<td>7.00E-04</td>
<td>0.17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>1.40</td>
</tr>
</tbody>
</table>

* HAP emission rates were estimated by the source based on stack testing results from a similar engineered site (Glacial Lakes Energy, MN) and scaled linearly based on production capacity.

### Methodology

Limited PTE (tons/yr) = Emission Rate (lbs/ton DDGS) x DDGS production limit (tons/yr) x 1 ton/2000 lbs
Appendix A: Emission Calculations

PM / PM10 / PM2.5 Emissions

DDGS Handling and Loadout Operations

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

1. Potential to Emit PM/PM10/PM2.5 - Captured Emissions:

<table>
<thead>
<tr>
<th>Baghouse/Stack ID</th>
<th>Process Description</th>
<th>Control Device</th>
<th>Outlet Grain Loading (gr/dscf)</th>
<th>Maximum Air Flow Rate (scfm)</th>
<th>PTE of PM/PM10/PM2.5 after Control (lbs/hr)</th>
<th>PTE of PM/PM10/PM2.5 before Control (tons/yr)</th>
<th>Control Efficiency (%)</th>
<th>PTE of PM/PM10/PM2.5 before Control (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C00/S90</td>
<td>DDGS Handling and Loadout</td>
<td>Baghouse</td>
<td>0.004</td>
<td>9,100</td>
<td>0.31</td>
<td>1.37</td>
<td>99%</td>
<td>136.7</td>
</tr>
</tbody>
</table>

*Limited PM/PM10/PM2.5 Emissions (tons/yr) 40.73

Assume all PM emissions equal PM10 and PM2.5 emissions.

Methodology

\[
PTE\ of\ PM/PM10/PM2.5\ after\ Control\ (lbs/hr) = \text{Grain Loading (gr/dscf)} \times \text{Max. Air Flow Rate (scfm)} \times 60\ min/hr \times \frac{1}{7,000\ lb/gr}
\]

\[
PTE\ of\ PM/PM10/PM2.5\ before\ Control\ (tons/yr) = \frac{\text{PTE of PM/PM10/PM2.5 after Control (tons/yr)}}{\text{1-Control Efficiency}}
\]

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

<table>
<thead>
<tr>
<th>Unit Description</th>
<th>Grain Throughput (tons/hr)</th>
<th>Grain Throughput (tons/year)</th>
<th>Uncaptured PM Emission Factor (lbs/ton)</th>
<th>Uncaptured PM10 Emission Factor (lbs/ton)</th>
<th>Uncaptured PM2.5 Emission Factor (lbs/ton)</th>
<th>Capture Efficiency (%)</th>
<th>Uncaptured PM Emissions (tons/yr)</th>
<th>Uncaptured PM10 Emissions (tons/yr)</th>
<th>Uncaptured PM2.5 Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDGS Handling and Loadout</td>
<td>590</td>
<td>4,818,000</td>
<td>0.0033</td>
<td>0.0008</td>
<td>0.0008</td>
<td>95%</td>
<td>0.40</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>DDGS Storage Building (EU035)</td>
<td>220</td>
<td>1,927,200</td>
<td>0.0033</td>
<td>0.0008</td>
<td>0.0008</td>
<td>0%</td>
<td>3.18</td>
<td>0.77</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Total 3.58 0.87 0.87

Assume all PM emissions equal PM10 and PM2.5 emissions.

Methodology

\[
\text{Uncaptured PM/PM10/PM2.5 (tons/yr)} = \text{Grain Throughput (tons/year)} \times \text{Uncaptured Emission Factor (lbs/ton)} \times \text{1-Capture Efficiency%} \times 1\ ton/2000\ lbs
\]

Note: Emission factors are from AP-42, Chapter 9.9.1 - Grain Elevators, Table 9.9.1-2 (03/03).
Note 1: Uncaptured emissions are accounted for here. Capture efficiency reflects that 95% of emissions will be captured and controlled through the DDGS Handling and Loadout baghouse C00.

Methodology

\[
\text{Uncaptured PM/PM10/PM2.5 (tons/yr)} = \text{Grain Throughput (tons/year)} \times \text{Uncaptured Emission Factor (lbs/ton)} \times \text{1-Capture Efficiency%} \times 1\ ton/2000\ lbs
\]
## Appendix A: Emissions Calculations
### Ethanol Loading Rack System & Enclosed Vapor Combustion Unit (VCU)

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** T179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

<table>
<thead>
<tr>
<th>Flare Heat Input Capacity</th>
<th>Maximum Hourly Loading Rate</th>
<th>Operations</th>
<th>Annual Shipping Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMBtu/hr</td>
<td>gals/hr</td>
<td>hours</td>
<td>gallons (denatured)</td>
</tr>
<tr>
<td>6.4</td>
<td>192,000</td>
<td>8,760</td>
<td>165,000,000</td>
</tr>
</tbody>
</table>

### Combustion Emissions

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>NOx</th>
<th>CO</th>
<th>PM</th>
<th>PM_{10}/PM_{2.5}</th>
<th>SO2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lbs/kgal loaded</td>
<td>lbs/kgal loaded</td>
<td>Negligible</td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
<tr>
<td>Uncontrolled Emission Factors</td>
<td>4.51E-03</td>
<td>1.43E-03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited Emission Factors</td>
<td>0.0138</td>
<td>0.0392</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

Note 1: Ethanol Loading Rack System (EU047) With A Control Flare (CE009). Calculations based on shipping all denatured ethanol (98/2 blend).

