



# INTERMEDIATE STATE 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.

**Intermediate Operating Permit Number:** OP2016-010  
**Expiration Date:** MAR 29 2021  
**Installation ID:** 195-0046  
**Project Number:** 2014-06-016

**Installation Name and Address**

Mid-Missouri Energy, LLC  
15311 N. Saline 65 Highway  
Malta Bend, MO 65339  
Saline County

**Parent Company's Name and Address**

Mid-Missouri Energy, LLC  
15311 N. Saline 65 Highway  
Malta Bend, MO 65339

**Installation Description:**

Mid-Missouri Energy, LLC is an ethanol plant located in Malta Bend, Missouri. The facility is a synthetic minor source of VOC, CO, HAP, and Acetaldehyde (107-02-8).



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Director or Designee  
Department of Natural Resources

**MAR 30 2016**

Effective Date

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## **I. Installation Description and Equipment Listing**

### **INSTALLATION DESCRIPTION**

Mid-Missouri Energy, LLC operates a 60 million gallon per year ethanol plant located in Malta Bend, Missouri. The facility is a synthetic minor source of VOC, CO, HAP, and Acetaldehyde (107-02-8).

Mid-Missouri Energy, LLC purchases grain, namely corn, from area farmers and hauls the grain to the plant by truck where it is unloaded into one of three storage bins. A baghouse collects particulate emissions from the grain unloading operation and the collected grain dust is returned to the process via the corn unloading drag and elevator leg. In a dry milling process a hammer mill is used to mill the corn into a powder. The hammer mill particulate emissions are controlled by a baghouse. The powder is mechanically conveyed to a mixer.

In the mixer, the powder is mixed with recycled process water from the cook water tank to form a slurry. The slurry is cooked to liquefy and breakdown the starch to sugars. The slurry is cooled with non-contact cooling water and sent to fermenter process vessels where the fermentation process, along with added yeast, converts the sugars to ethanol. This process produces a fermented mash called beer. The beer well is a process tank that provides continuous flow of beer slurry to the distillation column. Emissions from the fermenters and the beer well passes through a water scrubber to remove residual amounts of ethanol before the exhaust exits through the scrubber stack. CO<sub>2</sub> in the exhaust stream may be sold to a third party as a by-product. The water from the scrubber is pumped to the cook water tank and recycled in the process.

The beer contains about 10 percent ethanol in addition to non-fermentable corn solids. The ethanol is separated from the beer by distillation and leaves the distillation section as 190 proof ethanol. The 190 proof ethanol is stored in a 100,000-gallon tank. At this point in the process, the ethanol contains residual water. The 190 proof ethanol passes through a molecular sieve to remove the remaining water making the ethanol 200 proof. The 200 proof ethanol passes through a second condenser before entering a 100,000-gallon storage tank. The 200 proof ethanol is mixed with a denaturant (natural gasoline) and stored in one of two 750,000-gallon storage tanks. The denatured ethanol is loaded into trucks or railcars for delivery to customers.

Vapors from the mixer, slurry tank, cook water tank, yeast tank, and the two condensers are collected in the process vent and directed to a thermal oxidizer.

The distillation process removes the ethanol from the beer, non-fermentable corn solids, and water. The residue mash leaving distillation, called whole stillage, is transferred from the base of the distillation column to the stillage processing area. The whole stillage passes through a centrifuge to remove the majority of the water. The underflow from the centrifuge, called wet distillers grain, is pumped to a dryer where the wet distillers grain is dried to customer specific moisture content. The grain, now called DDGS is cooled by a cyclone and conveyed to the storage and load out areas. Particulate generated during the DDGS loading process is collected by a baghouse.

The overflow from the centrifuge, called thin stillage, enters an evaporator to reduce the water content. The concentrated stream from the evaporator is mixed with the centrifuge underflow stream before entering the dryer. The water stream from the evaporators goes to a methanator. The methanator is an anaerobic biological water treatment system that converts organic material to methane. The methane is

used as supplemental fuel in the dryer. When the dryer is not in operation, the methane is routed to the biomethanator flare. The water from the methanator is recycled to the cook water tank for reuse in the process.

A thermal oxidizer controls emissions from the natural gas dryer and emissions collected by the process vent. A waste heat recovery boiler recovers most of the waste heat given off by the thermal oxidizer to produce process steam for plant operations.

A vapor recovery system controls VOC emissions at the truck loadout area and routes the emissions to the VRS flare.

