Missouri Department of Natural Resources
Air Pollution Control Program

PART 70
PERMIT TO OPERATE

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth herein.

Operating Permit Number: OP2015-001
Expiration Date: APR 0 4 2020
Installation ID: 007-0054
Project Number: 2012-06-083

Installation Name and Address
POET Biorefining - Laddonia
809 North Pine Street
Laddonia, MO 63352
Audrain County

Parent Company's Name and Address
POET Biorefining - Laddonia
809 North Pine Street
Laddonia MO, 63352

Installation Description:

POET Biorefining – Laddonia is a 68,000,000 gallon per year denatured ethanol production plant. The installation is a major source of CO_2e.

Alana L. Hess

Prepared by
Alana L. Hess, P.E.
Environmental Engineer III
Operating Permits Unit

Kyra L Moore

Director or Designee
Department of Natural Resources
APR 0 4 2015

Effective Date

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

APR 0 4 2015

Mr. Steve Murphy
POET Biorefining - Laddonia
809 North Pine Street
Laddonia, MO 63352

Re: POET Biorefining - Laddonia, 007-0054
Permit Number: **OP2015-001**

Dear Mr. Murphy:

Enclosed with this letter is your Part 70 operating permit. Please review this document carefully. Operation of your installation in accordance with the rules and regulations cited in this document is necessary for continued compliance. It is very important that you read and understand the requirements contained in your permit.

You may appeal this permit to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.078.16 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you have any questions or need additional information regarding this permit, please do not hesitate to contact Alana Hess at the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Michael J. Stansfield, P.E.
Operating Permit Unit Chief

MJS:ark

Enclosures

c: Northeast Regional Office
PAMS File: 2012-06-083

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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

POET Biorefining – Laddonia is a 68,000,000 gallon per year denatured ethanol production plant. The installation is a major source of CO_2e. Up to 25 million bushels of grain are processed to produce 200 proof ethanol. The grain is received and stored on site prior to cleaning and milling. The grain handling equipment is enclosed and vented to a baghouse with negative pressure. Once the grain is cleaned it is then ground with hammer mills. Emissions from each of the four hammer mills and grain cleaners are controlled by a baghouse with negative pressure. The milled grain is then blended with water and enzymes to form a mash slurry for the fermentation process. Yeast and more enzymes are added to this mash in the six fermentation tanks. Emissions from the fermentation process flow to a scrubber, which captures the entrained ethanol, and then are released to the RTO. When the RTO is bypassed, these emissions are vented to the atmosphere.

After batch fermentation, the resultant ethanol mixture (beer) is distilled in a series of distillation columns. The resultant products are approximately 190 proof ethanol and whole stillage. Using molecular sieves, most of the remaining water will be removed from the ethanol to produce 200 proof ethanol. This is then combined with natural gasoline (denaturant) and shipped as denatured ethanol.

The whole stillage is centrifuged to yield thin stillage and solid fractions (wet cake). Emissions from the centrifuge are vented to the RTO. The thin stillage is further evaporated in a series of evaporators to produce a syrup. This syrup is combined with the centrifuged wet cake and dried and cooled in a series of ring driers to produce DDGS.

Two ring dryers are used to dry the DDGS. The air and water vapor from this process go through cyclones to collect additional DDGS product which has an added benefit of reducing the DDGS dust load before being vented to the RTO. The RTO has been tested to verify emissions. The DDGS is stored and then loaded onto trucks or rail cars for distribution as DDGS. The DDGS load out system is controlled by a baghouse to minimize emissions. Process steam is produced by two 100 MMBTU/hr natural gas-fired boilers. Additional steam is also supplied by one Heat Recovery steam generator that is associated with a natural gas fired turbine operated by the Missouri Joint Municipal Electric Utility Commission (see Project 2006-06-002).

A 250,000-gallon storage tank is available for 190 proof ethanol. The 200 proof ethanol is stored in one of two 1,500,000-gallon ethanol storage tanks. Denaturant gasoline is stored in a 250,000-gallon tank. The 200 proof ethanol is mixed with the denaturant at the truck and rail load outs for delivery to customers through the loadout system, emissions are controlled by a flare. No denatured ethanol is stored onsite. A 115,000-gallon storage tank can serve as either a denaturant tank or ethanol tank, but is typically empty.

The installation is a named source; therefore, fugitive emissions count towards major source applicability.

Reported Air Pollutant Emissions, tons per year					
Pollutants	**2013**	**2012**	**2011**	**2010**	**2009**
PM_{10}	31.37	32.07	26.56	15.37	15.76
$PM_{2.5}$	9.51	9.08	-	-	-
SO_x	0.44	0.44	0.46	0.49	0.45
NO_x	37.27	43.73	45.86	45.45	39.09
VOC	38.65	43.05	48.85	63.30	75.72
CO	46.21	52.06	54.66	54.12	42.43
HAP	3.63	3.91	3.44	2.42	2.33
Acetaldehyde (75-07-0)	1.71	1.88	1.52	1.52	1.57
Methanol (67-56-1)	0.79	0.80	0.12	0.12	0.12
Formaldehyde (50-00-0)	0.63	0.62	0.17	0.17	0.16
Hexane (110-54-3)	0.25	0.34	0.39	0.39	0.26
Acrolein (107-02-8)	0.22	0.24	0.15	0.15	0.15
Benzene (71-43-2)	0.02	0.02	0.07	0.07	0.07
Xylene (1330-20-7)	0.01	0.01	0.01	0.01	0.01

EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation that emits air pollutants and that are identified as having unit-specific emission limitations.

Emission Unit	Description	Applicable Requirements
EP-01	Corn Receiving, Transfer, and Storage	102005-015A
EP-20	DDGS Transfer & Loading	10 CSR 10-6.220
EP-02	Corn Scalpers, Conveyor, and Surge Bin	102005-015A
EP-03	Hammermill #1	102005-015A
EP-04	Hammermill #2	102005-015A
EP-05	Hammermill #3	102005-015A
EP-06	Hammermill #4	102005-015A
EP-07	Pneumatic Flour Receiver	102005-015A
EP-08	Bypass Stack	102005-015A
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO	102005-015A, 102005-015C, 10 CSR 10-6.220
EP-10	DDGS Fluid Bed Cooler	102005-015A
EP-11	DDGS Storage Silo	102005-015A
EP-12	DDGS Storage Silo Bypass Receiver	102005-015A
EP-13	Boiler #1	102005-015A, NSPS Dc
EP-14	Boiler #2	102005-015A, NSPS Dc
EP-15	Denatured Ethanol Truck Loadout	102005-015A
EP-16	Denatured Ethanol Railcar Loadout	102005-015A
FS002	Haul Roads	102005-015A
FS003	VOC Equipment Leaks	NSPS VVa
TK-02	190 Proof Ethanol Storage Tank	NSPS Kb
TK-03	Denaturant Storage Tank	NSPS Kb
TK-04	Ethanol Storage Tank #1	NSPS Kb
TK-05	Ethanol Storage Tank #2	NSPS Kb
FS001	Grain Receiving and DDGS Handling	10 CSR 10-6.220
FS004	Tank Farm Equipment Leaks	NSPS VVa
FS005	Wet Cake Production	NSPS VVa

EMISSION UNITS WITHOUT LIMITATIONS

The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance. These emissions sources are subject to the plant wide emission limitations in Section II of this permit.

Emission Unit	Description
CWT	Cooling Tower
-	Three 505,000 bushel Storage Bins
-	Two 430,000 bushel Storage Bins
-	50,000 bushel Storage Bin

II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the CFR and CSR for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

PERMIT CONDITION PW001

10 CSR 10-6.060 Construction Permits Required
Construction Permit 102005-015A, Issued January 7, 2013
Construction Permit 102005-015C, Issued June 30, 2014

Emission Limitation:

1. Construction Permit 102005-015A Special Condition 2.A: The permittee shall emit less than 50 tons of PM_{10} from the entire installation in any consecutive 12-month period.
2. Construction Permit 102005-015A Special Condition 2.B: The permittee shall emit less than 100 tons of VOC from the entire installation in any consecutive 12-month period.
3. Construction Permit 102005-015A Special Condition 2.C: The permittee shall emit less than 100 tons of CO from the entire installation in any consecutive 12-month period.
4. Construction Permit 102005-015C Special Condition 2: The permittee shall emit less than 10.0 tons of any individual HAP from the entire installation in any consecutive 12-month period.
5. Construction Permit 102005-015C Special Condition 3: The permittee shall emit less than 25.0 tons of combined HAP from the entire installation in any consecutive 12-month period.
6. Construction Permit 102005-015C Special Condition 4: The permittee shall emit individual HAPs in quantities less than their respective SMALs from the entire installation in any consecutive 12-month period.
   a) Exception: The permittee is not required to limit Acrolein emission below the Acrolein SMAL.
7. Construction Permit 102005-015C Special Condition 5: The permittee shall emit less than 0.075 pounds per hour of Acrolein. The Acrolein emission rate from the RTO shall be verified every five years as required by Special Condition 8.D of NSR Permit 102005-015A.

Operational Limitations:

1. Construction Permit 102005-015A Special Condition 14.A: The permittee shall not produce denatured ethanol is excess of 68,000,000 gallons per consecutive 12-month period.
2. Construction Permit 102005-015A Special Condition 15.A: The permittee shall not receive grain in excess of 700,000 tons per consecutive 12-month period.

Requirements for Future Emissions Alterations:

1. Construction Permit 102005-015A Special Condition 11.A: If a situation arises such that the permittee wishes to alter Special Condition 2.A of Construction Permit 102005-015A in order to allow the existing installation to emit more than 50 tons per year of PM_{10}, the permittee shall be required to conduct an ambient air quality evaluation of the area to demonstrate compliance with the NAAQS in accordance with 10 CSR 10-6.060(6). The evaluation shall include a refined modeling analysis of emissions from the entire installation in addition to existing installations in the area. A complete application with approved analysis shall be submitted to the Air Pollution Control Program at least 180 days prior to the date of desired production increase.

2. Construction Permit 102005-015A Special Condition 11.B: If a situation arises such that the permittee wishes to alter Special Condition 2.B and/or 2.C of Construction Permit 102005-015A in order to allow the existing installation to emit more than 100 tons per year of VOC and/or CO, the permittee shall be required to conduct a New Source Review in accordance with 10 CSR 10-6.060(8). Such a review shall include BACT analysis utilizing current technologies and any other requirements that the Director deems necessary pursuant to 10 CSR 10-6.060(8).

PM_{10} NAAQS Resources and Corrective Action Plan:

Construction Permit 102005-015A Special Condition 12: If a NAAQS evaluation for this area should reveal a violation(s) of the NAAQS in the immediate area of the installation and if it is further demonstrated that the installation is either the cause or is contributing to the violation(s), the Director may require the permittee to submit a corrective action plan to address the NAAQS violation(s) or the portion of the NAAQS violation(s) that is caused by the installation. This corrective action plan, if requested, shall be submitted within 30 days and shall be adequate to timely and significantly mitigate the emissions of PM_{10} to address the situation causing the NAAQS violation(s). The permittee shall implement any such corrective action plan immediately upon its approval by the Director. Failure to either submit or implement such a plan shall be a violation of this permit.

Monitoring/Recordkeeping:

1. Construction Permit 102005-015A Special Condition 2.C.1: The permittee shall record the monthly and the 12-month rolling total CO emissions in tons from the entire installation. These records shall be kept on-site for five years and shall be made immediately available for inspection to Department of Natural Resources' personnel upon request. Attachment A1 or an equivalent form approved by the Missouri Air Pollution Control Program shall be used for this purpose.
2. Construction Permit 102005-015A Special Condition 2.A.1: The permittee shall record the monthly and the 12-month rolling total PM_{10} emissions in tons from the entire installation. These records shall be kept on-site for five years and shall be made immediately available for inspection to Department of Natural Resources' personnel upon request. Attachment A2 or an equivalent form approved by the Missouri Air Pollution Control Program shall be used for this purpose.
3. Attachment B contains Potential to Emit calculations demonstrating that the installation is in compliance with the VOC, individual HAP, and combined HAP limits.
4. Construction Permit 102005-015A Special Condition 14.B: The permittee shall record the monthly and 12-month rolling total denatured ethanol production rate from the entire installation using Attachment C or an equivalent form approved by the Missouri Air Pollution Control Program. These records shall be kept on-site for five years and shall be made available for inspection to Department of Natural Resources' personnel upon request.
5. Construction Permit 102005-015A Special Condition 15.B: The permittee shall record the monthly and 12-month rolling total amount of grain received by the entire installation using Attachment C or an equivalent form approved by the Missouri Air Pollution Control Program. These records shall be kept on-site for five years and shall be made available for inspection to Department of Natural Resources' personnel upon request.

Performance Testing:

1. Construction Permit 102005-015A Special Condition 8.A: The permittee shall conduct performance tests to verify their emission rates as follows:
   a) The Bypass Stack (EP-08), the RTO (EP-09) and the Fluid Bed Cooler (EP-10) shall be tested to determine the VOC and aggregate HAP emission rates when all the processes controlled by these

devices are in operation. These emission rates shall be used to update the PTE in Attachment B and demonstrate compliance with Special Condition 2.B of Construction Permit 102005-015A and Special Conditions 2 through 5 of Construction Permit 102005-015C.

b) The Bypass Stack (EP-08), the RTO (EP-09), and the Fluid Bed Cooler (EP-10) shall be tested to determine the emission rates of the following HAPs: Acetaldehyde, Acrolein, Formaldehyde, and Methanol. These emission rates shall be used to update the PTE in Attachment B and demonstrate compliance with Special Conditions 2 through 5 of Construction Permit 102005-015C.

c) The RTO (EP-09) shall be tested to determine the CO emission rate when in operation. This emission rate shall be used in Attachment A1 for compliance with Special Condition 2.C of Construction Permit 102005-015A.

d) The emission units limited by Special Condition 2.E of Construction Permit 102005-015A shall be tested to determine their PM_{10} emission rates. These emission rates shall not exceed the amounts listed in Special Condition 2.E of Construction Permit 102005-015A. In addition, these emission rates shall be used to update Attachment B and demonstrate compliance with Special Condition 2.A of Construction Permit 102005-015A.

e) The Denatured Ethanol Truck Loadout (EP-15) shall be tested to determine the destruction efficiency of the flare. The destruction efficiency shall be used to update Attachment B and demonstrate compliance with Special Condition 2.B of Construction Permit 102005-015A and Special Conditions 2 through 4 of Construction Permit 102005-015C.

2. Construction Permit 102005-015A Special Condition 8.C: These tests shall be performed in accordance with the stack test procedures outlined in Special Condition 9 of Construction Permit 102005-015A.
3. Construction Permit 102005-015A Special Condition 8.D: The permittee shall conduct performance tests to verify the emission rates as indicated in Special Condition 8.A of Construction Permit 102005-015A once every five years from the date of the most recent performance tests.
4. Construction Permit 102005-015A Special Condition 9.A: A completed Proposed Test Plan Form shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Director prior to conducting the required emission testing.
5. Construction Permit 102005-015A Special Condition 9.B: Two copies of a written report of the performance test results shall be submitted to the Director within 30 days of completion of any required testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.
6. Construction Permit 102005-015A Special Condition 9.C: The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.
7. Construction Permit 102005-015A Special Condition 9.D: If the performance testing required by Special Condition 8 of Construction Permit 102005-015A indicates that any of the emission limits are being exceeded, the permittee shall propose a plan to the Air Pollution Control Program within 30 days of submitting the performance test results. This plan shall demonstrate how the permittee will reduce the emission rates below the emission limits. The permittee shall implement any such plan immediately upon its approval by the Director.

Reporting:

1. Construction Permit 102005-015A Special Condition 2.C.2: The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which records indicate an exceedance of the CO emission limitation.
2. Construction Permit 102005-015A Special Condition 2.A.2: The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which records indicate an exceedance of the PM_{10} emission limitation.
3. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the CFR and CSR for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

PERMIT CONDITION 001 10 CSR 10-6.060 Construction Permits Required Construction Permit 102005-015A, Issued January 7, 2013	
Emission Unit	**Description**
EP-01	Corn Receiving, Transfer, and Storage
EP-02	Corn Scalpers, Conveyor, and Surge Bin
EP-03	Hammermill #1
EP-04	Hammermill #2
EP-05	Hammermill #3
EP-06	Hammermill #4
EP-07	Pneumatic Flour Receiver
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO
EP-10	DDGS Fluid Bed Cooler
EP-11	DDGS Storage Silo
EP-12	DDGS Storage Silo Bypass Receiver

Emission Limitations:

Special Condition 2.E: The permittee shall not discharge PM_{10} into the atmosphere from the following emission units in excess of the listed amounts:

Emission Unit	Description	PM_{10} Emission Limit (lb/hr)
EP-01	Corn Receiving, Transfer, and Storage	1.00
EP-02	Corn Scalpers, Conveyor, and Surge Bin	0.11
EP-03	Hammermill #1	0.51
EP-04	Hammermill #2	0.51
EP-05	Hammermill #3	0.51
EP-06	Hammermill #4	0.51
EP-07	Pneumatic Flour Receiver	0.18
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO	6.5
EP-10	DDGS Fluid Bed Cooler	1.02
EP-11	DDGS Storage Silo	0.17
EP-12	DDGS Storage Silo Bypass Receiver	0.17

The emission rates from these emission units shall be verified through performance testing.