Note 2: Emission factors based on July 2015 stack testing on the loading rack flare. As emission factors are based on actual stack test results, Valero requests incorporation of a ten percent safety factor to allow for operational variability.

Note 3: As per manufacturer, PM/PM_{10}/PM_{2.5} emissions are negligible due to smokeless design. SO$_2$ emissions are negligible due to negligible sulfur in natural gas stream.

**Methodology:**

Uncontrolled PTE of NOx and CO (tons/yr) = Max. Load-out Rate (gal/hr) ÷ 1,000 (gals) x Emission Factor (lbs/kgal) x 8,760 (hr/yr) ÷ 2,000 (lbs/ton)

Limited PTE of NOx and CO (tons/yr) = Annual Denatured Production Limit (gal/yr) ÷ 1,000 (gals) x Emission Factor (lbs/kgal) ÷ 2,000 (lbs/ton)
Appendix A: Emissions Calculations

Ethanol Loading Rack System & Enclosed Vapor Combustion Unit (VCU) 1

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: 1179-41632-00033
Reviewer: Andrew Belt

<table>
<thead>
<tr>
<th>Source</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assumed to be 97.5% EtOH &amp; 2.5% gasoline</td>
<td></td>
</tr>
</tbody>
</table>

1. Emission Factors: AP-42

Denatured ethanol will be shipped by either truck or railcar via the Ethanol Loading Rack System. Railcars will be dedicated fleets, but the trucks may have been used to carry gasoline prior to filling with ethanol. Both railcars and trucks will be filled by a submerged loading process. The Ethanol Loading Rack System will be controlled by flare CE009. This flare has a control efficiency ≥ 98%.

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:

\[ LL = 12.46 \times \left( \frac{S \times P \times M}{T} \right) \]

Where:
- \( LL \) = Loading loss for liquid loaded, lbs/kgal
- \( S \) = Saturation factor from Table 5.2-1:
- True vapor pressure of liquid loaded (psia):
- \( M \) = Molecular weight of vapors:
- \( T \) = Temperature of bulk liquid loaded (°R):

### Source | S | P | M | T | LL |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline (normal, vapor balance)</td>
<td>1.0</td>
<td>5.69</td>
<td>65.00</td>
<td>512</td>
<td>9.00</td>
</tr>
<tr>
<td>Gasoline (normal)</td>
<td>0.6</td>
<td>5.69</td>
<td>65.00</td>
<td>512</td>
<td>5.40</td>
</tr>
<tr>
<td>Gasoline (50%normal;50%VB)</td>
<td>0.8</td>
<td>5.69</td>
<td>65.00</td>
<td>512</td>
<td>7.20</td>
</tr>
<tr>
<td>Gasoline (clean cargo)</td>
<td>0.5</td>
<td>5.69</td>
<td>65.00</td>
<td>512</td>
<td>4.50</td>
</tr>
<tr>
<td>Denatured Ethanol (normal)</td>
<td>0.6</td>
<td>0.59</td>
<td>48.83</td>
<td>512</td>
<td>0.42</td>
</tr>
<tr>
<td>Denatured Ethanol (clean cargo)</td>
<td>0.5</td>
<td>0.59</td>
<td>48.83</td>
<td>512</td>
<td>0.35</td>
</tr>
</tbody>
</table>

Note: True vapor pressure, molecular weight of vapors, bulk liquid temperature, and vapor mass fraction taken from TANKS 4.09d software.

2. VOC Calculations & PTE (All Loading Options):

### Limited

<table>
<thead>
<tr>
<th>Source</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assumed to be an average RVP11 gasoline. RVP9 for ozone months; RVP13 all others.</td>
<td></td>
</tr>
</tbody>
</table>

Note 1: One (1) ethanol loading system, identified as EU037, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed flare C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr.

Note 2: Since the source can load product at the maximum pumping rate, the lbs/hr emission rate will not change for limited annual loading capacity.

Note 3: Since the source can load product at the maximum pumping rate, the lbs/hr emission rate will not change for limited annual loading capacity.