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

<b>Reported Air Pollutant Emissions, tons per year</b>					
<b>Pollutants</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Filterable PM <sub>10</sub>	36.72	31.29	29.78	38.50	39.28
Filterable PM <sub>2.5</sub>	5.67	5.05	4.52	5.04	5.12
PM CON	5.11	5.14	4.51	5.05	5.11
SO <sub>x</sub>	2.45	2.46	0.34	0.43	0.45
NO <sub>x</sub>	59.46	51.91	42.27	58.98	50.67
VOC	48.82	39.82	86.22 <sup>1</sup>	33.13	34.01
CO <sup>2</sup>	42.95	41.09	26.97	62.43	63.37
HAP	6.67	5.85	6.42	4.16	4.26
Acetaldehyde (75-07-0) <sup>3</sup>	3.19	2.67	3.05	0.83	0.86
Hexane (110-54-3)	1.74	1.57	1.39	1.68	1.73
Methanol (67-56-1) <sup>3</sup>	1.16	1.07	0.83	0.39	0.40
Formaldehyde (50-00-0) <sup>3,4</sup>	0.34	0.32	0.48	0.72	0.72
Benzene (71-43-2)	0.09	0.09	0.09	0.10	0.10
Acrolein (107-02-8) <sup>3,5</sup>	0.08	0.07	0.52	0.39	0.39
Toluene (108-88-3)	0.06	0.06	0.06	0.06	0.06
Dichlorobenzene (106-46-7)	0.001	0.001	0.001	0.001	0.001
Naphthalene (91-20-3)	0.0005	0.0004	0.0003	0.0004	0.0005

<sup>1</sup> During stack testing of P40 in 2012, the water flow rate to the scrubber was not adequate resulting in high VOC emissions. Subsequent testing of P40 in 2013 at an adequate water flow rate resulted in lower VOC emissions comparable with test results from prior to 2012. The results of the 2012 stack test were used in the 2012 EIQ. The results of the 2013 stack test were used in the installation's 2013 and 2014 EIQs.

<sup>2</sup> CO emissions from P10 are lower in 2013 and subsequent years as stack testing conducted in 2013 indicated a lower emission rate than previously assumed.

<sup>3</sup> EIQ reported Acetaldehyde, Acrolein, Methanol, and Formaldehyde emissions are artificially high as the EIQ double counts emissions from distillation including emissions under P10 and P50. All emissions from P50 are routed to P10. P50 is not an actual emission point.

<sup>4</sup> Formaldehyde emissions from P40 are lower in 2013 and subsequent years as stack testing conducted in 2013 indicated a lower emission rate than previously assumed.

<sup>5</sup> Acrolein emissions from P40 are lower in 2013 and subsequent years as stack testing conducted in 2013 indicated a lower emission rate than previously assumed.

**EMISSION UNITS WITH LIMITATIONS**

The following list provides a description of the equipment at this installation which emits air pollutants and identified as having unit-specific emission limitations. These emission units are also subject to the plantwide permit limitations.

<b>Emission Unit</b>	<b>Description</b>	<b>Applicable Requirements</b>
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers, 205 MMBtu/hr total	10 CSR 10-6.220, NSPS Db, 092011-001
P15	Grain Unloading, 840 tph	10 CSR 10-6.220, 092011-001
P30	Hammermill, 72 tph	10 CSR 10-6.220, 092011-001
P40	CO <sub>2</sub> Fermentation Scrubber	092011-001
F60	VOC Equipment Leaks	NSPS VV, NSPS VVa
P70	DDGS Cooler Cyclone, 18 tph	10 CSR 10-6.220, 092011-001
P80	Cooling Tower, 1,500,000 gal/hr	10 CSR 10-6.220, 092011-001
P90	DDGS Loadout, 840 tph	092011-001
F100	Truck Traffic on Haul Roads	10 CSR 10-6.220, 092011-001
EP11	Biomethanator Smokeless Flare, 3.2 MMBtu/hr	092011-001
EP22, F55, & F56	Truck and Rail VRS Loadout and Smokeless Flare, 6.4 MMBtu/hr	092011-001
T61	Denatured Ethanol Tank #1	NSPS Kb
T62	Denatured Ethanol Tank #2	NSPS Kb
T63	200-Proof Ethanol Storage Tank	NSPS Kb
T64	Denaturant Storage Tank	NSPS Kb
T65	190-Proof Ethanol Storage Tank	NSPS Kb
P120	Diesel Emergency Generator Engine, 364 HP	NSPS IIII, 092011-001, 10 CSR 10-6.260
P110	Emergency Fire Water Pump Engine, 300 HP	092011-001, MACT ZZZZ, 10 CSR 10-6.260

**EMISSION UNITS WITHOUT LIMITATIONS**

The following list provides a description of the equipment, which does not have unit specific limitations at the time of permit issuance. These emission units are subject to the plantwide permit limitations.

<b>Emission Unit</b>	<b>Description of Emission Source</b>
P50	Distillation & other processes (Routes to P10) (2) 200,000 bushel grain bins (1) 730,000 bushel grain 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 on the date of permit issuance.

**PERMIT CONDITION PW001**  
 10 CSR 10-6.060 Construction Permits Required  
 Construction Permit 092011-001, Issued September 1, 2011

### Emission Limitations:

1. Special Condition 2.A: The permittee shall emit less than 100.0 tons of VOC from the entire installation in any consecutive 12 month period.
  - a) The permittee shall record the monthly and the sum of the most recent consecutive 12 months VOC 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 A or an equivalent form approved by the Air Pollution Control Program shall be used for this purpose.
  - b) 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 VOC emission limitation.
2. Special Condition 2.B: The permittee shall emit less than 100.0 tons of CO from the entire installation in any consecutive 12 month period.
  - a) The permittee shall record the monthly and the sum of the most recent consecutive 12 months 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 B or an equivalent form approved by the Air Pollution Control Program shall be used for this purpose.
  - b) 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 the records indicate an exceedance of the CO emission limitation.