Performance Testing:

1. Special Condition 8.A: The permittee shall conduct performance tests to verify their emission rates as follows:
   a) The emission units shall be tested to determine their PM_{10} emission rates. These emission rates shall not exceed the amounts listed. In addition, these emission rates shall be used to update Attachment B and demonstrate compliance with Special Condition 2.A of Construction Permit 102005-015A.
2. Special Condition 8.C: These tests shall be performed in accordance with the stack test procedures outlined in Special Condition 9.

3. Special Condition 8.D: The permittee shall conduct performance tests to verify the emission rates as indicated in Special Condition 8.A once every five years from the date of the most recent performance tests.
4. Special Condition 9.A: A completed Proposed Test Plan Form shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Director prior to conducting the required emission testing.
5. Special Condition 9.B: Two copies of a written report of the performance test results shall be submitted to the Director within 30 days of completion of any required testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.
6. Special Condition 9.C: The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.
7. Special Condition 9.D: If the performance testing required by Special Condition 8 indicates that any of the emission limits are being exceeded, the permittee shall propose a plan to the Air Pollution Control Program within 30 days of submitting the performance test results. This plan shall demonstrate how the permittee will reduce the emission rates below the emission limits. The permittee shall implement any such plan immediately upon its approval by the Director.

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 002

10 CSR 10-6.060 Construction Permits Required
Construction Permit 102005-015A, Issued January 7, 2013

Emission Unit	Description
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO
EP-13	Boiler #1
EP-14	Boiler #2

Emission Limitations:

Special Condition 2.F: The permittee shall not discharge NO_x into the atmosphere from the following emission units in excess of the listed amounts:

Emission Unit	Description	NO_x Emission Limit (lb/hr)
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO	11.5
EP-13	Boiler #1	4.0
EP-14	Boiler #2	4.0

The emission rates from these emission units shall be verified through performance testing.

Performance Testing:

1. Special Condition 8.A: The permittee shall conduct performance tests to verify their emission rates as follows:

a) The emission units shall be tested to determine their NO_x emission rates when in operation. These emission rates shall not exceed the amounts listed in Special Condition 2.F. In addition, these emission rates shall be used to update Attachment B.

2. Special Condition 8.C: These tests shall be performed in accordance with the stack test procedures outlined in Special Condition 9.
3. Special Condition 8.D: The permittee shall conduct performance tests to verify the emission rates as indicated in Special Condition 8.A once every five years from the date of the most recent performance tests.
4. Special Condition 9.A: A completed Proposed Test Plan Form shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Director prior to conducting the required emission testing.
5. Special Condition 9.B: Two copies of a written report of the performance test results shall be submitted to the Director within 30 days of completion of any required testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.
6. Special Condition 9.C: The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.
7. Special Condition 9.D: If the performance testing required by Special Condition 8 indicates that any of the emission limits are being exceeded, the permittee shall propose a plan to the Air Pollution Control Program within 30 days of submitting the performance test results. This plan shall demonstrate how the permittee will reduce the emission rates below the emission limits. The permittee shall implement any such plan immediately upon its approval by the Director.

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 003 10 CSR 10-6.060 Construction Permits Required Construction Permit 102005-015A, Issued January 7, 2013	
Emission Unit	**Description**
EP-01	Corn Receiving, Transfer, and Storage
EP-02	Corn Scalpers, Conveyor, and Surge Bin
EP-03	Hammermill #1
EP-04	Hammermill #2
EP-05	Hammermill #3
EP-06	Hammermill #4
EP-07	Pneumatic Flour Receiver
EP-10	DDGS Fluid Bed Cooler
EP-11	DDGS Storage Silo
EP-12	DDGS Storage Silo Bypass Receiver

Operational Limitations:

1. Special Condition 3.A: The baghouses listed below shall be in use at all times when the associated equipment is in operation:

Control Device	Emission Unit	Description
CE-01	EP-01	Corn Receiving, Transfer, and Storage
CE-02	EP-02	Corn Scalpers, Conveyor, and Surge Bin
CE-03	EP-03	Hammermill #1
CE-04	EP-04	Hammermill #2
CE-05	EP-05	Hammermill #3
CE-06	EP-06	Hammermill #4
CE-07	EP-07	Pneumatic Flour Receiver
CE-12	EP-10	DDGS Fluid Bed Cooler
CE-13	EP-11	DDGS Storage Silo
CE-14	EP-12	DDGS Storage Silo Bypass Receiver

2. Special Condition 3.B: The baghouse(s) and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse(s) shall be equipped with a gauge or meter that indicates the pressure drop across each baghouse. This gauge or meter shall be located in such a way it may be easily observed by Department of Natural Resources' employees.
3. Special Condition 3.C: Replacement bags for all baghouse(s) shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance).

Monitoring/Recordkeeping:

1. Special Condition 3.D: Visible emissions shall be used as an indicator of the proper operation of the control devices. During proper operation no visible emissions are expected from these emission units. The existence of visible emissions shall indicate a decrease in the efficiency of the control device and corrective actions shall be implemented.
   a) Visible emissions from each exhaust shall be monitored on a daily basis when the process is in operation.
   b) The duration of the observation shall be for a two minute time period.
   c) The condition of no visible emissions is considered normal for these emission units. When visible emissions are noted from any of these emission units, it shall be documented and corrective actions taken.
2. Special Condition 3.E: The observation of visible emissions from these emission units will be considered an excursion and corrective actions shall be implemented within a reasonable period. An excursion does not necessarily indicate a violation of the applicable requirement. When the level of excursions exceed three percent of the of the total number of observations in a six month period and corrective actions fail to return the emission unit to a no visible emission condition, then the permittee shall conduct source testing within 90 days of the last excursion to demonstrate compliance with 10 CSR 10-6.400. If the test demonstrates noncompliance with the emission limitation found in Special Condition 2.E of Construction Permit 102005-015A the permittee shall propose a schedule to implement further corrective actions to bring the source into compliance and demonstrate that compliance.
3. Special Condition 3.F: The permittee shall monitor and record the operating pressure drop across the baghouse(s) at least once in every 24 hour period when the associated equipment is operated. The

operating pressure drop shall be maintained within the normal operating range specified by the manufacturer's performance warranty. If the pressure drop reading should fall outside of this normal operating range, then the associated equipment shall be shut down as quickly as is reasonably practical. Corrective actions shall be taken to address the cause of the non-normal pressure drop and the baghouse(s) shall be returned to normal operation before restarting the equipment.

4. Special Condition 3.G: The permittee shall inspect the baghouse(s) at least once every six months and maintain an operating and maintenance log containing at a minimum:
   a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
5. The permittee shall maintain a copy of all records onsite and shall make them available to Department of Natural Resources' personnel upon request.

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 004

10 CSR 10-6.060 Construction Permits Required
Construction Permit 102005-015A, Issued January 7, 2013

Emission Unit	Description
EP-08	Bypass Stack

Operational Limitations:

1. Special Condition 4.A: The permittee shall use a scrubber at all times to control emissions from EP-08 Bypass Stack while the process is in operation. Emission sources to be controlled include the Fermentation Process (six fermentation tanks, one beer well, the slurry tank, and the yeast propagation tank) and the Distillation Process (beer stripper, rectifier, side stripper, 200 proof rundown tank, reboiler, regeneration tank, and 190 rundown tank).
2. Special Condition 4.B. Emissions from the scrubber shall be routed to the RTO (CE-11) to further control VOC and HAP emissions. The permittee may allow scrubber emissions to bypass the RTO during times when the RTO is not in operation, not to exceed a maximum of 500 hours per consecutive 12-month during which time the emission rate from the scrubber shall be used to demonstrate compliance with Special Condition 2.B of Construction Permit 102005-015A.
3. Special Condition 4.C: The scrubber and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer's specifications. The scrubber shall be equipped with a gauge or meter that indicates the pressure drop across the scrubber. The scrubber shall be equipped with a flow meter that indicates the flow through the scrubber. This gauge and meter shall be located in such a way they may be easily observed by Department of Natural Resources' employees.

Monitoring/Recordkeeping:

1. Special Condition 4.D: The permittee shall monitor and record the operating pressure drop across the scrubber at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

2. Special Condition 4.E: The permittee shall monitor and record the flow rate through the scrubber at least once every 24 hours. The flow rate shall be maintained within the design conditions specified by the manufacturer's performance warranty.
3. Special Condition 4.F. The permittee shall maintain an operating and maintenance log for the scrubber which shall include the following:
   a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
   c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.
   d) A written record of the total number of hours the thermal oxidizer is bypassed including the date and time of the bypass.
4. The permittee shall maintain a copy of all records onsite and shall make them available to Department of Natural Resources' personnel upon request.

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176 Jefferson City, Missouri 65102, no later than ten days after the end of the month during which records indicate an exceedance of the 500 hours of maximum annual bypass operation.
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 005 10 CSR 10-6.060 Construction Permits Required Construction Permit 102005-015A, Issued January 7, 2013	
Emission Unit	**Description**
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO

Operational Limitations/Monitoring:

1. Special Condition 5.A: The multicyclones (CE-09 and CE-10) shall be in use at all times when the DDGS Dryers (EP-09) are in operation. The multicyclones shall be operated and maintained in accordance with the manufacturer's specifications.
2. Special Condition 5.B: The multicyclones shall be equipped with a gauge or meter that indicates the pressure drop across the multicyclones. The permittee shall monitor and record the operating pressure drop across the multicyclones at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
3. Special Condition 6.A: The RTO (CE-11) shall be in use at all times when the DDGS Dryers (EP-09) are in operation or any time that regulated PM_{10}, VOC, or HAP emissions are possible. The RTO shall be operated and maintained in accordance with the manufacturer's specifications. Emission rates of PM_{10}, VOC, HAPs, CO, and NO_x shall be tested, as detailed in Special Condition 8 of Construction Permit 102005-015A to verify the RTO is operating as assumed.
4. Special Condition 6.B: The operating temperature of the RTO shall be continuously monitored and recorded during operation. The operating temperature of the RTO shall be maintained on a rolling three-hour rolling average within 50 degrees Fahrenheit of the average temperature of the RTO recorded during the compliance test specified in Special Condition 8 of Construction Permit 102005-015A which demonstrated compliance with the emission limits. The acceptable temperature range

may be reestablished by performing a new set of emission tests. The most recent 60 months of records shall be maintained on-site and shall be made immediately available to Missouri Department of Natural Resources' personnel upon request.

Recordkeeping:

1. Special Condition 5.C. The permittee shall maintain an operating and maintenance log for the multicyclones which shall include the following:
   a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
   c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.
2. Special Condition 6.C: The permittee shall maintain an operating and maintenance log for the RTO which shall include the following:
   a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
   c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 006

10 CSR 10-6.060 Construction Permits Required
Construction Permit 102005-015A, Issued January 7, 2013

Emission Unit	Description
EP-15	Denatured Ethanol Truck Loadout
EP-16	Denatured Ethanol Railcar Loadout

Operational Limitations:

1. Special Condition 7.A: The flare shall be in use at all times during Denatured Ethanol Truck Loadout (EP-15) and loadout into non-ethanol dedicated tanks (rail loadout EP-16). The flare shall be operated and maintained in accordance with the manufacturer’s specifications.
2. Special Condition 7.B: The flare may be bypassed for a total of 2,000,000 gallons per consecutive 12-month period during which time the uncontrolled emission rate shall be used for compliance with Special Condition 2.B of Construction Permit 102005-015A. The bypass total shall include both truck and rail loadout.

Recordkeeping:

1. Special Condition 7.C: The permittee shall maintain an operating and maintenance log for the flare which shall include the following:
   a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.
d) A written record of the total number of hours the flare is bypassed including the date and time of the bypass.

2. The permittee shall maintain the most recent 60 months of records on-site and make them available to Missouri Department of Natural Resources' personnel upon request.

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176 Jefferson City, Missouri 65102, no later than ten days after the end of the month during which records indicate an exceedance of the 2,000,000 gallons of maximum annual bypass operation.
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 007

10 CSR 10-6.060 Construction Permits Required
Construction Permit 102005-015A, Issued January 7, 2013

Emission Unit	Description
FS002	Haul Roads

Operational Limitations:

1. Special Condition 13.A: The permittee shall pave FS002 Haul Roads with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the Program. The pavement shall be applied in accordance with industry standards for such pavement so as to achieve "Control of Fugitive Emissions" while the plant is operating.
2. Special Condition 13.B: Maintenance and/or repair of the surfaces shall be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
3. Special Condition 13.C: The permittee shall periodically water, wash, and/or otherwise clean the paved haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 008

10 CSR 10-6.070 New Source Performance Regulations
40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Emission Unit	Description
EP-13	Boiler #1
EP-14	Boiler #2

Monitoring/Recordkeeping:

1. Except as provided under §60.48c(g)(2) and (3), the permittee shall record and maintain records of the amount of each fuel combusted during each operating day. [§60.48c(g)(1)]
2. As an alternative to meeting the requirements of §60.48c(g)(1), the permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month. [§60.48c(g)(2)]
3. As an alternative to meeting the requirements of §60.48c(g)(1), the permittee may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month. [§60.48c(g)(3)]
4. The permittee shall maintain the most recent 60 months of records on-site and make them available to Missouri Department of Natural Resources' personnel upon request.

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 009

10 CSR 10-6.070 New Source Performance Regulations
40 CFR Part 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Emission Unit	Description
TK-02	190 Proof Ethanol Storage Tank
TK-03	Denaturant Storage Tank
TK-04	Ethanol Storage Tank #1
TK-05	Ethanol Storage Tank #2

VOC Standards:

1. The permittee shall equip each storage vessel with one of the following: [§60.112b(a)]
   a) A fixed roof in combination with an internal floating roof meeting the following specifications: [§60.112b(a)(1)]
      i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. [§60.112b(a)(1)(i)]
      ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof: [§60.112b(a)(1)(ii)]
         (1) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank. [§60.112b(a)(1)(ii)(A)]
         (2) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the

internal floating roof. The lower seal may be vapor-mounted, but both shall be continuous. [§60.112b(a)(1)(ii)(B)]

iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. [§60.112b(a)(1)(iii)]

iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. [§60.112b(a)(1)(iv)]

v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [§60.112b(a)(1)(v)]

vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [§60.112b(a)(1)(vi)]

vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening. [§60.112b(a)(1)(vii)]

viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. [§60.112b(a)(1)(viii)]

ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [§60.112b(a)(1)(ix)]

Testing and Procedures:

1. After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), the permittee shall: [§60.113b(a)]
   a) Visually inspect the internal floating roof, the primary seal, and the secondary seal, prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the permittee shall repair the items before filling the storage vessel. [§60.113b(a)(1)]
   b) Visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension shall document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. [§60.113b(a)(2)]
   c) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B): [§60.113b(a)(3)]

i) Visually inspect the vessel as specified in §60.113b(a)(4) at least every five years; or [§60.113b(a)(3)(i)]
ii) Visually inspect the vessel as specified in §60.113b(a)(2). [§60.113b(a)(3)(ii)]

d) Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than ten percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than ten years in the case of vessels conducting the annual visual inspection as specified in §60.113b(a)(2) and (3)(ii) and at intervals no greater than five years in the case of vessels specified in §60.113b(a)(3)(i). [§60.113b(a)(4)]

e) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by §60.113b(a)(1) and (4) to afford the Administrator the opportunity to have an observer present. If the inspection required by §60.113b(a)(4) is not planned and the permittee could not have known about the inspection 30 days in advance of refilling the tank, the permittee shall notify the Administrator at least seven days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least seven days prior to the refilling. [§60.113b(a)(5)]

Reporting and Recordkeeping:

1. After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the permittee shall meet the following requirements: [§60.115b(a)]
   a) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3). [§60.115b(a)(1)]
   b) Keep a record of each inspection performed as required by §60.113b(a)(1), (2), (3), and (4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [§60.115b(a)(2)]
   c) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made. [§60.115b(a)(3)]
   d) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §60.112b(a)(1) or §60.113b(a)(3) and list each repair made. [§60.115b(a)(4)]
2. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [§60.116b(b)]

3. Except as provided in §60.116b(f) and (g), the permittee shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. [§60.116b(c)]
4. Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below. [§60.116b(e)]
   a) For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [§60.116b(e)(1)]
   b) For refined petroleum products the vapor pressure may be obtained by the following: [§60.116b(e)(2)]
      i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see §60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [§60.116b(e)(2)(i)]
   c) For other liquids, the vapor pressure: [§60.116b(e)(3)]
      i) May be obtained from standard reference texts, or [§60.116b(e)(3)(i)]
      ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see §60.17); or [§60.116b(e)(3)(ii)]
      iii) Measured by an appropriate method approved by the Administrator; or [§60.116b(e)(3)(iii)]
      iv) Calculated by an appropriate method approved by the Administrator. [§60.116b(e)(3)(iv)]
5. The permittee shall maintain the most recent 60 months of records on-site and make them available to Missouri Department of Natural Resources' personnel upon request.
6. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 010