Note 4: Railcars used by Valero will be dedicated. Railcars will not have previously contained gasoline only.
### Methodology

**Limited PTE of HAP after Control (tons/yr)** = Limited PTE of VOC (tons/yr) × HAP %

**Note 5:** This is the HAP fraction for gasoline vapors.
**Note 6:** All pilot light combustion HAPs emissions are included in HAPs combustion calculation. Process HAPs emissions are included in HAPs process emissions calculations.
Appendix A: Emission Calculations
Criteria Pollutants
Diesel-Fired Fire Pump (EU038)

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

Emissions calculated based on output rating (hp)

<table>
<thead>
<tr>
<th>Output Horsepower Rating (hp)</th>
<th>300.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Hours Operated per Year</td>
<td>500</td>
</tr>
<tr>
<td>Potential Throughput (hp-hr/yr)</td>
<td>150,000</td>
</tr>
</tbody>
</table>

<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/hp-hr</td>
<td>0.0022</td>
<td>0.0022</td>
<td>0.0022</td>
<td>0.0021</td>
<td>0.0310</td>
<td>0.0025</td>
<td>0.0067</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
<td>0.15</td>
<td>2.33</td>
<td>0.19</td>
<td>0.50</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>Emission Factor in lb/hp-hr****</td>
<td>6.53E-06</td>
<td>2.86E-06</td>
<td>2.00E-06</td>
<td>2.74E-07</td>
<td>8.26E-06</td>
<td>5.37E-06</td>
<td>6.48E-07</td>
<td>1.18E-06</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>4.90E-04</td>
<td>2.15E-04</td>
<td>1.50E-04</td>
<td>2.05E-05</td>
<td>6.20E-04</td>
<td>4.03E-04</td>
<td>4.86E-05</td>
<td>8.82E-05</td>
</tr>
</tbody>
</table>

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

| Potential Emission of Total HAPs (tons/yr) | 2.03E-03 |
## Appendix A: Emissions Calculations

### VOC and HAP Emissions

#### Storage Tanks

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** T179-41632-00033  
**Part 70 Operating Permit Renewal No.:** T179-41817-00033  
**Reviewer:** Andrew Belt

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>190 Proof Ethanol (T65)</td>
<td>6.38</td>
<td>1.28E-03</td>
<td>1.28E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>200 Proof Ethanol (T63)</td>
<td>6.38</td>
<td>1.28E-03</td>
<td>1.28E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Denat. Ethanol Tanks (T61a/b, T62a/b)</td>
<td>15.93</td>
<td>3.19E-03</td>
<td>3.19E-03</td>
<td>7.96E-03</td>
<td>1.43E-01</td>
<td>7.96E-02</td>
<td>7.96E-03</td>
<td>1.59E-03</td>
<td>7.96E-04</td>
<td>3.19E-04</td>
</tr>
<tr>
<td>Denaturant (T64)</td>
<td>12.59</td>
<td>-</td>
<td>-</td>
<td>3.15E-03</td>
<td>6.30E-01</td>
<td>6.30E-02</td>
<td>6.30E-03</td>
<td>1.26E-03</td>
<td>6.30E-04</td>
<td>2.52E-04</td>
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<tr>
<td>Corrosion Inhibitor (C1)</td>
<td>2.57E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diesel Tank (C2)</td>
<td>8.00E-05</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Gasoline Tank (C10)</td>
<td>0.08</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diesel Tank (C11)</td>
<td>3.25E-04</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Syrup feed tank (TS-6851)</td>
<td>0.01</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil storage tank (TS-8901)</td>
<td>4.03E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil storage tank (TS-8902)</td>
<td>4.03E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil storage tank (TS-8903)</td>
<td>4.03E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil storage tank (TS-8904)</td>
<td>4.03E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil storage tank (TS-8905)</td>
<td>0.05</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Syrup receiver tank (TS-6852)</td>
<td>4.61E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil receiver tank (TS-6854)</td>
<td>4.60E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>41.44</td>
<td>5.74E-03</td>
<td>5.74E-03</td>
<td>1.11E-02</td>
<td>7.73E-01</td>
<td>1.43E-01</td>
<td>1.43E-02</td>
<td>2.85E-03</td>
<td>1.43E-03</td>
<td>5.70E-04</td>
</tr>
</tbody>
</table>

**Total HAPs = 0.957 tons/yr**

### Methodology

Emissions from the storage tanks were calculated by the Permittee using EPA TANKS software (version 4.09d) and have been verified.
Appendix A: Emission Calculations

1. Fugitive VOC Emissions:

<table>
<thead>
<tr>
<th>Equipment Component</th>
<th>Service</th>
<th>Component Count</th>
<th>Emission Factor (kg/hr/source)</th>
<th>Subpart VV Control Effectiveness (%)</th>
<th>Fugitive VOC Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Uncontrolled (tons/yr)</td>
</tr>
<tr>
<td>Valves Light Liquid</td>
<td></td>
<td>545</td>
<td>0.00403</td>
<td>84%</td>
<td>21.21</td>
</tr>
<tr>
<td>Pumps Light Liquid</td>
<td></td>
<td>45</td>
<td>0.0199</td>
<td>69%</td>
<td>8.65</td>
</tr>
<tr>
<td>Valves Gas/Vapor</td>
<td></td>
<td>91</td>
<td>0.00597</td>
<td>87%</td>
<td>5.25</td>
</tr>
<tr>
<td>Flanges/Connectors</td>
<td>Gas/Vapor</td>
<td>910</td>
<td>0.00183</td>
<td>87%</td>
<td>16.08</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>51.18</td>
</tr>
</tbody>
</table>

Notes:
1. Components in vacuum service are not inventoried and not able to be inspected due to leak free nature. Components with >20% VOC by volume or >10% by weight will be part of the LDAR program. Except for valves and pumps, non-welded components and fittings treated as "flanges" for LDAR. Above are based on actual counts at a 40 MMgpy (nameplate) plant + 15% and adjusted accordingly.
2. Component count estimated based on similar ethanol plants. Components added in Beer Degas System project are considered within the original design margin, component counts unchanged from original calculations.