10 CSR 10-6.070 New Source Performance Regulations
40 CFR Part 60, Subpart VVa – Standards of Performance for Equipment Leaks for VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

Emission Unit	Description
FS003	VOC Equipment Leaks
FS004	Tank Farm Equipment Leaks

General Standards:

1. The permittee shall demonstrate compliance with the requirements of §§60.482-1a through 60.482-10a or §60.480a(e) for all equipment within 180 days of initial startup. [§60.482-1a(a)]
2. Compliance with §§60.482-1a to 60.482-9a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485a. [§60.482-1a(b)]
3. The permittee may request a determination of equivalence of a means of emission limitation to the requirements of §§60.482-2a, 60.482-5a, 60.482-6a, 60.482-7a, and 60.482-8a as provided in §60.484a. [§60.482-1a(c)(1)]

4. If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§60.482-2a, 60.482-5a, 60.482-6a, 60.482-7a, or 60.482-8a the permittee shall comply with the requirements of that determination. [§60.482-1a(c)(2)]
5. Equipment that is in vacuum service is excluded from the requirements of §§60.482-2a through 60.482-9a if it is identified as required in §60.486a(e)(5). [§60.482-1a(d)]
6. Equipment that the permittee designates as being in VOC service less than 300 hours per year is excluded from the requirements of §§60.482-2a through 60.482-9a if it is identified as required in §60.486a(e)(6) and it meets any of the following conditions: [§60.482-1a(e)]
   a) The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process. [§60.482-1a(e)(1)]
   b) The equipment is in VOC service only during process malfunctions or other emergencies. [§60.482-1a(e)(2)]
   c) The equipment is backup equipment that is in VOC service only when the primary equipment is out of service. [§60.482-1a(e)(3)]
7. If a dedicated batch process unit operates less than 365 days during a year, the permittee may monitor to detect leaks from pumps, valves, and open-ended valves or lines at the frequency specified in the following table instead of monitoring as specified in §§60.482-2a, 60.482-7a, and 60.483.2a: [§60.482-1a(f)(1)]

Operating time (% of hours during year)	**Equivalent Monitoring Frequency Time in Use**		
	Monthly	**Quarterly**	**Semi-annually**
0 to <25	Quarterly	Annually	Annually
25 to <50	Quarterly	Semi-annually	Annually
50 to <75	Bimonthly	Three quarters	Semi-annually
75 to 100	Monthly	Quarterly	Semi-annually

8. Pumps and valves that are shared among two or more batch process units that are subject to NSPS VVa may be monitored at the frequencies specified in §60.482-1a(f)(1), provided the operating time of all such process units is considered. [§60.482-1a(f)(2)]
9. The monitoring frequencies specified in §60.482-1a(f)(1) are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. The permittee may monitor at any time during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. Reasonable intervals are defined as follows: [§60.482-1a(f)(3)]
   a) When monitoring is conducted quarterly, monitoring events shall be separated by at least 30 calendar days. [§60.482-1a(f)(3)(i)]
   b) When monitoring is conducted semi-annually (i.e., once every two quarters), monitoring events shall be separated by at least 60 calendar days. [§60.482-1a(f)(2)(ii)]
   c) When monitoring is conducted in three quarters per year, monitoring events shall be separated by at least 90 calendar days. [§60.482-1a(f)(2)(iii)]
   d) When monitoring is conducted annually, monitoring events shall be separated by at least 120 calendar days. [§60.482-1a(f)(2)(iv)]
10. If the storage vessel is shared with multiple process units, the process unit with the greatest annual amount of stored materials (predominant use) is the process unit the storage vessel is assigned to. If the storage vessel is shared equally among process units, and one of the process units has equipment subject to NSPS VVa, the storage vessel is assigned to that process unit. If the predominant use of the storage vessel varies from year to year, then the permittee shall estimate the predominant use initially and reassess every three years. The permittee shall keep records of the information and

supporting calculations that show how predominant use is determined. All equipment on the storage vessel shall be monitored when in VOC service. [§60.482-1a(g)]

Standards for Pumps in Light Liquid Service:

1. Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §60.485a(b), except as provided in §60.482-1a(c) and (f) and §60.482-2a(d), (e), and (f). A pump that begins operation in light liquid service after the initial startup date for the process unit shall be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in §60.482-1a(c) and §60.482-2a(d), (e), and (f). [§60.482-2a(a)(1)]
2. Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in §60.482-1a(f). [§60.482-2a(a)(2)]
3. The instrument reading that defines a leak is specified as follows: [§60.482-2a(b)(1)]
   a) 5,000 ppm or greater for pumps handling polymerizing monomers; [§60.482-2a(b)(1)(i)]
   b) 2,000 ppm or greater for all other pumps. [§60.482-2a(b)(1)(ii)]
4. If there are indications of liquids dripping from the pump seal, the permittee shall follow the procedure specified in either §60.482-2a(b)(2)(i) or (ii). This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in §60.482-2a(b)(1)(i) or (ii), whichever is applicable. [§60.482-2a(b)(2)]
   a) Monitor the pump within five days as specified in §60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in §60.482-2a(b)(1)(i) or (ii), whichever is applicable. The leak shall be repaired using the procedures in §60.482-2a(c). [§60.482-2a(b)(2)(i)]
   b) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in §60.482-2a(c) or by eliminating the visual indications of liquids dripping. [§60.482-2a(b)(2)(ii)]
5. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9a. [§60.482-2a(c)(1)]
6. A first attempt at repair shall be made no later than five calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following practices, where practicable: [§60.482-2a(c)(2)]
   a) Tightening the packing gland nuts; [§60.482-2a(c)(2)(i)]
   b) Ensuring that the seal flush is operating at design pressure and temperature. [§60.482-2a(c)(2)(ii)]
7. Any pump that is designated, as described in §60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of §60.482-2a(a) and (c) if the pump: [§60.482-2a(e)]
   a) Has no externally actuated shaft penetrating the pump housing; [§60.482-2a(e)(1)]
   b) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in §60.485a(c); and [§60.482-2a(e)(2)]
   c) Is tested for compliance with §60.482-2a(e)(2) initially upon designation, annually, and at other times requested by the Administrator. [§60.482-2a(e)(3)]
8. Any pump that is designated, as described in §60.486a(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of §60.482-2a(a) if: [§60.482-2a(g)]

a) The permittee demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with §60.482-2a(a); and [§60.482-2a(g)(1)]
b) The permittee has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in §60.482-2a(c) if a leak is detected. [§60.482-2a(g)(2)]

9. Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of §60.482-2a(a)(2), provided that each pump is visually inspected as often as practicable and at least monthly. [§60.482-2a(h)]

Standards for Pressure Relief Devices in Gas/Vapor Service:

1. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in §60.485a(c). [§60.482-4a(a)]
2. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than five calendar days after the pressure release, except as provided in §60.482-9a. [§60.482-4a(b)(1)]
3. No later than five calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in §60.485a(c). [§60.482-4a(b)(2)]
4. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of §60.482-4a(a) and (b), provided the permittee complies with the requirements in §60.482-4a(d)(2). [§60.482-4a(d)(1)]
5. After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than five calendar days after each pressure release, except as provided in §60.482-9a. [§60.482-4a(d)(2)]

Standards for Sampling Connection Systems:

1. Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482-1a(c) and §60.482-5a(c). [§60.482-5a(a)]
2. Each closed-purge, closed-loop, or closed-vent system as required in §60.482-5a(a) shall comply with the following requirements: [§60.482-5a(b)]
   a) Gases displaced during filling of the sample container are not required to be collected or captured. [§60.482-5a(b)(1)]
   b) Containers that are part of a closed-purge system shall be covered or closed when not being filled or emptied. [§60.482-5a(b)(2)]
   c) Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured. [§60.482-5a(b)(3)]
   d) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet one of the following requirements: [§60.482-5a(b)(4)]
      i) Return the purged process fluid directly to the process line. [§60.482-5a(b)(4)(i)]
      ii) Collect and recycle the purged process fluid to a process. [§60.482-5a(b)(4)(ii)]

iii) Collect, store, and transport the purged process fluid to any of the following systems or facilities: [§60.482-5a(b)(4)(iv)]
   (1) A waste management unit as defined in §63.111, if the waste management unit is subject to and operated in compliance with the provisions of MACT G, applicable to Group 1 wastewater streams; [§60.482-5a(b)(4)(iv)(A)]
   (2) A treatment, storage, or disposal facility subject to regulation under 40 CFR Parts 262, 264, 265, or 266; [§60.482-5a(b)(4)(iv)(B)]
   (3) A facility permitted, licensed, or registered by a state to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR Part 261; [§60.482-5a(b)(4)(iv)(C)]
   (4) A waste management unit subject to and operated in compliance with the treatment requirements of §61.348(a), provided all waste management units that collect, store, or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of §61.343 through §61.347; or [§60.482-5a(b)(4)(iv)(D)]
   (5) A device used to burn off-specification used oil for energy recovery in accordance with 40 CFR Part 279, Subpart G, provided the purged process fluid is not hazardous waste as defined in 40 CFR Part 261. [§60.482-5a(b)(4)(iv)(E)]

3. In-situ sampling systems and sampling systems without purges are exempt from the requirements of §60.482-5a(a) and (b). [§60.482-5a(c)]

Standards for Open-ended Valves or Lines:

1. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1a(c) and §60.482-6a(d) and (e). [§60.482-6a(a)(1)]
2. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line. [§60.482-6a(a)(2)]
3. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. [§60.482-6a(b)]
4. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with §60.482-6a(a) at all other times. [§60.482-6a(c)]
5. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of §60.482-6a(a), (b), and (c). [§60.482-6a(d)]
6. Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in §60.482-6a(a) through (c) are exempt from the requirements of §60.482-6a(a) through (c). [§60.482-6a(e)]

Standards for Valves in Gas/Vapor Service and in Light Liquid Service:

1. Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485a(b) and shall comply with §60.482-7a(b) through (e), except as provided in §60.482-7a(f), (g), and (h), §60.482-1a(c) and (f), and §§60.483-1a and 60.483-2a. [§60.482-7a(a)(1)]
2. A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit shall be monitored according to §60.482-7a(a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in §60.482-7a(f), (g), and (h), §60.482-1a(c), and §§60.483-1a and 60.483-2a. [§60.482-7a(a)(2)]

a) Monitor the valve as in §60.482-7a(a)(1). The valve shall be monitored for the first time within 30 days after the end of its startup period to ensure proper installation. [§60.482-7a(a)(2)(i)]
b) If the existing valves in the process unit are monitored in accordance with §60.483-1a or §60.483-2a, count the new valve as leaking when calculating the percentage of valves leaking as described in §60.483-2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve shall be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first. [§60.482-7a(a)(2)(ii)]

3. If an instrument reading of 500 ppm or greater is measured, a leak is detected. [§60.482-7a(b)]
4. Any valve for which a leak is not detected for two successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. [§60.482-7a(c)(1)(i)]
5. As an alternative to monitoring all of the valves in the first month of a quarter, the permittee may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every three months. The permittee shall keep records of the valves assigned to each subgroup. [§60.482-7a(c)(1)(ii)]
6. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months. [§60.482-7a(c)(2)]
7. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482-9a. [§60.482-7a(d)(1)]
8. A first attempt at repair shall be made no later than five calendar days after each leak is detected. [§60.482-7a(d)(2)]
9. First attempts at repair include, but are not limited to, the following best practices where practicable: [§60.482-7a(e)]
   a) Tightening of bonnet bolts; [§60.482-7a(e)(1)]
   b) Replacement of bonnet bolts; [§60.482-7a(e)(2)]
   c) Tightening of packing gland nuts; [§60.482-7a(e)(3)]
   d) Injection of lubricant into lubricated packing. [§60.482-7a(e)(4)]
10. Any valve that is designated, as described in §60.486a(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of §60.482-7a(a) if the valve: [§60.482-7a(f)]
    a) Has no external actuating mechanism in contact with the process fluid, [§60.482-7a(f)(1)]
    b) Is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485a(c), and [§60.482-7a(f)(2)]
    c) Is tested for compliance with §60.482-7a(f)(2) initially upon designation, annually, and at other times requested by the Administrator. [§60.482-7a(f)(3)]
11. Any valve that is designated, as described in §60.486a(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of §60.482-7a(a) if: [§60.482-7a(g)]
    a) The permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with §60.482-7a(a), and [§60.482-7a(g)(1)]
    b) The permittee adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. [§60.482-7a(g)(2)]
12. Any valve that is designated, as described in §60.486a(f)(2), as a difficult-to-monitor valve is exempt from the requirements of §60.482-7a(a) if: [§60.482-7a(h)]
    a) The permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than two meters above a support surface. [§60.482-7a(h)(1)]

b) The process unit within which the valve is located: [§60.482-7a(h)(2)]
   i) Has less than 3.0 percent of its total number of valves designated as difficult-to-monitor by the permittee. [§60.482-7a(h)(2)(ii)]
c) The permittee follows a written plan that requires monitoring of the valve at least once per calendar year. [§60.482-7a(h)(3)]

Delay of Repair Standards:

1. Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit. [§60.482-9a(a)]
2. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. [§60.482-9a(b)]
3. Delay of repair for pumps will be allowed if: [§60.482-9a(d)]
   a) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and [§60.482-9a(d)(1)]
   b) Repair is completed as soon as practicable, but not later than six months after the leak was detected. [§60.482-9a(d)(2)]
4. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than six months after the first process unit shutdown. [§60.482-9a(e)]
5. When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition. [§60.482-9a(f)]

Alternative Standards for Valves – Allowable Percentage of Valves Leaking:

1. The permittee may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent. [§60.483-1a(a)]
2. The following requirements shall be met if the permittee wishes to comply with an allowable percentage of valves leaking: [§60.483-1a(b)]
   a) The permittee shall notify the Administrator that the permittee has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in §60.487a(d). [§60.483-1a(b)(1)]
   b) A performance test as specified in §60.483-1a(c) shall be conducted initially upon designation, annually, and at other times requested by the Administrator. [§60.483-1a(b)(2)]
   c) If a valve leak is detected, it shall be repaired in accordance with §60.482-7a(d) and (e). [§60.483-1a(b)(3)]
3. Performance tests shall be conducted in the following manner: [§60.483-1a(c)]
   a) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within one week by the methods specified in §60.485a(b). [§60.483-1a(c)(1)]
   b) If an instrument reading of 500 ppm or greater is measured, a leak is detected. [§60.483-1a(c)(2)]

c) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility. [§60.483-1a(c)(3)]

4. The permittee shall not have a leak percentage greater than 2.0 percent, determined as described in §60.485a(h). [§60.483-1a(d)]

Alternative Standards for Valves – Skip Period LDAR:

1. The permittee may elect to comply with one of the alternative work practices specified in §60.483-2a(b)(2) and (3). [§60.483-2a(a)(1)]
2. The permittee shall notify the Administrator before implementing one of the alternative work practices, as specified in §60.487(d)a. [§60.483-2a(a)(2)]
3. The permittee shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in §60.482-7a. [§60.483-2a(b)(1)]
4. After two consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, the permittee may begin to skip one of the quarterly leak detection periods for the valves in gas/vapor and light liquid service. [§60.483-2a(b)(2)]
5. After five consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, the permittee may begin to skip three of the quarterly leak detection periods for the valves in gas/vapor and light liquid service. [§60.483-2a(b)(3)]
6. If the percent of valves leaking is greater than 2.0, the permittee shall comply with the requirements as described in §60.482-7a but can again elect to use §60.483-2a. [§60.483-2a(b)(4)]
7. The percent of valves leaking shall be determined as described in §60.485a(h). [§60.483-2a(b)(5)]
8. The permittee shall keep a record of the percent of valves found leaking during each leak detection period. [§60.483-2a(b)(6)]
9. A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in §60.483-2a shall be monitored in accordance with §60.482-7a(a)(2)(i) or (ii) before the provisions of §60.483-2a can be applied to that valve. [§60.483-2a(b)(7)]

Equivalence of Means of Emission Limitation:

The permittee shall refer to §60.484a for information regarding how to apply for a determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in NSPS VVa.

Test Methods and Procedures:

The permittee shall comply with the test methods and procedures in §60.485a.

Recordkeeping:

1. If the permittee owns or operates more than one affected facility subject to the provisions of NSPS VVa, the permittee may comply with the recordkeeping requirements for the facilities in one recordkeeping system if the system identifies each record by each facility. [§60.486a(a)(2)]
2. The permittee shall record the information specified in §60.486a(a)(3)(i) through (v) for each monitoring event required by §§60.482-2a, 60.482-7a, and 60.483-2a. [§60.486a(a)(3)]
   a) Monitoring instrument identification. [§60.486a(a)(3)(i)]
   b) Operator identification. [§60.486a(a)(3)(ii)]
   c) Equipment identification. [§60.486a(a)(3)(iii)]
   d) Date of monitoring. [§60.486a(a)(3)(iv)]

e) Instrument reading. [§60.486a(a)(3)(v)]

3. When each leak is detected as specified in §§60.482-2a, 60.482-7a, and 60.483-2a, the following requirements apply: [§60.486a(b)]
   a) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [§60.486a(b)(1)]
   b) The identification on a valve may be removed after it has been monitored for two successive months as specified in §60.482-7a(c) and no leak has been detected during those two months. [§60.486a(b)(2)]
   c) The identification on equipment, except on a valve or connector, may be removed after it has been repaired. [§60.486a(b)(4)]
4. When each leak is detected as specified in §§60.482-2a, 60.482-7a, and 60.483-2a, the following information shall be recorded in a log and shall be kept for five years in a readily accessible location: [§60.486a(c)]
   a) The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak. [§60.486a(c)(1)]
   b) The date the leak was detected and the dates of each attempt to repair the leak. [§60.486a(c)(2)]
   c) Repair methods applied in each attempt to repair the leak. [§60.486a(c)(3)]
   d) Maximum instrument reading measured by Method 21 of NSPS Appendix A-7 at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping. [§60.486a(c)(4)]
   e) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [§60.486a(c)(5)]
   f) The signature of the responsible official whose decision it was that repair could not be affected without a process shutdown. [§60.486a(c)(6)]
   g) The expected date of successful repair of the leak if a leak is not repaired within 15 days. [§60.486a(c)(7)]
   h) Dates of process unit shutdowns that occur while the equipment is unrepaired. [§60.486a(c)(8)]
   i) The date of successful repair of the leak. [§60.486a(c)(9)]
5. The following information pertaining to all equipment subject to the requirements in §§60.482-1a to 60.482-9a shall be recorded in a log that is kept in a readily accessible location: [§60.486a(e)]
   a) A list of identification numbers for equipment subject to the requirements of NSPS VVa. [§60.486a(e)(1)]
   b) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482-2a(e) and 60.482-7a(f). [§60.486a(e)(2)(i)]
   c) The designation of equipment as subject to the requirements of §60.482-2a(e) or §60.482-7a(f) shall be signed by the responsible official. Alternatively, the permittee may establish a mechanism with their permitting authority that satisfies this requirement. [§60.486a(e)(2)(ii)]
   d) A list of equipment identification numbers for pressure relief devices required to comply with §60.482-4a. [§60.486a(e)(3)]
   e) The dates of each compliance test as required in §§60.482-2a(e), 60.482-4a, and 60.482-7a(f). [§60.486a(e)(4)(i)]
   f) The background level measured during each compliance test. [§60.486a(e)(4)(ii)]
   g) The maximum instrument reading measured at the equipment during each compliance test. [§60.486a(e)(4)(ii)]
   h) A list of identification numbers for equipment in vacuum service. [§60.486a(e)(5)]

i) A list of identification numbers for equipment that the permittee designates as operating in VOC service less than 300 hr/yr in accordance with §60.482-1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr. [§60.486a(e)(6)]
j) The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service. [§60.486a(e)(7)]
k) Records of the information specified in §60.486a(e)(8)(i) through (vi) for monitoring instrument calibrations conducted according to §§8.1.2 and 10 of Method 21 of NSPS Appendix A-7 and §60.485a(b). [§60.486a(e)(8)]
   i) Date of calibration and initials of operator performing the calibration. [§60.486a(e)(8)(i)]
   ii) Calibration gas cylinder identification, certification date, and certified concentration. [§60.486a(e)(8)(ii)]
   iii) Instrument scale(s) used. [§60.486a(e)(8)(iii)]
   iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with §10.1 of Method 21 of NSPS Appendix A-7. [§60.486a(e)(8)(iv)]
   v) Results of each calibration drift assessment required by §60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value). [§60.486a(e)(8)(v)]
   vi) If the permittee makes their own calibration gas, a description of the procedure used. [§60.486a(e)(8)(vi)]
l) Records of each release from a pressure relief device subject to §60.482-4a. [§60.486a(e)(10)]

6. The following information pertaining to all valves subject to the requirements of §60.482-7a(g) and (h) and all pumps subject to the requirements of §60.482-2a(g) shall be recorded in a log that is kept in a readily accessible location: [§60.486a(f)]
   a) A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump. [§60.486a(f)(1)]
   b) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve. [§60.486a(f)(2)]
7. The following information shall be recorded for valves complying with §60.483-2a: [§60.486a(g)]
   a) A schedule of monitoring. [§60.486a(g)(1)]
   b) The percent of valves found leaking during each monitoring period. [§60.486a(g)(2)]
8. The following information shall be recorded in a log that is kept in a readily accessible location: [§60.486a(h)]
   a) Design criterion required in §§60.482-2a(d)(5) and explanation of the design criterion; and [§60.486a(h)(1)]
   b) Any changes to this criterion and the reasons for the changes. [§60.486a(h)(2)]
9. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location. [§60.486a(j)]
10. The provisions of §60.7(b) and (d) do not apply to affected facilities subject to NSPS VVa. [§60.486a(k)]
11. The permittee shall maintain the most recent 60 months of records on-site and make them available to Missouri Department of Natural Resources' personnel upon request.

Reporting:

1. The permittee shall submit semi-annual reports to the Administrator beginning six months after the initial startup date. [§60.487a(a)]
2. The initial semi-annual report to the Administrator shall include the following information: [§60.487a(b)]
   a) Process unit identification. [§60.487a(b)(1)]
   b) Number of valves subject to the requirements of §60.482-7a, excluding those valves designated for no detectable emissions under the provisions of §60.482-7a(f). [§60.487a(b)(2)]
   c) Number of pumps subject to the requirements of §60.482-2a, excluding those pumps designated for no detectable emissions under the provisions of §60.482-2a(e) and those pumps complying with §60.482-2a(f). [§60.487a(b)(3)]
3. All semi-annual reports to the Administrator shall include the following information, summarized from the information in §60.486a: [§60.487a(c)]
   a) Process unit identification. [§60.487a(c)(1)]
   b) For each month during the semi-annual reporting period, [§60.487a(c)(2)]
      i) Number of valves for which leaks were detected as described in §60.482-7a(b) or §60.483-2a, [§60.487a(c)(2)(i)]
      ii) Number of valves for which leaks were not repaired as required in §60.482-7a(d)(1), [§60.487a(c)(2)(ii)]
      iii) Number of pumps for which leaks were detected as described in §60.482-2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii), [§60.487a(c)(2)(iii)]
      iv) Number of pumps for which leaks were not repaired as required in §60.482-2a(c)(1) and (d)(6), [§60.487a(c)(2)(iv)]
      v) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible. [§60.487a(c)(2)(xi)]
   c) Dates of process unit shutdowns which occurred within the semi-annual reporting period. [§60.487a(c)(3)]
   d) Revisions to items reported according to §60.487(b) if changes have occurred since the initial report or subsequent revisions to the initial report. [§60.487a(c)(4)]
4. If the permittee elects to comply with the provisions of §§60.483-1a or 60.483-2a, the permittee shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions. [§60.487a(d)]
5. The permittee shall report the results of all performance tests in accordance with §60.8. The provisions of §60.8(d) do not apply to affected facilities subject to the provisions of NSPS VVa except that the permittee shall notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests. [§60.487a(e)]
6. The requirements of §60.487a(a) through (c) remain in force until and unless EPA, in delegating enforcement authority to a state under §111(c) of the CAA, approves reporting requirements or an alternative means of compliance surveillance adopted by such state. In that event, affected sources within the state will be relieved of the obligation to comply with the requirements of §60.487a(a) through (c), provided that they comply with the requirements established by the state. [§60.487a(f)]
7. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 011 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants	
Emission Unit	**Description**
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO
EP-20	DDGS Transfer & Loading
FS001	Grain Receiving and DDGS Handling

Emission Limitation:

1. The permittee shall not cause or permit to be discharged into the atmosphere from these emission units any visible emissions with an opacity greater than 20 percent.
2. Exception:
   a) The permittee may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six minutes in any 60 minutes air contaminants with an opacity up to 60 percent.

Monitoring:

1. The permittee shall conduct opacity readings on these emission units using the procedures contained in EPA Test Method 22. Readings are only required when the emission units are operating and when the weather conditions allow. If no visible emissions are observed using Method 22, then no further observations would be required. For emission units with visible emissions, the permittee representative would then conduct a Method 9 observation.
2. The following monitoring schedule shall be maintained:
   a) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then-
   b) Observations must be made once every two weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then-
   c) Observations shall be made once per month. If a violation is noted, monitoring reverts to weekly.
   d) If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

Recordkeeping:

1. The permittee shall maintain records of all observation results using Attachments D & E, or equivalent forms approved by the Air Pollution Control Program, noting:
   a) Whether any air emissions (except for water vapor) were visible from the emission units and
   b) All emission units from which visible emissions occurred.
2. The permittee shall maintain records of any equipment malfunctions and maintenance using Attachment F or an equivalent form approved by the Air Pollution Control Program.
3. The permittee shall maintain records of any Method 9 opacity test performed in accordance with this permit condition.
4. These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon request.
5. All records shall be maintained for five years.

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedance of any of the

terms imposed by this regulation, or any malfunction which could possibly cause an exceedance of this regulation.

2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 012 10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes	
Emission Unit	**Description**
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO
EP-20	DDGS Transfer & Loading
FS001	Grain Receiving and DDGS Handling

Emission Limitation:

The permittee shall not emit PM in excess of the limits given in the following table:

Emission Unit	Description	PM Emission Limit (lb/hr)
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO	34.72
EP-20	DDGS Transfer & Loading	34.72
FS001	Grain Receiving and DDGS Handling	49.05 & 34.72

Compliance Demonstration:

The following table demonstrates that the emission sources are in compliance with the regulation:

Emission Unit	MHDR (tph)	PM Emission Factor (lb/ton)	Emission Factor Source	Potential Uncontrolled PM Emission Rate (lb/hr)	PM Emission Limit (lb/hr)
EP-09	24.26	0.114	March 2007 Stack Test	2.77	34.72
EP-20	24.26	0.029	AP-42 Table 9.9.1-1	0.70	34.72
FS001	79.91	0.059		4.54[1]	49.05
	24.26	0.029		0.68[1]	34.72

[1]These sources are enclosed; therefore, the calculated PM emission rate includes 3.75% enclosure control. The control efficiency for process enclosure was obtained from AP-42 Table B.2-3.

Monitoring/Recordkeeping/Reporting:

The compliance demonstration shows that the emission sources are in compliance with this regulation without the aid of a control device; therefore, no additional monitoring, recordkeeping, or reporting is required at this time.

IV. Core Permit Requirements

The installation shall comply with each of the following regulations or codes. Consult the appropriate sections in the CFR, the CSR, and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued. The following is only an excerpt from the regulation or code, and is provided for summary purposes only.

10 CSR 10-6.045 Open Burning Requirements

1. General Provisions. The open burning of tires, petroleum-based products, asbestos containing materials, and trade waste is prohibited, except as allowed below. Nothing in this rule may be construed as to allow open burning which causes or constitutes a public health hazard, nuisance, a hazard to vehicular or air traffic, nor which violates any other rule or statute.
2. Refer to the regulation for a complete list of allowances. The following is a listing of exceptions to the allowances:
   a) Burning of household or domestic refuse. Burning of household or domestic refuse is limited to open burning on residential premises having not more than four dwelling units, provided that the refuse originates on the same premises.
   b) Yard waste.
3. Certain types of materials may be open burned provided an open burning permit is obtained from the director. The permit will specify the conditions and provisions of all open burning. The permit may be revoked if the permittee fails to comply with the conditions or any provisions of the permit.
4. POET Biorefining - Laddonia may be issued an annually renewable open burning permit for open burning provided that an air curtain destructor or incinerator is utilized and only tree trunks, tree limbs, vegetation or untreated wood waste are burned. Open burning shall occur at least 200 yards from the nearest occupied structure unless the owner or operator of the occupied structure provides a written waiver of this requirement. Any waiver shall accompany the open burning permit application. The permit may be revoked if POET Biorefining - Laddonia fails to comply with the provisions or any condition of the open burning permit.
   a) In a nonattainment area, as defined in 10 CSR 10-6.020(2)(N)10, the director shall not issue a permit under this section unless the permittee can demonstrate to the satisfaction of the director that the emissions from the open burning of the specified material would be less than the emissions from any other waste management or disposal method.
5. Reporting and Recordkeeping. NSPS CCCC establishes certain requirements for air curtain destructors or incinerators that burn wood trade waste. These requirements are established in §60.2245 - §60.2260. The provisions of NSPS CCCC promulgated as of September 22, 2005 shall apply and are hereby incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401. To comply with NSPS §60.2245 - §60.2260, sources shall conduct an annual Method 9 test. A copy of the annual Method 9 test results shall be submitted to the director.
6. Test Methods. The visible emissions from air pollution sources shall be evaluated as specified by NSPS Appendix A–Test Methods, Method 9–Visual Determination of the Opacity of Emissions from Stationary Sources. The provisions of NSPS Appendix A, Method 9 promulgated as of December 23, 1971 is incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401.

10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions

1. In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
   a) Name and location of installation;
   b) Name and telephone number of person responsible for the installation;
   c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
   d) Identity of the equipment causing the excess emissions;
   e) Time and duration of the period of excess emissions;
   f) Cause of the excess emissions;
   g) Air pollutants involved;
   h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
   i) Measures taken to mitigate the extent and duration of the excess emissions; and
   j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
2. The permittee shall submit the paragraph 1 information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
3. Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under §643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under §§643.080 or 643.151, RSMo.
4. Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under §§643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
5. Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060 Construction Permits Required

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

10 CSR 10-6.065 Operating Permits

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than 18 months. [10 CSR 10-

6.065(6)(B)1.A(V)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources' personnel upon request. [10 CSR 10-6.065(6)(C)3.B]

10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61 Subpart M - National Emission Standard for Asbestos

1. The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M - National Emission Standard for Asbestos.
2. The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.110 Submission of Emission Data, Emission Fees and Process Information

1. The permittee shall submit full emissions report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on EIQ paper forms on the frequency specified in this rule and in accordance with the requirements outlined in this rule. Alternate methods of reporting the emissions, such as spreadsheet file, can be submitted for approval by the director.
2. The permittee may be required by the director to file additional reports.
3. Public Availability of Emission Data and Process Information. Any information obtained pursuant to the rule(s) of the Missouri Air Conservation Commission that would not be entitled to confidential treatment under 10 CSR 10-6.210 shall be made available to any member of the public upon request.
4. The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.
5. The fees shall be payable to the Department of Natural Resources and shall be accompanied by the emissions report.
6. The permittee shall complete required reports on state supplied EIQ forms or electronically via MoEIS. Alternate methods of reporting the emissions can be submitted for approval by the director. The reports shall be submitted to the director by April 1 after the end of each reporting year. If the full emissions report is filed electronically via MoEIS, this due date is extended to May 1.
7. The reporting period shall end on December 31 of each calendar year. Each report shall contain the required information for each emission unit for the 12-month period immediately preceding the end of the reporting period.
8. The permittee shall collect, record, and maintain the information necessary to complete the required forms during each year of operation of the installation.

10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

10 CSR 10-6.150 Circumvention

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

10 CSR 10-6.170 Restriction of PM to the Ambient Air Beyond the Premises of Origin

Emission Limitation:

1. The permittee shall not cause or allow any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive PM emissions to go beyond the premises of origin in quantities that the PM may be found on surfaces beyond the property line of origin. The nature or origin of the PM shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
2. The permittee shall not cause nor allow any fugitive PM emissions to remain visible in the ambient air beyond the property line of origin.
3. Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
   a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
   b) Paving or frequent cleaning of roads, driveways and parking lots;
   c) Application of dust-free surfaces;
   d) Application of water; and
   e) Planting and maintenance of vegetative ground cover.

Monitoring:

1. The permittee shall conduct inspections of its facilities sufficient to determine compliance with this regulation. If the permittee discovers a violation, the permittee shall undertake corrective action to eliminate the violation.
2. The permittee shall maintain the following monitoring schedule:
   a) The permittee shall conduct weekly observations for a minimum of eight consecutive weeks after permit issuance.
   b) Should no violation of this regulation be observed during this period then-
      i) The permittee may observe once every two weeks for a period of eight weeks.
      ii) If a violation is noted, monitoring reverts to weekly.
      iii) Should no violation of this regulation be observed during this period then-
         (1) The permittee may observe once per month.
         (2) If a violation is noted, monitoring reverts to weekly.
   c) If the permittee reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.