Methodology

Fugitive VOC Emissions (tons/yr) = Component Count x Emission Factor (kg/hr/source) x (1 lb/0.45359 kg) x 8760 hr/yr x 1 ton/2000 lbs x (1-Control Effectiveness)

2. Fugitive HAP Emissions:

<table>
<thead>
<tr>
<th>HAP</th>
<th>HAP Fraction*</th>
<th>Fugitive HAP Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>1.69E-04</td>
<td>1.50E-03</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>1.55E-01</td>
<td>1.37</td>
</tr>
<tr>
<td>Methanol</td>
<td>1.50E-02</td>
<td>1.33E-01</td>
</tr>
<tr>
<td>Acrolein</td>
<td>4.50E-03</td>
<td>3.98E-02</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1.55</strong></td>
</tr>
</tbody>
</table>

* ICM HAP fraction derived from stack testing of Fermentation Scrubber

Methodology

Fugitive HAP Emissions (tons/yr) = Fugitive VOC Emissions (tons/yr) x HAP Fraction
Insignificant Source of Fugitive Emissions (VOCs):

<table>
<thead>
<tr>
<th>Source Description</th>
<th>VOC Concentration (ppm)</th>
<th>Molecular Weight (from test data)</th>
<th>Flow Rate (cfm)</th>
<th>Conversion Constant</th>
<th>Midwest Scaling Factor (from test data)</th>
<th>VOC Emissions (lbs/hr)</th>
<th>VOC Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thin Stillage Tank Vent (C3)</td>
<td>44.00</td>
<td>59.2</td>
<td>8.0</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.007</td>
<td>0.033</td>
</tr>
<tr>
<td>Syrup Tank Vent (C4)</td>
<td>62.20</td>
<td>59.2</td>
<td>5.4</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.007</td>
<td>0.031</td>
</tr>
<tr>
<td>Cook Water Tank Vent (C5)</td>
<td>31.00</td>
<td>59.2</td>
<td>13.4</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.009</td>
<td>0.039</td>
</tr>
<tr>
<td>Liquification Tank #1 (C6)</td>
<td>64.70</td>
<td>59.2</td>
<td>80</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.110</td>
<td>0.481</td>
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<tr>
<td>Whole Stillage Tank (C9)</td>
<td>7.00</td>
<td>59.2</td>
<td>100</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.015</td>
<td>0.065</td>
</tr>
<tr>
<td>Methanator Feed Tank (C8)</td>
<td>46.50</td>
<td>59.2</td>
<td>15</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.015</td>
<td>0.065</td>
</tr>
<tr>
<td><strong>TOTAL EMISSIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>0.163</strong></td>
<td><strong>0.713</strong></td>
</tr>
</tbody>
</table>

Notes:
- Note 1: No vent on other liquefaction tanks
- Note 2: Based on VOC measurement of wet cake
- Note 3: Estimate based on 40F warmer than Cookwater tank

Emission factors based on actual test data of similar equipment.
Above vents at <1.0 tpy may be classified as insignificant.

Methodology:
VOC Emission lbs/hr = VOC Concentration (ppm) x Molecular Weight x Flow Rate x Conversion Constant x Scaling Factor
VOC Emission ton/yr = VOC emission lbs/hr x 8,760 hr/yr / 2,000 lbs/ton
Appendix A: Emissions Calculations
Kerosene Space Heaters

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

| Heat Input Capacity (MMBtu/hr) | Potential Throughput (kgals/year) | S = Weight % Sulfur
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.495</td>
<td>32.12</td>
<td>0.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/kgal</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>2.0</td>
<td>0.032</td>
</tr>
<tr>
<td>PM10</td>
<td>2.4</td>
<td>0.038</td>
</tr>
<tr>
<td>direct PM2.5</td>
<td>2.1</td>
<td>0.034</td>
</tr>
<tr>
<td>SO2</td>
<td>71</td>
<td>1.140</td>
</tr>
<tr>
<td>NOx</td>
<td>20.0</td>
<td>0.321</td>
</tr>
<tr>
<td>VOC</td>
<td>0.34</td>
<td>0.005</td>
</tr>
<tr>
<td>CO</td>
<td>5.0</td>
<td>0.080</td>
</tr>
</tbody>
</table>

**Methodology**

1 gallon of Kerosene has a heating value of 135,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal)/2,000 lb/ton

<table>
<thead>
<tr>
<th>HAPs - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/mmBtu</td>
</tr>
<tr>
<td>Arsenic</td>
</tr>
<tr>
<td>Beryllium</td>
</tr>
<tr>
<td>Cadmium</td>
</tr>
<tr>
<td>Chromium</td>
</tr>
<tr>
<td>Lead</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
</tr>
<tr>
<td>8.67E-06</td>
</tr>
<tr>
<td>6.50E-06</td>
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<td>6.50E-06</td>
</tr>
<tr>
<td>6.50E-06</td>
</tr>
<tr>
<td>1.95E-05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAPs - Metals (continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/mmBtu</td>
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<tr>
<td>Mercury</td>
</tr>
<tr>
<td>Manganese</td>
</tr>
<tr>
<td>Nickel</td>
</tr>
<tr>
<td>Selenium</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
</tr>
<tr>
<td>6.50E-06</td>
</tr>
<tr>
<td>1.30E-05</td>
</tr>
<tr>
<td>6.50E-06</td>
</tr>
<tr>
<td>3.25E-05</td>
</tr>
</tbody>
</table>

**Methodology**

No data was available in AP-42 for organic HAPs.