Recordkeeping:

1. The permittee shall document all readings on Attachment G, or an equivalent form approved by the Air Pollution Control Program, noting the following:
   a) Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
   b) Whether equipment malfunctions contributed to an exceedance.
   c) Any violations and any corrective actions undertaken to correct the violation.

10 CSR 10-6.180 Measurement of Emissions of Air Contaminants

1. The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. All tests shall be performed by qualified personnel.
2. The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
3. The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

10 CSR 10-6.165 Restriction of Emission of Odors

This requirement is not federally enforceable.

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour. This odor evaluation shall be taken at a location outside of the installation's property boundary.

10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
   a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
   b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
   c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
   d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in 40 CFR Part 82, Subpart B:
   a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
   b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
   c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
   d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
   e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
   f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A - Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B - Servicing of MVACs. The term "motor vehicle" as used in 40 CFR Part 82, Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in 40 CFR Part 82, Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.
5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G - Significant New Alternatives Policy Program. *40 CFR Part 82 is Federally Enforceable Only*

10 CSR 10-6.280 Compliance Monitoring Usage

1. The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
   a) Monitoring methods outlined in 40 CFR Part 64;
   b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, “Operating Permits”, and incorporated into an operating permit; and
   c) Any other monitoring methods approved by the director.
2. Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
   a) Monitoring methods outlined in 40 CFR Part 64;
   b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, “Operating Permits”, and incorporated into an operating permit; and
   c) Compliance test methods specified in the rule cited as the authority for the emission limitations.

3. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
   a) Applicable monitoring or testing methods, cited in:
      i) 10 CSR 10-6.030, “Sampling Methods for Air Pollution Sources”;
      ii) 10 CSR 10-6.040, “Reference Methods”;
      iii) 10 CSR 10-6.070, “New Source Performance Standards”;
      iv) 10 CSR 10-6.080, “Emission Standards for Hazardous Air Pollutants”; or
   b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the CFR and CSR for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued,

10 CSR 10-6.065(6)(C)1.B Permit Duration

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

10 CSR 10-6.065(6)(C)1.C General Recordkeeping and Reporting Requirements

1. Recordkeeping
   a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
   b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
2. Reporting
   a) All reports shall be submitted to the Air Pollution Control Program's Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
   b) The permittee shall submit a report of all required monitoring by:
      i) October 1st for monitoring which covers the January through June time period, and
      ii) April 1st for monitoring which covers the July through December time period.
      iii) Exception. Monitoring requirements which require reporting more frequently than semi-annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
   c) Each report shall identify any deviations from emission limitations, monitoring, recordkeeping, reporting, or any other requirements of the permit, this includes deviations or CAM exceedances.
   d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
      i) Notice of any deviation resulting from an emergency (or upset) condition as defined in 10 CSR 10-6.065(6)(C)7.A shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
      ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.

iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semi-annual report shall be reported on the schedule specified in this permit, and no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.

e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.

f) The permittee may request confidential treatment of information submitted in any report of deviation.

10 CSR 10-6.065(6)(C)1.D Risk Management Plan Under §112(r)

1. The permittee shall comply with the requirements of 40 CFR Part 68 - Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by §68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:
   a) June 21, 1999;
   b) Three years after the date on which a regulated substance is first listed under §68.130; or
   c) The date on which a regulated substance is first present above a threshold quantity in a process.

10 CSR 10-6.065(6)(C)1.F Severability Clause

In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall continue to be in force. All terms and conditions of this permit remain in effect pending any administrative or judicial challenge to any portion of the permit. If any provision of this permit is invalidated, the permittee shall comply with all other provisions of the permit.

10 CSR 10-6.065(6)(C)1.G General Requirements

1. The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
2. The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
3. The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
4. This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
5. The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

10 CSR 10-6.065(6)(C)1.H Incentive Programs Not Requiring Permit Revisions

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

10 CSR 10-6.065(6)(C)1.I Reasonably Anticipated Operating Scenarios

None.

10 CSR 10-6.065(6)(C)3 Compliance Requirements

1. Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
2. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
   a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
   b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
   d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
3. All progress reports required under an applicable schedule of compliance shall be submitted semi-annually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
   a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
   b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
4. The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, as well as the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and CAM exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:
   a) The identification of each term or condition of the permit that is the basis of the certification;
   b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
   c) Whether compliance was continuous or intermittent;
   d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and

e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

10 CSR 10-6.065(6)(C)6 Permit Shield

1. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
   a) The applicable requirements are included and specifically identified in this permit, or
   b) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
2. Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
   a) The provisions of §303 of the Act or §643.090, RSMo concerning emergency orders,
   b) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
   c) The applicable requirements of the acid rain program,
   d) The authority of EPA and the Air Pollution Control Program to obtain information, or
   e) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

10 CSR 10-6.065(6)(C)7 Emergency Provisions

1. An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
   a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
   b) That the installation was being operated properly,
   c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
   d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
2. Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

10 CSR 10-6.065(6)(C)8 Operational Flexibility

1. An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable

permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

2. §502(b)(10) changes. Changes that, under §502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), recordkeeping, reporting or compliance requirements of the permit.
   a) Before making a change under this provision, the permittee shall provide advance written notice to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the Air Pollution Control Program shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the Air Pollution Control Program as above at least seven days before the change is to be made. If less than seven days' notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the EPA and the Air Pollution Control Program as soon as possible after learning of the need to make the change.
   b) The permit shield shall not apply to these changes.

10 CSR 10-6.065(6)(C)9 Off-Permit Changes

1. Except as noted below, the permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the application, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:
   a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is subject to any requirements under Title IV of the Act or is a Title I modification;
   b) The permittee must provide contemporaneous written notice of the change to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3 of this rule. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.
   c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and
   d) The permit shield shall not apply to these changes.

10 CSR 10-6.020(2)(R)12 Responsible Official

The application utilized in the preparation of this permit was signed by Steve Murphy, General Manager. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting

affairs, the permittee shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the permittee to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

10 CSR 10-6.065(6)(E)6 Reopening-Permit for Cause

1. This permit may be reopened for cause if:
   a) The Missouri Department of Natural Resources receives notice from EPA that a petition for disapproval of a permit pursuant to §70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
   b) The Missouri Department of Natural Resources or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
   c) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
      i) The permit has a remaining term of less than three years;
      ii) The effective date of the requirement is later than the date on which the permit is due to expire; or
      iii) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
   d) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit; or
   e) The Missouri Department of Natural Resources or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

10 CSR 10-6.065(6)(E)1.C Statement of Basis

This permit is accompanied by a statement setting forth the legal and factual basis for the permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

VI. Attachments

Attachments follow. Attachment H contains a list of abbreviations and acronyms used throughout this permit.

Attachment A1
102005-015A CO Tracking Sheet

This sheet covers the period from _____ to _____ .
(Month/Day/Year) (Month/Day/Year)

Emission Unit	Description	Amount Processed	CO Emission Factor	Emission Factor Source	Monthly CO Emissions[1] (tons)
EP-08	Bypass Stack	hrs	9.81 lb/hr	AP-42 Table 1.4-1	
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO	MMgal	793.53 lb/MMgal	March 2007 Stack Test[4]	
EP-13	Boiler #1	MMscf	84 lb/MMscf	AP-42 Table 1.4-1	
EP-14	Boiler #2				
EP-15	Denatured Ethanol Truck Loadout	MMgal	88.33 lb/MMgal	AP-42 Table 13.5-1	
A) Total Monthly CO Emissions[2] (tons):					
B) 12-Month Rolling Total CO Emissions from Previous Month's Attachment C (tons):					
C) Total Monthly CO Emissions from Previous Year's Attachment C (tons):					
12-Month Rolling Total CO Emissions[3] (tons):					

[1]Monthly CO Emissions (tons) = Amount Processed x CO Emission Factor x 0.0005 (ton/lb).
[2]Total Monthly CO Emissions (tons) = the sum of each emission unit's Monthly CO Emissions (tons).
[3]12-Month Rolling Total CO Emissions = B + A – C. **The permittee is in compliance with Permit Condition PW003 if 12-Month Rolling Total CO Emissions are less than 100 tons.**
[4]Emission factors obtained from stack testing shall be replaced with the most recent Air Pollution Control Program approved stack testing emission factor.

Attachment A2
102005-015A PM_{10} Tracking Sheet

This sheet covers the period from _____ to _____ .
(Month/Day/Year) (Month/Day/Year)

Emission Unit	Description	Amount Processed	PM_{10} Emission Factor	Emission Factor Source	Monthly PM_{10} Emissions[1] (tons)
EP-01	Corn Receiving, Transfer, and Storage	28,000 dscfm	0.00016 gr/dscf	March 2007 Stack Test[4]	0.01
EP-02	Corn Scalpers, Conveyor, and Surge Bin	2,500 dscfm	0.00013 gr/dscf		0.001
EP-03	Hammermill #1	12,000 dscfm	0.004 gr/dscf	Baghouse Manufacturer Guarantee	0.15
EP-04	Hammermill #2	12,000 dscfm	0.00102 gr/dscf	March 2007 Stack Test[4]	0.04
EP-05	Hammermill #3	12,000 dscfm	0.004 gr/dscf	Baghouse Manufacturer Gaurantee	0.15
EP-06	Hammermill #4	12,000 dscfm	0.004 gr/dscf		0.15
EP-07	Pneumatic Flour Receiver	5,000 dscfm	0.00016 gr/dscf	March 2007 Stack Test[4]	0.003
EP-09	DDGS Dryers (2), Centrifuges (5), and RTO	MMgal	357.36 lb/MMgal		
EP-10	DDGS Fluid Bed Cooler	25,000 dscfm	0.0019 gr/dscf		0.15
EP-11	DDGS Storage Silo	6,000 dscfm	0.0008 gr/dscf		0.02
EP-12	DDGS Storage Silo Bypass Receiver	4,000 dscfm	0.000861 gr/dscf		0.002
EP-13	Boiler #1	MMscf	7.6 lb/MMscf	AP-42 Table 1.4-1	
EP-14	Boiler #2				
EP-15	Denatured Ethanol Truck Loadout	MMgal	1.81 lb/MMgal	AP-42 Table 13.5-1	
EP-20	DDGS Transfer & Loading	tons	0.029 lb/ton	AP-42 Table 9.9.1-1	
FS001	Grain Receiving and DDGS Handling	tons grain	0.059 lb/ton[5]		
		tons DDGS	0.029 lb/ton[5]		
FS002	Haul Roads	VMT	0.0654 lb/VMT	AP-42 Section 13.2.1	
CWT	Cooling Tower	18,500 gpm	1500 ppm	AP-42 Section 13.4[6]	0.04
A) Total Monthly PM_{10} Emissions[2] (tons):					
B) 12-Month Rolling Total PM_{10} Emissions from Previous Month's Attachment C (tons):					
C) Total Monthly PM_{10} Emissions from Previous Year's Attachment C (tons):					
12-Month Rolling Total PM_{10} Emissions[3] (tons):					

[1]Monthly PM_{10} Emissions (tons) = Amount Processed x PM_{10} Emission Factor x 0.0005 (ton/lb).
[2]Total Monthly PM_{10} Emissions (tons) = the sum of each emission unit's Monthly PM_{10} Emissions (tons).
[3]12-Month Rolling Total PM_{10} Emissions = B + A – C. **The permittee is in compliance with Permit Condition PW003 if 12-Month Rolling Total PM_{10} Emissions are less than 100 tons.**
[4]Emission factors obtained from stack testing shall be replaced with the most recent Air Pollution Control Program approved stack testing emission factor.
[5]The permittee may reduce this emission factor by 3.75% to account for control efficiency provided by enclosure.
[6]Drift loss of 0.005%. PM_{10} considered to be 15% of PM emissions based upon paper by Reisman and Frisbie.

Attachment B
Installation PTE

Emission Point	PM_{10}		$PM_{2.5}$	NO_x	SO_x	VOC	CO	CO_2e
	lb/hr	tpy	tpy	tpy	tpy	tpy	tpy	tpy
EP-01	0.04	0.17	0.03	-	-	-	-	-
EP-20	0.70	3.08	0.53	-	-	-	-	-
EP-02	0.003	0.01	0.002	-	-	-	-	-
EP-03	0.41	1.80	0.31	-	-	-	-	-
EP-04	0.10	0.46	0.08	-	-	-	-	-
EP-05	0.41	1.80	0.31	-	-	-	-	-
EP-06	0.41	1.80	0.31	-	-	-	-	-
EP-07	0.01	0.03	0.01	-	-	-	-	-
EP-08	< EP-09	< EP-09	< EP-09	2.10	< EP-09	2.90	2.45	< EP-09
EP-09	2.77	12.15	12.15	24.27	0.38	8.26	25.44	76,875.94
EP-13	0.74	3.24	3.24	15.42	0.26	2.34	35.79	51,250.63
EP-14	0.74	3.24	3.24	15.42	0.26	2.34	35.79	51,250.63
EP-10	0.41	1.78	0.30	-	-	1.90	-	-
EP-11	0.04	0.18	0.03	-	-	-	-	-
EP-12	0.03	0.13	0.02	-	-	-	-	-
EP-15	0.01	0.06	0.06	0.55	-	17.89	3.00	1,261.15
TK-02	-	-	-	-	-	0.08	-	-
TK-04	-	-	-	-	-	0.20	-	-
TK-05	-	-	-	-	-	0.20	-	-
TK-03	-	-	-	-	-	1.62	-	-
FS001	5.21	22.84	3.87	-	-	-	-	-
FS002	0.25	1.08	0.26	-	-	-	-	-
FS003	-	-	-	-	-	4.00	-	-
EP-CWT	0.10	0.46	0.46	-	-	-	-	-
FS004	-	-	-	-	-	4.94	-	-
FS005	-	-	-	-	-	< EP-09	-	-
Installation PTE (tpy)	-	54.31	25.19	57.75	0.89	46.68	102.47	180,638.33
Installation Limits	N/A	50.00	N/A	N/A	N/A	100.00	100.00	N/A
Installation in Compliance?	N/A	See Attachment A2	N/A	N/A	N/A	Yes	See Attachment A1	N/A

Installation HAP PTE

Emission Point	Acetaldehyde	Methanol	Acrolein	Formaldehyde	Hexane	Benzene	Ethylbenzene	Toluene	Xylene	HAP
	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy
EP-01	-	-	-	-	-	-	-	-	-	-
EP-20	-	-	-	-	-	-	-	-	-	-
EP-02	-	-	-	-	-	-	-	-	-	-
EP-03	-	-	-	-	-	-	-	-	-	-
EP-04	-	-	-	-	-	-	-	-	-	-
EP-05	-	-	-	-	-	-	-	-	-	-
EP-06	-	-	-	-	-	-	-	-	-	-
EP-07	-	-	-	-	-	-	-	-	-	-
EP-08	0.38	< EP-09	0.02	< EP-09	< EP-09	<0.01	-	<0.01	-	0.49
EP-09	0.89	0.69	0.26	0.69	1.15	<0.01	-	<0.01	-	3.57
EP-13	-	-	-	0.03	0.77	<0.01	-	<0.01	-	0.80
EP-14	-	-	-	0.03	0.77	<0.01	-	<0.01	-	0.80
EP-10	0.02	0.02	<0.01	0.02	<0.01	-	-	-	-	0.06
EP-11	-	-	-	-	-	-	-	-	-	-
EP-12	-	-	-	-	-	-	-	-	-	-
EP-15	-	-	-	-	4.62	0.31	0.01	0.13	0.01	4.93
TK-02	-	-	-	-	-	-	-	-	-	-
TK-04	-	-	-	-	-	-	-	-	-	-
TK-05	-	-	-	-	-	-	-	-	-	-
TK-03	-	-	-	-	0.73	0.08	-	-	-	0.81
FS001	-	-	-	-	-	-	-	-	-	-
FS002	-	-	-	-	-	-	-	-	-	-
FS003	-	-	-	-	-	-	-	-	-	-
EP-CWT	-	-	-	-	-	-	-	-	-	-
FS004	-	-	-	-	0.19	<0.01	-	-	-	0.20
FS005	< EP-09	< EP-09	< EP-09	< EP-09	-	-	-	-	-	< EP-09
Installation PTE (tpy)	1.29	0.71	0.29	0.77	8.22	0.41	0.01	0.13	0.01	11.68
Installation Limits	9.00	10.00	10.00	2.00	10.00	2.00	10.0	10.0	10.0	25.00
Installation in Compliance?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

PTE Notes:
The installation is limited by NSR Permit 102005-015A Special Condition 14.A to 68,000,000 gallons of denatured ethanol production per year.
The installation's denatured ethanol consists of 95 percent ethanol and 5 percent denaturant.
The installation is limited by NSR Permit 102005-015A Special Condition 15.A to 700,000 tons of grain receiving per year.
The grain used has an average density of 56 pounds per bushel.
Approximately 17 pounds of DDGS is produced from a bushel of grain.

EP-01 to EP-07, EP-10 to EP-12, and EP-20 PTE Calculations

The controlled potential PM_{10} emissions were calculated by multiplying the design grain loading from the fabric filter by the design flow rate for the source and converting to a pound per hour emission rate. The equation for the calculations is:

E (lb/hr) = G (gr/dscf) x 1 lb / 7000 gr x Q (dscfm) x 60 minutes / hour

Where:

E = Emission rate of PM_{10} in lb/hr

G = Outlet Grain Loading in grain per dry standard cubic foot of air

Q = Flow Rate in dry standard cubic feet per minute

EP-01 Corn Receiving, Transfer and Loading MHDR = 840 tph		
Special Condition 3.A of NSR Permit 102005-015A requires these emission sources to operate a baghouse.		
Maximum baghouse PM_{10} emission rate (March 2007 Stack Test) =	0.00016	gr/dscf
Exhaust Flow Rate =	28,000	dscfm
Controlled PM_{10} PTE =	0.04	lb/hr
	0.17	tpy
$PM_{2.5}$ = 17% of $PM_{10,}$ AP-42 Table 9.9.1-1 Reference 40		
Controlled $PM_{2.5}$ PTE =	0.01	lb/hr
	0.029	tpy

EP-20 DDGS Transfer and Loading MHDR = 24 tph				
Emission Factors from AP-42 Table 9.9.1-1 for 30200560:	PM_{10}: 0.029 lb/ton		$PM_{2.5}$: 0.0049 lb/ton	
Maximum PM_{10} emission rate =	0.72	lb/hr	3.14	tpy
Maximum $PM_{2.5}$ emission rate =	0.12	lb/hr	0.53	tpy

EP-02 Corn Scalper, Conveyor, Surge Bin
MHDR = 140 tph

Special Condition 3.A of NSR Permit 102005-015A requires these emission sources to operate a baghouse.

Maximum baghouse PM_{10} emission rate (March 2007 Stack Test) =	0.00013	gr/dscf
Exhaust Flow Rate =	2,500	dscfm
Controlled PM_{10} PTE =	0.003	lb/hr
	0.01	tpy
$PM_{2.5}$ = 17% of $PM_{10,}$ AP-42 Table 9.9.1-1 Reference 40		
Controlled $PM_{2.5}$ PTE =	0.0005	lb/hr
	0.002	tpy

EP-03 Hammermill #1
MHDR = 22 tph

Special Condition 3.A of NSR Permit 102005-015A requires these emission sources to operate a baghouse.

Maximum baghouse PM_{10} emission rate (Manufacturer Guarantee) =	0.004	gr/dscf
Exhaust Flow Rate =	12,000	dscfm
Controlled PM_{10} PTE =	0.41	lb/hr
	1.80	tpy
$PM_{2.5}$ = 17% of $PM_{10,}$ AP-42 Table 9.9.1-1 Reference 40		
Controlled $PM_{2.5}$ PTE =	0.07	lb/hr
	0.31	tpy

EP-04 Hammermill #2
MHDR = 22 tph

Special Condition 3.A of NSR Permit 102005-015A requires these emission sources to operate a baghouse.

Maximum baghouse PM_{10} emission rate (March 2007 Stack Test) =	0.00102	gr/dscf
Exhaust Flow Rate =	12,000	dscfm
Controlled PM_{10} PTE =	0.10	lb/hr
	0.46	tpy
$PM_{2.5}$ = 17% of $PM_{10,}$ AP-42 Table 9.9.1-1 Reference 40		
Controlled $PM_{2.5}$ PTE =	0.02	lb/hr
	0.08	tpy

EP-05 Hammermill #3
MHDR = 22 tph

Special Condition 3.A of NSR Permit 102005-015A requires these emission sources to operate a baghouse.		
Maximum baghouse PM_{10} emission rate (Manufacturer Guarantee) =	0.004	gr/dscf
Exhaust Flow Rate =	12,000	dscfm
Controlled PM_{10} PTE =	0.41	lb/hr
	1.80	tpy
$PM_{2.5}$ = 17% of $PM_{10,}$ AP-42 Table 9.9.1-1 Reference 40		
Controlled $PM_{2.5}$ PTE =	0.07	lb/hr
	0.31	tpy

EP-06 Hammermill #4
MHDR = 22 tph

Special Condition 3.A of NSR Permit 102005-015A requires these emission sources to operate a baghouse.		
Maximum baghouse PM_{10} emission rate (Manufacturer Guarantee) =	0.004	gr/dscf
Exhaust Flow Rate =	12,000	dscfm
Controlled PM_{10} PTE =	0.41	lb/hr
	1.80	tpy
$PM_{2.5}$ = 17% of $PM_{10,}$ AP-42 Table 9.9.1-1 Reference 40		
Controlled $PM_{2.5}$ PTE =	0.07	lb/hr
	0.31	tpy

EP-07 Pneumatic Flour Conveyor/Receiver
MHDR = 80 tph

Special Condition 3.A of NSR Permit 102005-015A requires these emission sources to operate a baghouse.		
Maximum baghouse PM_{10} emission rate (March 2007 Stack Test) =	0.00016	gr/dscf
Exhaust Flow Rate =	5,000	dscfm
Controlled PM_{10} PTE =	0.01	lb/hr
	0.03	tpy
$PM_{2.5}$ = 17% of $PM_{10,}$ AP-42 Table 9.9.1-1 Reference 40		
Controlled $PM_{2.5}$ PTE =	0.001	lb/hr
	0.01	tpy

EP-10 DDGS Fluid Bed Cooler
MHDR = 24 tph

Special Condition 3.A of NSR Permit 102005-015A requires these emission sources to operate a baghouse.

Maximum baghouse PM_{10} emission rate (March 2007 Stack Test) =	0.0019	gr/dscf
Exhaust Flow Rate =	25,000	dscfm
Controlled PM_{10} PTE =	0.41	lb/hr
	1.78	tpy

$PM_{2.5}$ = 17% of $PM_{10,}$ AP-42 Table 9.9.1-1 Reference 40

Controlled $PM_{2.5}$ PTE =	0.07	lb/hr
	0.30	tpy

The DDGS cooler is also a source of VOC emissions because the DDGS retains a small quantity of ethanol after drying. This ethanol is emitted from the cooler stack. The cooler is not controlled. The HAP and VOC emission rates are based upon the May 2011 stack test. The production rate during the May 2011 stack test was 61,200,000 gallons per year; therefore, the emission rates were scaled up to 68,000,000 gallons per year.

VOC	0.4333333	lb/hr	1.90	tpy
Methanol	0.0051577	lb/hr	0.02	tpy
Acetaldehyde	0.0046568	lb/hr	0.02	tpy
Formaldehyde	0.0034632	lb/hr	0.02	tpy
Acrolein	0.0010776	lb/hr	0.00	tpy
Total HAPs	0.0143552	lb/hr	0.06	tpy

EP-11 DDGS Silo
MHDR = 24 tph

Special Condition 3.A of NSR Permit 102005-015A requires these emission sources to operate a baghouse.

Maximum baghouse PM_{10} emission rate (March 2007 Stack Test) =	0.0008	gr/dscf
Exhaust Flow Rate =	6,000	dscfm
Controlled PM_{10} PTE =	0.04	lb/hr
	0.18	tpy

$PM_{2.5}$ = 17% of $PM_{10,}$ AP-42 Table 9.9.1-1 Reference 40

Controlled $PM_{2.5}$ PTE =	0.01	lb/hr
	0.03	tpy

EP-12 DDGS Silo Bypass MHDR = 24 tph		
Special Condition 3.A of NSR Permit 102005-015A requires these emission sources to operate a baghouse.		
Maximum baghouse PM_{10} emission rate (March 2007 Stack Test) =	0.00086	gr/dscf
Exhaust Flow Rate =	4,000	dscfm
Controlled PM_{10} PTE =	0.03	lb/hr
	0.13	tpy
$PM_{2.5}$ = 17% of $PM_{10,}$ AP-42 Table 9.9.1-1 Reference 40		
Controlled $PM_{2.5}$ PTE =	0.01	lb/hr
	0.02	tpy

EP-09 RTO, DDGS Dryers, and Centrifuges PTE Calculations

EP-09 is the RTO exhaust and includes the emissions from yeast propagation, fermentation systems, distillation systems, and a portion of the emissions from the DDGS dryers. When the RTO is not in operation, emissions are routed to EP-08 Bypass Stack. The distillation system includes the beer wells, distillation columns, rectifiers, molecular sieves, and centrifuges. The dryers have natural gas fired burners and are sources of combustion emissions. The DDGS dryers #1 and #2 each have 60 MMBtu/hr natural gas fired burners. The dryers do not have the capacity to combust any other fuel. The dryers are connected in series, therefore, all of the DDGS from each production line is processed by the two dryers in series.

Pollutant	Emission Factor (lb/MMBtu)	Source
NO_x	0.0700	March 2007 Stack Test
CO	0.0817	AP-42 Section 1.4
PM_{10}	0.0074	AP-42 Section 1.4
$PM_{2.5}$	0.00739	AP-42 Section 1.4
VOC	0.0054	AP-42 Section 1.4
SO_2	0.0006	AP-42 Section 1.4
Hexane	0.0018	AP-42 Section 1.4
Formaldehyde	0.0001	AP-42 Section 1.4
HAP	0.0018	AP-42 Section 1.4
CO_2e	117.0106	40 CFR 98

Emission factors in lb/MMscf were converted to lb/MMBtu assuming a heating value of 1,028 Btu/ft^3 for natural gas.

Therefore, the dryer combustion emissions are:

Pollutant	PTE (lb/hr)	PTE (tpy)
NO_x	8.40	36.79
CO	9.81	42.95
PM_{10}	0.89	3.89
$PM_{2.5}$	0.89	3.89
VOC	0.64	2.81
SO_2	0.07	0.31
Hexane	0.21	0.92
Formaldehyde	0.01	0.04
HAP	0.22	0.97
CO_2e	14,041.27	61,500.75

The RTO is equipped with five natural gas fired burners, each rated at 6 MMBtu/hr each for a total of 30 MMBTU/hr. The RTO is not equipped with burners to combust any other fuel.

Pollutant	Emission Factor (lb/MMBtu)	Source
NO_x	0.040	Manufacturer Guarantee
CO	0.0817	AP-42 Section 1.4
PM_{10}	0.0074	AP-42 Section 1.4
$PM_{2.5}$	0.00739	AP-42 Section 1.4
VOC	0.0054	AP-42 Section 1.4
SO_2	0.0006	AP-42 Section 1.4
Hexane	0.0018	AP-42 Section 1.4
Formaldehyde	0.0001	AP-42 Section 1.4
HAP	0.0018	AP-42 Section 1.4
CO_2e	117.0106	40 CFR 98

Emission factors in lb/MMscf were converted to lb/MMBtu assuming a heating value of 1,028 Btu/ft^3 for natural gas.

Therefore, RTO combustion emissions are:

Pollutant	PTE (lb/hr)	PTE (tpy)
NO_x	1.20	5.26
CO	2.45	10.74
PM_{10}	0.22	0.97
$PM_{2.5}$	0.22	0.97
VOC	0.16	0.70
SO_2	0.02	0.08
Hexane	0.05	0.23
Formaldehyde	0.00	0.01
HAP	0.06	0.24
CO_2e	3,510.32	15,375.19

Total Controlled Emissions from the RTO Stack

The emission rates for VOC from the RTO stack assume the products of combustion are not further reduced by the RTO.

Pollutant	PTE (lb/hr)	PTE (tpy)	Emission Factor Source
NO_x	5.88	24.27	2007 Stack Test
CO	6.16	25.44	2007 Stack Test
PM_{10}	2.77	12.15	2007 Stack Test
$PM_{2.5}$	2.77	12.15	2007 Stack Test
VOC	2.00	8.26	2011 Stack Test
SO_2	0.09	0.38	Sum of Dryers and RTO Combustion Emissions
Acetaldehyde	0.21	0.89	2011 Stack Test
Acrolein	0.06	0.26	2011 Stack Test
Methanol	0.16	0.65	2011 Stack Test
Formaldehyde	0.16	0.65	2011 Stack Test
Hexane	0.26	1.08	Sum of Dryers and RTO Combustion Emissions
Total HAPs	0.87	3.57	2011 Stack Test + Hexane Combustion Emissions
CO_2e	17,551.58	76,875.94	Sum of Dryers and RTO Combustion Emissions

The installation is allowed to bypass the RTO for a maximum of 500 hours. Based upon hourly PTE, operation of the RTO results in higher hourly emissions of PM_{10}, $PM_{2.5}$, SO_2, CO_2e, Methanol, Formaldehyde, and Hexane; therefore, annual PTE for these pollutants were evaluated at 8,760 hours of RTO operation. As the hourly PTE during bypass results in higher hourly emissions of NO_x, VOC, CO, Acetaldehyde, Acrolein, and HAP, for these pollutants emissions were evaluated at 8,260 hours per year from the RTO and 500 hours per year from the bypass.

EP-08 Emission Calculations for Fermentation and Distillation Bypass

The RTO must occasionally be temporarily shut down for unscheduled maintenance or other operational reasons. This operating scenario is limited to less than 500 hours per year. The emissions from these sources are vented to a bypass stack. The emissions are controlled by the wet scrubber.

Pollutant	PTE (lb/hr)	PTE (tpy)	Emission Factor Source
NO_x	8.40	2.10	Combustion Emissions
CO	9.81	2.45	
PM_{10}	0.89	0.22	Dry Combustion Emissions < when RTO operates
$PM_{2.5}$	0.89	0.22	
VOC	11.61	2.90	2011 Stack Test
SO_2	0.07	0.02	Dryer Combustion Emissions < when RTO operates
Acetaldehyde	1.52	0.38	2011 Stack Test
Acrolein	0.09	0.02	2011 Stack Test
Methanol	0.13	0.03	2011 Stack Test < when RTO operates
Formaldehyde	0.02	0.004	
Hexane	0.21	0.05	Dry Combustion Emissions < when RTO operates
Total HAPs	1.96	0.49	2011 Stack Test + Hexane Combustion Emissions
CO_2e	14,041.27	3,510.32	Dry Combustion Emissions < when RTO operates

EP-13 and EP-14 Boiler Calculations

The facility has two 100 MMBtu/hr natural gas fired steam boilers. The boilers are not capable of combusting any other fuel. Both boilers are subject to the provisions of NSPS Dc.

The boilers are equipped with low NOx burners.

The potential emissions for the boilers are calculated by multiplying an emission factor by the rated capacity of the boilers. AP-42 emission factors from Section 1.4 were converted to lb/MMBtu assuming a heating value of 1,028 Btu/ft^3 for natural gas. The emission factors are:

Pollutant	Emission Factor		Emission Factor Source
PM_{10}	0.0074	lb/MMbtu	AP-42 Section 1.4
$PM_{2.5}$	0.0074	lb/MMbtu	AP-42 Section 1.4
NO_x	March 2007 Stack testing		
SO_x	0.0006	lb/MMbtu	AP-42 Section 1.4
VOC	0.0054	lb/MMbtu	AP-42 Section 1.4
CO	0.0817	lb/MMbtu	AP-42 Section 1.4
Hexane	0.0018	lb/MMbtu	AP-42 Section 1.4
Formaldehyde	0.0001	lb/MMbtu	AP-42 Section 1.4
HAP	0.001837062	lb/MMbtu	AP-42 Section 1.4
CO_2e	117.01056	lb/MMbtu	40 CFR 98

	PM_{10} PTE lb/hr	$PM_{2.5}$ PTE lb/hr	NO_x PTE lb/hr	SO_x PTE lb/hr	VOC PTE lb/hr	CO PTE lb/hr	Hexane PTE lb/hr	Formaldehyde PTE lb/hr	HAP PTE lb/hr	CO_2e lb/hr
Boiler #1	0.74	0.74	3.52	0.06	0.54	8.17	0.18	0.01	0.18	11,701.06
Boiler #2	0.74	0.74	3.19	0.06	0.54	8.17	0.18	0.01	0.18	11,701.06

	PM_{10} PTE tpy	$PM_{2.5}$ PTE tpy	NO_x PTE tpy	SO_x PTE tpy	VOC PTE tpy	CO PTE tpy	Hexane PTE tpy	Formaldehyde PTE tpy	HAP PTE tpy	CO_2e tpy
Boiler #1	3.24	3.24	15.42	0.26	2.34	35.79	0.77	0.03	0.80	51,250.63
Boiler #2	3.24	3.24	13.97	0.26	2.34	35.79	0.77	0.03	0.80	51,250.63

EP-16 Rail Loading PTE Calculations

Emission Factor Equation (AP-42 Section 5.2): $L_L = 12.46 \times S \times P \times M / T$

S = 0.6 (from Table 5.2-1)

P = 0.77138 psia (average vapor pressure calculation for denatured ethanol at average Columbia temperature)

M = 46.8665 (denatured ethanol)

T = 513.5275 ^oR (from Tanks 4.0 average daily liquid surface temperature calculation for Columbia)

L_L = 0.5263 lb/Mgal loaded

MHDR = 144,000 gal/hr

VOC PTE (lb/hr)	VOC PTE (tpy)
75.79	17.9

Pollutant	HAP[1] (wt%)	HAP PTE (lb/hr)	HAP PTE (tpy)
Benzene	1.74%	1.32	0.31
Hexane	25.81%	19.56	4.62
HAP	27.55%	20.88	4.93

[1]This is the HAP fraction for gasoline vapors.