Potential Emissions (tons/year) = Throughput (MMBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton
Appendix A: Emission Calculations
VOC Emissions
Corn Oil Loadout

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

1. Emission Factors: AP-42

According to AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids (01/95), the VOC emission factors for the truck and rail loading racks can be estimated from the following equation:

\[ L = 12.46 \times \frac{S \times P \times M}{T} \]

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

<table>
<thead>
<tr>
<th>Previous Stored Liquid</th>
<th>*S</th>
<th>P (psia)</th>
<th>M (lbs/lb-mole)</th>
<th>T (degree R)</th>
<th>L (lbs/kgal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn Oil (normal)</td>
<td>0.6</td>
<td>0.0091</td>
<td>96.09</td>
<td>509.58</td>
<td>0.01</td>
</tr>
</tbody>
</table>

2. Potential to Emit VOC:

Max. Loading Rate: 7,500 kgal/yr for truck loading (worst case) = 7,500,000 gallons per year

\[ \text{PTE of VOC (tons/yr)} = 2500 \text{ kgal/yr} \times 0.01 \text{ lbs/kgal} \times 1 \text{ ton/2000 lbs} = 0.05 \text{ tons/yr} \]
### Appendix A: Emission Calculations

#### PM, PM10 and PM2.5 Emissions

#### Additional Corn Storage

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** T179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

#### Estimated Annual Use

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Grain Throughput (units)</th>
<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Factor (lb/ton)</th>
<th>PM2.5 Emission Factor (lb/ton)</th>
<th>PM Emission Rate (lb/yr)</th>
<th>PM10 Emission Rate (lb/yr)</th>
<th>PM2.5 Emission Rate (lb/yr)</th>
<th>PM Emission Rate (ton/yr)</th>
<th>PM10 Emission Rate (ton/yr)</th>
<th>PM2.5 Emission Rate (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck to Pile</td>
<td>28,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>13.116</td>
<td>6.203</td>
<td>0.939</td>
<td>0.0066</td>
<td>0.0031</td>
<td>0.0006</td>
</tr>
<tr>
<td>Pile Movement</td>
<td>28,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>13.116</td>
<td>6.203</td>
<td>0.939</td>
<td>0.0066</td>
<td>0.0031</td>
<td>0.0006</td>
</tr>
<tr>
<td>Pile to Truck</td>
<td>28,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>13.116</td>
<td>6.203</td>
<td>0.939</td>
<td>0.0066</td>
<td>0.0031</td>
<td>0.0006</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>39.347</strong></td>
<td><strong>18.610</strong></td>
<td><strong>2.818</strong></td>
<td><strong>0.0066</strong></td>
<td><strong>0.0031</strong></td>
<td><strong>0.0006</strong></td>
</tr>
</tbody>
</table>

#### Grain Receiving Permit Limit

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Grain Throughput (units)</th>
<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Factor (lb/ton)</th>
<th>PM2.5 Emission Factor (lb/ton)</th>
<th>PM Emission Rate (lb/yr)</th>
<th>PM10 Emission Rate (lb/yr)</th>
<th>PM2.5 Emission Rate (lb/yr)</th>
<th>PM Emission Rate (ton/yr)</th>
<th>PM10 Emission Rate (ton/yr)</th>
<th>PM2.5 Emission Rate (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck to Pile</td>
<td>1,622,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>759.776</td>
<td>359.353</td>
<td>54.416</td>
<td>0.3799</td>
<td>0.1797</td>
<td>0.0272</td>
</tr>
<tr>
<td>Pile Movement</td>
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<td>0.0005</td>
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<td>759.776</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>2279.328</strong></td>
<td><strong>1078.060</strong></td>
<td><strong>163.249</strong></td>
<td><strong>1.140</strong></td>
<td><strong>0.539</strong></td>
<td><strong>0.082</strong></td>
</tr>
</tbody>
</table>

#### Potential to Emit

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Grain Throughput (units)</th>
<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Factor (lb/ton)</th>
<th>PM2.5 Emission Factor (lb/ton)</th>
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<th>PM2.5 Emission Rate (lb/yr)</th>
<th>PM Emission Rate (ton/yr)</th>
<th>PM10 Emission Rate (ton/yr)</th>
<th>PM2.5 Emission Rate (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck to Pile</td>
<td>140 tons/hr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>0.066</td>
<td>0.031</td>
<td>0.005</td>
<td>0.2872</td>
<td>0.1359</td>
<td>0.0206</td>
</tr>
<tr>
<td>Pile Movement</td>
<td>140 tons/hr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>0.066</td>
<td>0.031</td>
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<td>0.005</td>
<td>0.2872</td>
<td>0.1359</td>
<td>0.0206</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>0.197</strong></td>
<td><strong>0.093</strong></td>
<td><strong>0.014</strong></td>
<td><strong>0.882</strong></td>
<td><strong>0.408</strong></td>
<td><strong>0.062</strong></td>
</tr>
</tbody>
</table>