EP-15 Truck Loading PTE Calculations

Assume gasoline vapors in back hauling truck and denaturant loadout (68 million gallons per year maximum)
S = 1.0 (from table 5.2-1)
P = 6.9 psia (average vapor pressure calculation for gasoline at average Columbia temperature)
M = 62 (from Tanks 4.0 calculation for gasoline)
T = 513.5275 ^{o}R (from Tanks 4.0 average daily liquid surface temperature calculation for Columbia)

L_L = 10.3799 lb/Mgal loaded uncontrolled

MHDR= 36,000 gal/hr

The installation is allowed to load up to 2,000,000 gallons of denatured ethanol without operating a control device.

Uncontrolled VOC PTE (lb/hr)	Uncontrolled VOC PTE (tpy)
373.68	10.38

The installation is required to vent emissions from all other loadout of denatured ethanol to a flare. The flare has a 98% VOC destruction efficiency.

Controlled VOC PTE (lb/hr)	Controlled VOC PTE (tpy)
7.47	6.85

EP-15 Combined PTE = 17.23 tpy

HAP emissions are mainly from the unloading process for trucks, which may have been used to ship gasoline previously.

Pollutant	HAP[1] (wt%)	HAP PTE (lb/hr)	HAP PTE (tpy)
Benzene	0.66%	0.03	0.11
Ethylbenzene	0.04%	0.002	0.01
Hexane	1.84%	0.07	0.32
Toluene	0.77%	0.03	0.13
Xylenes	0.05%	0.002	0.01
HAP	**0.03**	0.13	0.58

[1]This is the HAP fraction for gasoline vapors.

Flare PTE Calculations

Assume gasoline vapors have a heat content of 23,000 btu/lb
MMBtu/yr combusted = 16,234
AP-42 table 13.5-1 Emission Factors for Flare Operations
CO = 0.37 lb/MMBtu
NO_x = 0.068 lb/MMBtu
PM_{10} = 0.0076 lb/MMBtu
GHG = 155.36861 lb/MMBtu from 40 CFR 98

Pollutant	PTE (lb/hr)	PTE (tpy)
CO	0.69	3.00
NO_x	0.13	0.55
$PM_{10}/PM_{2.5}$	0.01	0.06
CO_2e	287.93	1,261.15

Railcar loading (EP-16) was determined to be the worst-case loadout method for VOC, Benzene, Hexane, and HAP emissions. Truck loading (EP-15) was determined to be the worst-case loadout method for Ethylbenzene, Toluene, Xylene, CO, NO_x, PM_{10}, $PM_{2.5}$, and CO_2e.

Storage Tank PTE Calculations

Pollutant	TK-02 PTE		TK-03 PTE		TK-04 PTE		TK-05 PTE	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Benzene	-	-	0.02	0.08	-	-	-	-
Hexane	-	-	0.17	0.73	-	-	-	-
VOC	0.02	0.08	0.37	1.62	0.04	0.20	0.04	0.20
HAP	-	-	0.19	0.81	-	-	-	-

The HAP speciation profile from the TANKS 4.09 reports for denatured ethanol and denaturant was used to estimate the VOC and HAP emissions from the tanks.

MSDS for the installation's denatured ethanol indicated 95% ethanol and 5% gasoline (denaturant).
MSDS for the installation's gasoline (denaturant) indicated 45% hexane and 5% benzene for a total of 50% HAP.

TANKS 4.0.9d **Emissions Report - Detail Format** **Tank Identification and Physical Characteristics**		
Identification		
User Identification: TK-04 and TK-05	TK-03	TK-02
City: Laddonia		
State: Missouri		
Company: POET Biorefining		
Type of Tank: Internal Floating Roof Tank		
Description: Ethanol Storage Tank	Denaturant Storage	190 Proof Ethanol Storage Tank
Tank Dimensions		
Diameter (ft): 75.00	38.00	38.00
Volume (gallons): 1,500,000.00	250,000.00	250,000.00
Turnovers: 21.54	13.60	3.00
Self Supp. Roof? (y/n): N		
No. of Columns: 1.00		
Eff. Col. Diam. (ft): 12.00		

Paint Characteristics		
Internal Shell Condition: Light Rust		
Shell Color/Shade: White/White		
Shell Condition Good		
Roof Color/Shade: White/White		
Roof Condition: Good		
Rim-Seal System		
Primary Seal: Liquid-mounted		
Secondary Seal Rim-mounted		
Deck Characteristics		
Deck Fitting Category: Typical		
Deck Type: Bolted		
Construction: Sheet		
Deck Seam: Sheet: 5 Ft Wide		
Deck Seam Len. (ft): 883.57	226.82	226.82
Deck Fitting/Status Quantity		
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed 1		
Automatic Gauge Float Well/Unbolted Cover, Ungasketed 1		
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. 1		
Ladder Well (36-in. Diam.)/Sliding Cover, Ungasketed 1		
Roof Leg or Hanger Well/Adjustable 22	12	12
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open 1		
Stub Drain (1-in. Diameter)/Slit Fabric Seal 10% Open 45	12	12
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask. 1		

Meteorological Data used in Emissions Calculations: Columbia, Missouri (Avg Atmospheric Pressure = 14.3 psia)

FS001 Fugitive Grain Handling and DDGS Loadout PTE Calculations

The grain unloading operations are located inside a dump shed. The loading shed controls 3.75% of the particulate matter emitted during loading operations.

The equation for calculating the PTE is:
Ec (lb/hr) = Ef (lb/ton) x W (tons) x [(100-3.75) / 100]

Where:
Ec = Potential Emissions
Ef = AP-42 Emission Factor for Straight Truck Grain Receiving
W = Tons of grain received

MHDR =	525	tph
Annual Handling Limit =	700,000	tpy
Straight Truck PM_{10} Emission Factor =	0.059	lb/ton
Straight Truck $PM_{2.5}$ Emission Factor =	0.01	lb/ton
Shed Capture Efficiency =	3.75%	

Pollutant	PTE lb/hr	PTE tpy
PM_{10}	4.54	19.88
$PM_{2.5}$	0.77	3.37

The loading of DDGS into trucks and railcars is conducted inside a shed. The loading shed controls 3.75% of the particulate matter emitted during loading operations.

The emissions from the loading operations into trucks are higher than railcar loading. Therefore, the PTE is based on truck loading for all DDGS.

The equation for calculating the PTE is:
Ec (lb/hr) = Ef (lb/ton) x W (tons) x [(100-3.75) / 100]

Where:
W = Tons of grain received
Ec = Emission rate in lb/hr
Ef = Emission factor in lb/ton loaded

MHDR =	240	tph	
Bottlenecked Annual Capacity =	212,500	tpy	
Straight Truck PM_{10} Emission Factor =	0.029	lb/ton	AP-42 Table 9.9.1-1 Grain Shipping
Straight Truck $PM_{2.5}$ Emission Factor =	0.0049	lb/ton	AP-42 Table 9.9.1-1 Grain Shipping
Capture Efficiency of truck shed =	3.75%		

Pollutant	PTE	
	lb/hr	tpy
PM_{10}	0.68	2.97
$PM_{2.5}$	0.11	0.50

FS002 Paved Road Traffic Emission Calculations

All trucks are assumed to have an empty weight of 15 tons and a full weight of 40 tons. Ethanol and denaturant trucks have a capacity of 8,000 gallons and DDGS trucks have a capacity of 25 tons.

Assumed for the PTE calculations that 100% of the ethanol and DDGS are trucked off-site. Also assumed that 100% of the denaturant and grain is received by truck. Actual operations will result in some of the ethanol and DDGS being shipped off-site by rail.

Road Path 1 is used for delivery of corn, enzymes, and urea and the shipment of wetcake and DDGS = 0.6 miles total
Road Path 2 is used for sulfuric acid and caustic delivery and the shipment of ethanol and syrup = 0.8 miles
All roads are paved and swept as needed to reduce fugitive emissions.
Equation from AP-42 Section 13.2.1 Paved Roads. January 2011
$E = k(sL)^{0.91} \times (W)^{1.02} \times (1-P/4N)$
Where:

Variable	Description	Value
k	Value used for lb/VMT $PM_{2.5}$	0.00054
k	Value used for lb/VMT PM_{10}	0.0022
sL	Surface material silt content (g/m^2)[1]	1.1
W	Mean vehicle weight (tons)[2]	27.50
P	Number of Days in a year with at least 0.01" of precipitation	105.00
N	Number of days in the averaging period	365

[1] Silt Loading from corn wet mills
[2] Mean vehicle weight (W) accounts for the vehicles weight (load or no load depending on the vehicle) while traveling only on the portion of the road in which the vehicle can travel fast enough to create fugitive emissions.

Material	Limited Annual Usage	
Grain Receiving	700,000	tpy
Ethanol Shipping	68,000,000	gal/yr
Enzymes and Urea Delivery	1,280,000	gal/yr
Acid and Caustic Delivery	1,280,000	gal/yr
DDGS	212,500	tpy
Wetcake	64,000	tpy
Syrup Shipment	32,000	tpy
Denaturant Delivery	3,400,000	gal/yr

Road Path 1 Emission Calculations

Vehicle Type	Quantity Transported per Truck	Maximum Annual Number of Trucks	Miles Traveled per Truck	Annual VMT
DDGS	25 tons	8,500	0.60	5,100.0
Enzymes and Urea Delivery	8,000 gallons	160	0.60	96.0
Wetcake	25 tons	2560	0.60	1,536.0
Grain Receiving	25 tons	28,000	0.64	17,920.0
			Total:	24,652.0

Road Path 2 Emission Calculations

Vehicle Type	Quantity Transported per Truck	Maximum Number of Trucks	Miles Traveled per Truck	Annual VMT
Ethanol Shipping	8000 gallons	8,500	0.80	6,800.0
Acid and Caustic Delivery	8000 gallons	160	0.80	128.0
Denaturant Delivery	8000 gallons	425	0.80	340.0
Syrup Shipment	25 tons	1,280	0.80	1,024.0
			Total:	**8,292.0**

Pollutant	$E_{(lb/VMT)}$	PTE (lb/hr)	PTE (tpy)
$PM_{2.5}$	0.0161	0.06	0.26
PM_{10}	0.0654	0.25	1.08

Process Equipment Leaks FS003

Equipment Type	Service	Emission Factor (lb/hr/source)
Pump Seals	light liquid	0.043872
Valves	light liquid	0.0088846
Valves	gas	0.013162
Compressors	gas	0.50265
Relief Valves	gas	0.22928
Sampling Connections	all	0.0033069
Open Ended Lines	all	0.0037479
Connectors	all	0.0040345

Emission Factors (EPA-453/R-95-017, Table 2-1). These factors assume the working fluid is 100% VOC by wt.

For sources where the working fluid is < 90% VOC by weight. The emission factors are multiplied by the VOC wt. % to calculate the appropriate emission rate.

Sources in Beer service (I.e. 15% VOC by wt.)			
Equipment Type	**Quantity**	**VOC Emissions (lb/hr)**	**VOC Emissions (tpy)**
Pump Seals	6	0.04	0.2
Valves lt. Liq.	117	0.16	0.7
Valves gas	0	0.00	0.0
Compressors	0	0.00	0.0
Relief Valves	0	0.00	0.0
Sampling Connections	0	0.00	0.0
Open Ended Lines	2	0.00	0.0
Connectors	379	0.23	1.0
	Total:	0.43	1.9

Sources in 90% or greater VOC service (assume 100% VOC by wt.)			
Equipment Type	**Quantity**	**VOC Emissions (lb/hr)**	**VOC Emissions (tpy)**
Pump Seals	7	0.31	1.3
Valves lt. Liq.	236	2.10	9.2
Valves gas	32	0.42	1.8
Compressors	0	0.00	0.0
Relief Valves	9	2.06	9.0
Sampling Connections	0	0.00	0.0
Open Ended Lines	23	0.09	0.4
Connectors	1098	4.43	19.4
	Total:	9.40	41.2

Since all of these sources are subject to the NSPS VV; credit for LDAR Program is warranted (see EPA-453/R-95-017, chapter 5). It should also be noted that POET Biorefining - Laddonia is demonstrating compliance with NSPS VV by complying with NSPS VVa.

Summary of Equipment Modifications and Control Efficiency

Equipment Type	Quantity	Modification	Control %
Pump Seals	0	Dual mechanical seal with barrier fluid at higher pressure	100
Relief Valves	3	Rupture disk assembly	100
Open Ended Lines	0	Blind, cap, plug or second valve	100

Control Effectiveness for a LDAR Program

Equipment Type	Control effectiveness (%) for NSPS VVa monitoring 500 ppmv leak[1]
Pump Seals	75
Valves lt. Liq.	88
Valves gas	92
Connectors	93
Relief Valves	92

[1]Control effectiveness is based upon a 500 ppm leak detection from Chapter 4, Preferred and alternative methods for estimating fugitive emissions from equipment leaks, November 1996.

Controlled Fugitive Equipment Leak Emissions

Equipment Type	VOC Emissions (lb/hr)	VOC Emissions (tpy)
Pump Seals	0.09	0.38
Valves lt. Liq.	0.27	1.18
Valves gas	0.03	0.15
Compressors	-	-
Relief Valves	0.11	0.48
Sampling Connections	-	-
Open Ended Lines	0.09	0.38
Connectors	0.33	1.43
PTE:	0.91	4.00

FS004 Equipment Leaks from equipment in VOC service in the tank farm

HAP speciation profile from the TANKS 4.09 reports for denatured ethanol and denaturant was used to estimate the HAP emissions from the equipment leaks associated with the respective service.

Equipment Type	Service
Pump Seals	light liquid
Valves	light liquid
Valves	gas
Compressors	gas
Relief Valves	gas
Sampling Connections	all
Open Ended Lines	all
Connectors	all

Emission Factors (EPA-453/R-95-017, Table 2-1). These factors assume the working fluid is 100% VOC by wt.

Sources in Tank Farm Equipment Denaturant service			
Equipment Type	**Quantity**	**VOC (lb/hr)**	**VOC (tpy)**
Pump Seals	2	0.09	0.38
Valves lt. Liq.	31	0.28	1.21
Valves gas	0	0.00	0.00
Relief Valves	3	0.69	3.01
Sampling Connections	2	0.01	0.03
Connectors	173	0.70	3.06
	Total:	1.76	7.69

Sources in Tank Farm Equipment Ethanol service			
Equipment Type	**Quantity**	**VOC (lb/hr)**	**VOC (tpy)**
Pump Seals	4	0.18	0.77
Valves lt. Liq.	111	0.99	4.32
Valves gas	5	0.07	0.29
Relief Valves	31	7.11	31.13
Sampling Connections	0	0.00	0.00
Connectors	800	3.23	14.14
	Total:	11.56	50.64

Since all of these sources are subject to the NSPS VV; credit for LDAR is warranted (see EPA-453/R-95-017, chapter 5). It should also be noted that POET Biorefining - Laddonia is demonstrating compliance with NSPS VV by complying with NSPS VVa.

Summary of Equipment Modifications and Control Efficiency			
Equipment Type	**Quantity**	**Modification**	**Control %**
Pump Seals	0	Dual mechanical seal with barrier fluid at higher pressure	100
Relief Valves	0	Rupture disk assembly	100

Control Effectiveness for a LDAR Program	
Equipment Type	**Control effectiveness (%) for LDAR VVa monitoring 500 ppmv leak[1]**
Pump Seals	75
Valves lt. Liq.	88
Valves gas	92
Connectors[1]	93
Relief Valves	92

[1]Conrol effectiveness is based upon a 500 ppm leak detection from Chapter 4, Preferred and alternative methods for estimating fugitive emissions from equipment leaks, November 1996.

Controlled Fugitive Emissions from Tank Farm Equipment in Denaturant Service		
Equipment Type	**VOC (lb/hr)**	**VOC (tpy)**
Pump Seals	0.02	0.10
Valves lt. Liq.	0.03	0.14
Valves gas	0.00	0.00
Relief Valves	0.06	0.24
Sampling Connections	0.01	0.03
Connectors	0.05	0.21
Total:	0.17	0.72

Controlled Fugitive Emissions from Tank Farm Equipment in Ethanol Service		
Equipment Type	**VOC (lb/hr)**	**VOC (tpy)**
Pump Seals	0.04	0.19
Valves lt. Liq.	0.12	0.52
Valves gas	0.01	0.02
Relief Valves	0.57	2.49
Sampling Connections	0.00	0.00
Connectors	0.23	0.99
Total:	1.0	4.2

HAP Emission Calculations (Denaturant Service)		
Pollutant	**Vapor Fraction**	**PTE (tpy)**
Benzene	0.0174	0.01
Hexane	0.2581	0.19
HAP	0.2755	0.20

FS005 Wet cake Fugitive

Wet cake production storage and loadout is a source of VOC and HAP emissions because the wet cake contains a small quantity of ethanol and HAPs. This source is not controlled. The emission factors for this process come from emissions testing at a similar facility. This operating scenario is limited to less than 500 hours per year. The operation of the dryers and DDGS cooler represent the "worst case" emission scenario and thus are presented in the potential to emit summary.