**Emission Factors for PM, PM10 and PM2.5 all come from AP-42, 13.2.4**  
**Emission Rate - E=k(0.0032)*((U/5)^1.3)/((M/2)^1.4)**  

- **k** = particle size multiplier  
  - **PM** = 0.74  
  - **PM10** = 0.35  
  - **PM2.5** = 0.053  
- **U** = mean wind speed (mph)  
  - Fort Wayne, IN (NWS) **U** = 9.9  
- **M** = moisture content (%)  
  - **M** = 12

1 bushel of corn = 56 lbs  
1000000 (buh yr of corn) * 56 (lb/bu) / 2000 (lb/ton) = 28,000 (ton/yr)
### Emission Calculations

#### PM, PM10 and PM2.5 Emissions

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

#### Estimated Annual Use

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Grain Throughput (units)</th>
<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Factor (lb/ton)</th>
<th>PM2.5 Emission Factor (lb/ton)</th>
<th>PM Emission Rate (lb/hr)</th>
<th>PM10 Emission Rate (lb/hr)</th>
<th>PM2.5 Emission Rate (lb/hr)</th>
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<th>PM10 Emission Rate (lb/yr)</th>
<th>PM2.5 Emission Rate (lb/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck to Pile</td>
<td>56,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>26.231</td>
<td>12.407</td>
<td>1.879</td>
<td>0.0131</td>
<td>0.0062</td>
<td>0.0009</td>
</tr>
<tr>
<td>Pile Movement</td>
<td>56,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
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<td>0.00003</td>
<td>26.231</td>
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<td>1.879</td>
<td>0.0131</td>
<td>0.0062</td>
<td>0.0009</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>78.694</td>
<td>37.220</td>
<td>5.636</td>
<td>0.036</td>
<td>0.019</td>
<td>0.003</td>
</tr>
</tbody>
</table>

#### Grain Receiving Permit Limit

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<td>0.0002</td>
<td>0.00003</td>
<td>795.776</td>
<td>359.353</td>
<td>54.416</td>
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<td>1.140</td>
<td>0.539</td>
<td>0.082</td>
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<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Factor (lb/ton)</th>
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<th>PM Emission Rate (lb/hr)</th>
<th>PM10 Emission Rate (lb/hr)</th>
<th>PM2.5 Emission Rate (lb/hr)</th>
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<th>PM10 Emission Rate (ton/yr)</th>
<th>PM2.5 Emission Rate (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck to Pile</td>
<td>560 tons/hr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>0.262</td>
<td>0.124</td>
<td>0.019</td>
<td>1.1469</td>
<td>0.0823</td>
<td>0.0823</td>
</tr>
<tr>
<td>Pile Movement</td>
<td>560 tons/hr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
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<td>0.124</td>
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<td>0.019</td>
<td>1.1469</td>
<td>0.0823</td>
<td>0.0823</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.787</td>
<td>0.372</td>
<td>0.056</td>
<td>3.447</td>
<td>0.247</td>
<td>0.247</td>
</tr>
</tbody>
</table>

Emission Factors for PM, PM10 and PM2.5 all come from AP-42, 13.2.4

Emission Rate - \( E = k(0.0032) \times ((U/5)^{1.3})/((M/2)^{1.4}) \)

- \( E \): Emission factor (lb/hr)
- \( k \): particle size multiplier
- \( U \): mean wind speed (mph) Fort Wayne, IN (NWS) \( U = 9.9 \)
- \( M \): moisture content (%) \( M = 12 \)

1 bushel of corn = 56 lbs

\[
1000000 \text{ (bu/yr of corn)} \times 56 \text{ (lb/bu)} / 2000 \text{ (lb/ton)} = 28,000 \text{ (ton/yr)}
\]
Appendix A: Emission Calculations  
Fugitive Dust Emissions - Paved Roads

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
Source Address: 1441 South Adams St., Bluffton, IN 46714  
Significant Source Modification No.: 1794-41017-00033  
Part 70 Operating Permit Renewal No.: 1794-41632-00033  
Reviewer: Andrew Belt

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 day per vehicle</th>
<th>Maximum trips per day (ton/day)</th>
<th>Maximum Weight of Loaded Vehicle (ton/mile)</th>
<th>Total Weight driven per day (ton/day)</th>
<th>Maximum one-way distance (mi/trip)</th>
<th>Maximum one-way distance (feet/trip)</th>
<th>Maximum one-way miles (miles/yr)</th>
<th>Maximum one-way miles (miles/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denatured Ethanol (leaving plant) (one-way trip)</td>
<td>1.0</td>
<td>10.98</td>
<td>11.0</td>
<td>46.0</td>
<td>448.4</td>
<td>2640</td>
<td>0.500</td>
<td>274.0</td>
<td>186.1</td>
</tr>
<tr>
<td>Denatured Ethanol (leaving plant) (one-way trip)</td>
<td>1.0</td>
<td>60.27</td>
<td>60.4</td>
<td>46.0</td>
<td>461.0</td>
<td>2640</td>
<td>0.500</td>
<td>274.0</td>
<td>186.1</td>
</tr>
<tr>
<td>Grain (leaving plant) (one-way trip)</td>
<td>1.0</td>
<td>17.70</td>
<td>17.9</td>
<td>46.0</td>
<td>449.9</td>
<td>2640</td>
<td>0.500</td>
<td>274.0</td>
<td>186.1</td>
</tr>
<tr>
<td>DDGS (leaving plant) (one-way trip)</td>
<td>1.0</td>
<td>53.76</td>
<td>53.8</td>
<td>25.0</td>
<td>1344.0</td>
<td>1320</td>
<td>0.250</td>
<td>33.9</td>
<td>12390.0</td>
</tr>
<tr>
<td>JDTS (leaving plant) (one-way trip)</td>
<td>1.0</td>
<td>135.78</td>
<td>135.8</td>
<td>25.0</td>
<td>1344.0</td>
<td>1320</td>
<td>0.250</td>
<td>33.9</td>
<td>12390.0</td>
</tr>
</tbody>
</table>

Unmitigated Emission Factor, \( Ef \) = \( \left[ k \times (sL)^{0.91} \times (W)^{1.02} \right] \) \( \text{(Equation 1 from AP-42 13.2.1)} \)

where \( k = 0.011 \) \( \text{lb/VMT} \) \( \text{= particle size multiplier (AP-42 Table 13.2.1-1)} \)

where \( W = 27.5 \) \( \text{tons} \) \( \text{= average vehicle weight} \)

where \( sL = 1.1 \) \( \text{g/m}^2 \) \( \text{= silt loading value for paved roads at corn wet mills - Table 13.2.1-3)} \)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, \( E_{ext} = Ef \times \left[ 1 - \left( p/4N \right) \right] \) \( \text{(Equation 2 from AP-42 13.2.1)} \)

where \( p = 125 \) days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)

Paved Roads at Industrial Site

Methodology
Total Weight driven per day (ton/day) = \([\text{Maximum Weight of Loaded Vehicle (ton/day)}] \times [\text{Maximum trips per day (trip/day)}] \)

Maximum one-way distance (mi/trip) = \([\text{Maximum one-way one-way distance (feet/trip)}] / [2640] \)

Average Vehicle Weight Per Trip = \( W = 27.5 \) \( \text{tons} \)

Average Miles Per Trip = \( \frac{\text{Total Weight driven per day (ton/day)}}{\text{Average Vehicle Weight Per Trip}} = 0.42 \text{ miles/trip} \)

Average Vehicle Weight Per Trip = 27.5 tons/trip

Average  Miles Per Trip = 0.42 miles/trip

Dust Control Efficiency = 50% 50% 50% (pursuant to control measures outlined in fugitive dust control plan)

Mitigated Emission Factor, \( E_{ext} = Ef \times \left[ 1 - \left( p/4N \right) \right] \)

where \( p = 125 \) days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)

Dust Control Efficiency = 50% 50% 50% (pursuant to control measures outlined in fugitive dust control plan)

Wet DGS and DDGS are both assumed to be shipped 100% by truck to avoid limits. As such, emissions are double counted.

An estimated 30 million gallons of denatured ethanol may be trucked to the facility per year. However, the actual 12-month rolling total will vary depending on how much ethanol is produced at the Bluffton Facility.

Wet DGS (entering plant) (one-way trip)

DDGS (entering plant) (one-way trip)

Grain (entering plant) (one-way trip)

Denatured Ethanol (entering plant) (one-way trip)

Denaturant (entering plant) (one-way trip)

Denatured Ethanol (leaving plant) (one-way trip)

Mitigated PTE of PM (tons/yr) = \( \left[ \text{Mitigated PTE (Before Control) (tons/yr)} \right] \times \left[ 1 - \text{Dust Control Efficiency} \right] \)

Mitigated PTE of PM (After Control) (tons/yr) = \( \left[ \text{Mitigated PTE (Before Control) (tons/yr)} \right] \times \left[ 1 - \text{Dust Control Efficiency} \right] \)

Mitigated PTE of PM10 (After Control) (tons/yr) = \( \left[ \text{Mitigated PTE (Before Control) (tons/yr)} \right] \times \left[ 1 - \text{Dust Control Efficiency} \right] \)

Mitigated PTE of PM2.5 (After Control) (tons/yr) = \( \left[ \text{Mitigated PTE (Before Control) (tons/yr)} \right] \times \left[ 1 - \text{Dust Control Efficiency} \right] \)

Mitigated PTE of PM (After Control) (tons/yr) = \( \left[ \text{Mitigated PTE (Before Control) (tons/yr)} \right] \times \left[ 1 - \text{Dust Control Efficiency} \right] \)

Notes:
Grain density = 56 lb/bushel

Trip miles based on 0.5 miles in 0.5 miles out (trucks travel approximately 1.5 full and 1.25 empty), except for wet DGS.