MHDR =	79.9	tph
VOC	0.008300	lb/ton of wet cake produced
Acetaldehyde	0.000100	lb/ton of wet cake produced
Methanol	0.000040	lb/ton of wet cake produced
Formaldehyde	0.000200	lb/ton of wet cake produced
Acrolein	0.000020	lb/ton of wet cake produced

Pollutant	PTE (lb/hr)	PTE (tpy)
VOC	0.6632	0.1658
Acetaldehyde	0.0080	0.0020
Methanol	0.0032	0.0008
Formaldehyde	0.0160	0.0040
Acrolein	0.0016	0.0004
HAP	0.0288	0.0072

EP-CWT Cooling Tower Emission Calculations

Particulate emissions can be estimated by analyzing the mass of condensed water that is released times the total mass of dissolved solids present in the water. The estimate is based on the assumption that all of the dissolved solids that are present in the water become airborne PM upon evaporation of the release condensed water droplets. The released water droplets are referred to as the "drift loss" of the tower. The drift loss of the tower is usually referenced as a percent of the total water circulation rate of the tower.

PM to PM_{10} ratio:	15%		Reisman and Frisbie
PM to $PM_{2.5}$ ratio	15%		Reisman and Frisbie
Water circulation flow =		18,500	gpm
Water circulation flow =		1,110,000	gal/hr
Drift loss =		0.005%	
Drift loss =		55.5	liters per minute
Total Dissolved Solids in cooling tower =		1500	ppm
PM PTE =		0.69	lb/hr
		3.04	tpy
PM_{10} & $PM_{2.5}$ PTE =		0.10	lb/hr
		0.46	tpy

Attachment C

Installation Operational Limitations Tracking Sheet

Date (Month/Year)	Denatured Ethanol Production Rate (gallons)		Amount of Grain Received (tons)	
	Monthly Usage	12-Month Rolling Total[1,3] Usage	Monthly Usage	12-Month Rolling Total[2,3] Usage

[1]The installation is in compliance with Permit Condition PW001 if 12-month rolling total denatured ethanol production is less than or equal to 68,000,000 gallons.

[2]The installation is in compliance with Permit Condition PW001 if the 12-month rolling total amount of grain received is less than or equal to 700,000 tons.

[3]The 12-Month Rolling Total = the sum of the most recent 12 consecutive months.

Attachment D
Method 22 Opacity Observations

Date	Time	Emission Source	Visible Emissions		Excess Emissions		
			No	Yes[1]	Cause	Corrective Action	Initial

[1]If there are visible emissions, the permittee shall complete the excess emissions columns or complete a Method 9 opacity observation.

Attachment E

Method 9 Opacity Emissions Observations	
Company	Observer
Location	Observer Certification Date
Date	Emission Unit
Time	Control Device

Hour	Minute	Seconds				Steam Plume (check if applicable)		Comments
		0	15	30	45	Attached	Detached	
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							

SUMMARY OF AVERAGE OPACITY

Set Number	Time		Opacity	
	Start	End	Sum	Average

Readings ranged from _____ to _____ % opacity.

Was the emission unit in compliance at the time of evaluation? _____ _____ _____
YES NO Signature of Observer

Attachment F

Inspection/Maintenance/Repair/Malfunction Log

Emission Unit # _____

Date/Time	Inspection/ Maintenance Activities	Malfunction Activities					
		Malfunction	Impact	Duration	Cause	Action	Initials

Attachment G

Fugitive Emissions Observations

Date	Time	Visible Emissions Beyond Property Boundary		Excess Emissions		
		No	Yes[1]	Cause	Corrective Action	Initial

[1]If there are visible emissions beyond the property boundary the permittee shall complete the excess emissions columns.

Attachment H
Abbreviations and Acronyms

°C.....degrees Celsius
°F.....degrees Fahrenheit
AAQIA.....ambient air quality impact analysis
acfm.....actual cubic feet per minute
BACT.....Best Available Control Technology
BMPs.....Best Management Practices
Btu.....British thermal unit
CAM.....Compliance Assurance Monitoring
CAS.....Chemical Abstracts Service
CEMS.....Continuous Emission Monitor System
CFR.....Code of Federal Regulations
CO.....carbon monoxide
CO_2.....carbon dioxide
CO_2e.....carbon dioxide equivalent
COMS.....Continuous Opacity Monitoring System
CSR.....Code of State Regulations
DDGS.....Dried Distillers Grains with Solubles
dscf.....dry standard cubic feet
dscm.....dry standard cubic meter
EIQ.....Emission Inventory Questionnaire
EP.....Emission Point
EPA.....Environmental Protection Agency
EU.....Emission Unit
FGD.....flue gas desulfurization
FIRE.....EPA's Factor Information Retrieval System
ft.....feet
GACT.....Generally Available Control Technology
GHG.....Greenhouse Gas
gpm.....gallons per minute
gr.....grains
GWP.....Global Warming Potential
HAP.....Hazardous Air Pollutant
hr.....hour
HP.....horsepower
lb.....pound
lb/hr.....pounds per hour
MACT.....Maximum Achievable Control Technology
$\mu g/m^3$.....micrograms per cubic meter
m/s.....meters per second
mg.....milligrams
Mgal.....1,000 gallons
MW.....megawatt
MHDR.....maximum hourly design rate
MMBtu.....Million British thermal units
mmHg.....millimeters mercury
MMscf.....Million standard cubic feet
MSDS.....Material Safety Data Sheet
NAAQS.....National Ambient Air Quality Standards
NESHAPs.National Emissions Standards for Hazardous Air Pollutants
NO_x.....nitrogen oxides
NSPS.....New Source Performance Standards
NSR.....New Source Review
PM.....particulate matter
$PM_{2.5}$.....particulate matter less than 2.5 microns in aerodynamic diameter
PM_{10}.....particulate matter less than 10 microns in aerodynamic diameter
ppm.....parts per million
PSD.....Prevention of Significant Deterioration
psi.....pounds per square inch
PTE.....potential to emit
RACT.....Reasonable Available Control Technology
RAL.....Risk Assessment Level
RTO.....Regenerative Thermal Oxidizer
SCC.....Source Classification Code
scfm.....standard cubic feet per minute
SCR.....selective catalytic reduction
SIC.....Standard Industrial Classification
SIP.....State Implementation Plan
SMAL.....Screening Model Action Levels
SO_x.....sulfur oxides
SO_2.....sulfur dioxide
tph.....tons per hour
tpy.....tons per year
VMT.....vehicle miles traveled
VOC.....Volatile Organic Compounds

STATEMENT OF BASIS

Permit Reference Documents
These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

1. Part 70 Operating Permit Application, received June 25, 2012
2. 2013, 2012, 2011, 2010, and 2009 Emissions Inventory Questionnaires
3. U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition
4. WebFIRE: http://cfpub.epa.gov/webfire/index.cfm?action=fire.SearchEmissionFactors
5. Construction Permit 102005-015
6. Construction Permit 102005-015A
7. Construction Permit 102005-015B
8. Construction Permit 102005-015C

Other Air Regulations Determined Not to Apply to the Operating Permit
The Air Pollution Control Program has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

10 CSR 10-6.100 *Alternate Emission Limits* is not applicable to the installation and has not been applied within this permit. The installation is located in an ozone attainment area.

10 CSR 10-6.260 *Restriction of Emission of Sulfur Compounds* is not applicable to the installation and has not been applied within this permit. 10 CSR 10-6.260(1)(A)2 exempts combustion equipment that exclusively uses natural gas.

10 CSR 10-6.405 *Restriction of PM Emissions from Fuel Burning Equipment Used for Indirect Heating* is not applicable to the installation and has not been applied within this permit. 10 CSR 10-6.405(1)(E) exempts installations that are fueled only by natural gas.

Construction Permit History
Construction Permit 102005-015, Issued October 20, 2005:
Construction Permit 102005-015A, Issued January 7, 2013:

- This minor construction permit is for the installation of a 56,000,000 gallons denatured ethanol production plant.
- Amendment A revises the capacity of the denatured ethanol production plant to 68,000,000 gallons and modifies the special conditions.
- Special Condition 1 states that this permit supersedes all special conditions found in Construction Permit 022003-004.
- Special Conditions 2.A, 2.B, and 2.C have been applied in Permit Condition PW001.
- Special Condition 2.D was superseded by NSR Permit 102005-015C.
- Special Condition 2.E has been applied in Permit Condition 001.
- Special Condition 2.F has been applied in Permit Condition 002.
- Special Condition 3 has been applied in Permit Condition 003.
- Special Condition 4 has been applied in Permit Condition 004.

- Special Conditions 5 and 6 have been applied in Permit Condition 005.
- Special Condition 7 has been applied in Permit Condition 006.
- Special Conditions 8 and 9 have been applied in Permit Conditions PW001, 001, and 002.
- Special Condition 10 required the installation to apply for and receive an Intermediate operating permit. At the time of issuance of Construction Permit 102005-015A the installation qualified as an Intermediate installation as emissions of all regulated pollutants were limited below the major source thresholds. Since the issuance of Construction Permit 102005-015A CO_2e has become a regulated pollutant. As a major source of CO_2e the installation no longer qualifies for an Intermediate operating permit and has instead applied for this Part 70 operating permit.
- Special Conditions 11 and 12 have been applied in Permit Condition PW001.
- Special Condition 13 has been applied in Permit Condition 007.
- Special Conditions 14 and 15 have been applied in Permit Condition PW001.

Construction Permit 102005-015B, Issued May 31, 2013:
- This was a no construction permit required for the use of alternative grains in the production of ethanol.

Construction Permit 102005-015C, Issued June 30, 2014:
- When initially permitted the installation accepted SMAL limits on their individual HAPs to avoid modeling. The installation decided to undergo Acrolein modeling to remove their SMAL limit. The installation modeled compliance with Missouri's Acrolein RALs.
- Special Condition 1 states that this permit supersedes Special Condition 2.D of NSR Permit 102015-015A.
- Special Conditions 2 – 7 have been applied within this permit (see Permit Condition PW001).

NSPS Applicability
40 CFR Part 60, Subpart Dc – *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* is applicable to EP-13 Boiler #1 and EP-14 Boiler #2 and has been applied in Permit Condition 008.

40 CFR Part 60, Subpart Kb – *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984* is applicable to TK-02 190 Proof Ethanol Storage Tank, TK-03 Denaturant Storage Tank, TK-04 Ethanol Storage Tank #1, and TK-05 Ethanol Storage Tank #2 and has been applied in Permit Condition 009.

40 CFR Part 60, Subpart DD – *Standards of Performance for Grain Elevators* is not applicable to the installation and has not been applied within this permit. Although the installation does handle grain, the installation does not meet the definitions of grain terminal elevator or grain storage elevator in §60.300. The installation is not a grain storage elevator as they are not wheat flour mill, wet corn mill, dry corn mill, rice mill, or soybean oil extraction plant. The installation is not a grain terminal elevator as permanent storage capacity does not exceed 2.5 million bushels. The installation operates three 505,000 bushel storage bins, two 430,000 bushel storage bins, and one 50,000 bushel storage bin resulting in a total permanent storage capacity of 2.425 million bushels.

40 CFR Part 60, Subpart VVa – *Standards of Performance for Equipment Leaks for VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006* is applicable to FS003 VOC Equipment Leaks and FS004 Tank Farm Equipment Leaks and has been applied within this permit (see Permit Condition 010).

MACT Applicability
40 CFR Part 60, Subpart Q – *National Emission Standards for HAP from Industrial Process Cooling Towers* is not applicable to the installation and has not been applied within this permit. The installation does not use chromium-based water treatment chemical in CWT Cooling Tower; therefore, the installation does not meet the applicability requirements of §63.400(a).

40 CFR Part 60, Subpart JJJJJJ – *National Emission Standards for HAP from Industrial, Commercial, and Institutional Boilers Area Sources* is not applicable to the installation and has not been applied within this permit. §63.11195(e) exempts gas-fired boilers.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability
40 CFR Part 61, Subpart M – *National Emission Standards for Asbestos* is applicable to the installation and has been applied within this permit (see Section IV. Core Permit Requirements).

CAM Applicability
40 CFR Part 64 - *Compliance Assurance Monitoring*
The CAM rule applies to each pollutant specific emission unit that:

- Is subject to an emission limitation or standard, and
- Uses a control device to achieve compliance, and
- Has pre-control emissions that exceed or are equivalent to the major source threshold.

40 CFR Part 64 is not applicable because none of the pollutant-specific emission units uses a control device to achieve compliance with a relevant standard.

Greenhouse Gas Emissions
This installation is a major source for greenhouse gases. Potential CO_2e emissions from the installation were calculated to be 180,638.33 tons per year. Major stationary sources are required by the Clean Air Act (CAA) to obtain Part 70 operating permits. While Part 70 permits generally do not establish new emissions limits, they consolidate applicable requirements, as defined in Missouri State Regulations 10 CSR 10-6.020(2)(A)23, into a comprehensive air permit.

Note that this source is subject to 40 CFR Part 98 – *Mandatory Greenhouse Gas Reporting*; however, the preamble of the regulation clarifies that 40 CFR Part 98 requirements do not have to be incorporated in Part 70 permits operating permits at this time. In addition, Missouri regulations do not require the installation to report CO_2e emissions in their Missouri EIQ. The applicant is required to report the data directly to EPA. The installation's 2012 CO_2e emissions were reported on EPA's website to be 57,250.70 tons.

Updated Potential to Emit for the Installation
An updated PTE for the installation is available in Attachment B

Other Regulatory Determinations

10 CSR 10-6.220 *Restriction of Emission of Visible Air Contaminants* is applicable to the installation and has been applied within this permit (see Permit Condition 011).

- This regulation is applicable to EP-01, EP-02, EP-03, EP-04, EP-05, EP-06, EP-07, EP-10, EP-11, and EP-12; however, Construction Permit 102005-015A Special Condition 3 is more restrictive requiring zero visible emissions from these sources during periods of normal operation.
- This regulation is applicable to EP-15 and CWT; however, potential PM_{10} emissions from these sources are below 0.5 lb/hr. No monitoring, recordkeeping, or reporting is being required for these sources at this time.
- FS002 is a fugitive source of emissions and is regulated by 10 CSR 10-6.170. Although FS001 is being operated as a fugitive source of emissions, FS001 does not meet the definition of fugitive emissions in 10 CSR 10-6.020(2)(F)37.
- This regulation is not applicable to EP-13 and EP-14 which are regulated by NSPS Dc. 10 CSR 10-6.220(1)(H) exempts sources regulated by NSPS.

10 CSR 10-6.400 *Restriction of Emission of PM From Industrial Processes* is applicable to the installation and has been applied within this permit (see Permit Condition 012).

- This regulation is not applicable to EP-01, EP-02, EP-03, EP-04, EP-05, EP-06, EP-07, EP-10, EP-11, and EP-12 as they are required to operate baghouses by Special Condition 3 of Construction Permit 102005-015A and 10 CSR 10-6.400(1)(B)15 exempts any PM emission sources that are subject to a federally enforceable requirement to install, operate, and maintain a PM control device system that controls at least 90 percent of PM emissions.
- This regulation is not applicable to EP-15 and CWT as 10 CSR 10-6.400(1)(B)12 exempts emission sources that have a potential to emit less than 0.5 lb/hr $PM_{10.}$
- This regulation is not applicable to FS002 as 10 CSR 10-6.400(1)(B)7 exempts fugitive emissions. Although FS001 is being operated as a fugitive source of emissions, FS001 does not meet the definition of fugitive emissions in 10 CSR 10-6.020(2)(F)37.
- This regulation is not applicable to EP-13 and EP-14 as 10 CSR 10-6.400(1)(B)6 exempts the combustion of fuel for indirect heating.

Response to Public Comments

The draft Part 70 Operating Permit, Project 2012-06-083, for POET Biorefining - Laddonia (007-0054) was placed on public notice as of August 12, 2014, for a 30-day comment period. The public notice was published on the Department of Natural Resources' Air Pollution Control Program's web page at: http://www.dnr.mo.gov/env/apcp/PermitPublicNotices.htm on Tuesday, August 12, 2014. The Missouri Air Pollution Control Program did not receive any comments on this permit during its public notice period.

Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis
Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

1. The specific pollutant regulated by that rule is not emitted by the installation;
2. The installation is not in the source category regulated by that rule;
3. The installation is not in the county or specific area that is regulated under the authority of that rule;
4. The installation does not contain the type of emission unit which is regulated by that rule;
5. The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the Air Pollution Control Program's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the Air Pollution Control Program a schedule for achieving compliance for that regulation(s).