Wet DGS truck round trip is considered 0.5 miles total (0.25 miles in/out).

The calculations are considered worst-case assuming no rail service.

An estimated 30 million gallons of denatured ethanol may be trucked to the facility per year. However, the actual 12-month rolling total will vary depending on how much ethanol is produced at the Bluffton Facility.

Wet DGS and DDGS are both assumed to be shipped 100% by truck to avoid limits. As such, emissions are double counted.

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit

Part 70 Operating Permit Renewal No.: 1794-41632-00033
Reviewer: Andrew Belt

Source Address: 1441 South Adams St., Bluffton, IN 46714
Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Significant Source Modification No.: 1794-41017-00033
Part 70 Operating Permit Renewal No.: 1794-41632-00033
Reviewer: Andrew Belt
November 15, 2019

Charles Liapes  
Valero Renewable Fuels Company LLC DBA Valero Bluffton Plant  
1441 S Adams St  
Bluffton, IN  46714

Re: Public Notice  
Valero Renewable Fuels Company LLC DBA Valero Bluffton Plant  
Permit Level: Title V Sig Source Mod Minor PSD  
Permit Number: 179-41817-00033

Dear Mr. Liapes:

Enclosed is a copy of your draft Title V Significant Source Modification Minor PSD, 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

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 Wells County Public Library, 200 West Washington Street in Bluffton, IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the 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 Andrew Belt, 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 2-3217 or dial (317) 232-3217.

Sincerely,

Theresa Weaver  
Theresa Weaver  
Permits Branch  
Office of Air Quality

Enclosures  
PN Applicant Cover Letter 4/12/19
November 15, 2019

To: Wells County Public Library

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: Important Information to Display Regarding a Public Notice for an Air Permit

Applicant Name: Valero Renewable Fuels Company LLC DBA Valero Bluffton Plant
Permit Number: 179-41632-00033; 179-41817-00033

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 Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library updated 4/2019
Notice of Public Comment

November 15, 2019
Valero Renewable Fuels Company LLC DBA Valero Bluffton Plant
179-41632-00033; 179-41817-00033

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.
AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

November 15, 2019

A 30-day public comment period has been initiated for:

Permit Number:  179-41632-00033; 179-41817-00033
Applicant Name:  Valero Renewable Fuels Company LLC DBA Valero Bluffton Plant
Location:  Bluffton, Wells County, Indiana

The public notice, draft permit and technical support documents can be accessed via the IDEM Air Permits Online site at:
https://www.in.gov/ai/appfiles/idem-caats/

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
100 North Senate Avenue
Indianapolis, IN  46204

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.
Mail Code 61-53

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<td>Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204</td>
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<td>Charles Liapes  Valero Renewable Fuels Company LLC DBA Valero Bluf 1441 S Adams St Bluffton IN 46714 (Source CAATS)</td>
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<td>Justin Moen  Plant Manager Valero Renewable Fuels Company LLC DBA Valero Bluf 1441 S Adams St Bluffton IN 46714 (RO CAATS)</td>
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<td>Wells County Health Department 223 W. Washington St Bluffton IN 46714-1955 (Health Department)</td>
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<td>Wells County Public Library 200 W. Washington St Bluffton IN 46714-1999 (Library)</td>
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<td>Ms. Joy Haney  5285 East 400 South Columbia City IN 46725 (Affected Party)</td>
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<td>Ms. Mary Shipley  10968 E 100 S Marion IN 46953 (Affected Party)</td>
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<td>Mrs. Tera Fredrickson  4860 W 900 S–90 Montpelier IN 47359-9559 (Affected Party)</td>
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<td>Mr. Christina Furnish  7539 W 1100 S–90 Montpelier IN 47359 (Affected Party)</td>
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<td>Dr. James Rybarczyk  9815 N. CR. 300 E. Muncie IN 47303 (Affected Party)</td>
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<td>Mr. Kevin E. Jackson  7858 South 450 West Poneto IN 46781 (Affected Party)</td>
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<td>Mr. Neil Potter Southern Wells Community Schools 9120 S 300 W Poneto IN 46781 (Affected Party)</td>
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<td>Mrs. Donna Runkle  7327 W 1000 S–90 Warren IN 46792 (Affected Party)</td>
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<td>Bluffton City Council and Mayors Office 128 East Market Street Bluffton IN 46714 (Local Official)</td>
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<td>Wells County Board of Commissioners 105 W Market Street, Suite 205, Courthouse Bluffton IN 46714 (Local Official)</td>
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<td>Vera Cruz Town Council 2837 SW Center Street Bluffton IN 46714 (Local Official)</td>
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<td>Michael Lautzenheiser Executive Director Wells County Government 223 W. Washington St., Room 211 Bluffton IN 46714 (Affected Party)</td>
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<td>Lisa Green  The Journal Gazette 600 W Main St Fort Wayne IN 46802  (Affected Party)</td>
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