3. Special Condition 2.C: The permittee shall not discharge any HAPs into the atmosphere from the entire installation, or individual stack, in excess of the listed amounts in any consecutive 12 month period:

HAP	Stack	Limit (tpy)
Acrolein (107-02-8)	Entire Installation	0.835
	P40 CO <sub>2</sub> Fermentation Scrubber	0.0438
	P70 DDGS Cooler	0.1226
	P10 Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers	0.6570
Any remaining individual HAP	Entire Installation	10.0
Combined HAP	Entire Installation	25.0

- a) The permittee shall record the monthly and the sum of the most recent consecutive 12 months HAP 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. Attachments C and D or equivalent forms approved by the Air Pollution Control Program shall be used for this purpose.

- b) 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 the records indicate an exceedance of one of the emission limitations.

**Operational Limitations:**

- 1. Special Condition 3.A: The permittee shall not exceed the following limits per 12-month rolling period:

<b>Item (truck capacity)</b>	<b>12-month Rolling Total Limit</b>
Grain, DDGS, Wetcake, Enzymes, Urea, Acid, and Caustic Delivery/Shipment (25 tons)	31,800 trucks
Denatured Ethanol Shipment and Denaturant Delivery (7,800 gallons)	7,884 trucks
CO <sub>2</sub> Shipment (20 tons)	5,475 trucks

- 2. Special Condition 3.B: The permittee shall not exceed an annual production limit of 60,000,000 gallons of denatured ethanol per 12-month rolling period.
- 3. Special Condition 3.C: The permittee shall limit the annual amount of denatured ethanol shipped by F55 Denatured Ethanol Loadout to Rail to 30,000,000 gallons per 12-month rolling period.
- 4. Special Condition 3.D: The permittee shall load F55 Denatured Ethanol Loadout to Rail during the hours of 7 am to 7 pm, exclusively (i.e. daylight hours).
- 5. Special Condition 3.E: The permittee shall retain a record of the monthly weight (tons) of grain received, gallons of denatured ethanol produced, and gallons denatured ethanol shipped by rail. Attachment E or an equivalent form approved by the Air Pollution Control Program shall be used for this purpose.
- 6. Special Condition 10: Stacks S15 Grain Unloading and S30 Hammermill shall have a minimum height of 21.34 m (70.0 ft).
- 7. Special Condition 11.A: The permittee shall not exceed a usage rate of 1,660 MMscf of natural gas from the entire installation in any 12-month rolling period.
- 8. Special Condition 11.B: The permittee shall track natural gas usage from the entire installation on a monthly and consecutive 12-month basis. Attachment J or an equivalent form approved by the Air Pollution Control Program shall be used to demonstrate compliance with the natural gas limitation.
- 9. Special Condition 11.C: 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 natural gas limitation.

**Recordkeeping and Reporting:**

- 1. Special Condition 15.A: The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources’ personnel upon request.
- 2. Special Condition 15.B: 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 a limitation.
- 3. The permittee shall report any deviations from the requirements of this permit condition in the annual monitoring report and 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 on the date of permit issuance.

<b>PERMIT CONDITION 001</b>	
10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants	
<b>Emission Unit</b>	<b>Description</b>
F100	Truck Traffic on Haul Roads
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers
P15	Grain Unloading
P30	Hammermill
P70	DDGS Cooler
P80	Cooling Tower

**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: The permittee may discharge into the atmosphere from any source of emissions for a period 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 U.S. 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 these procedures, then no further observations would be required. For emission units with visible emissions, the source 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 shall 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.
3. If at the time of permit issuance the permittee has already progressed to conducting observations once every two weeks or once per month, the permittee may continue from that point in the schedule after permit issuance.
4. 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 (see Attachments F & G 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 using Attachment H or an equivalent form approved by the Air Pollution Control Program.
3. These records shall be made available immediately for inspection to the Department of Natural Resources personnel upon request.
4. 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 an exceedance of the opacity limitation.
2. The permittee shall report any deviations from the requirements of this permit condition in the annual monitoring report and compliance certification required by Section V of this permit.

<b>PERMIT CONDITION 002</b>	
10 CSR 10-6.070 New Source Performance Regulations	
40 CFR Part 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	
Emission Unit	Description
P10	Heat Recovery Boiler

**Emission Limitation:**

1. The permittee shall not cause to be discharged into the atmosphere from P10 any gases that contain NO<sub>x</sub> in excess of: [§60.44b(a)]
  - a) 0.10 lb/MMBtu at a heat release rate of less than or equal to 70,000 Btu/hr-ft<sup>3</sup>.
  - b) 0.20 lb/MMBtu at a heat release rate of greater than 70,000 Btu/hr-ft<sup>3</sup>.
2. For purposes of §60.44b(i), the NO<sub>x</sub> standards apply at all times including periods of startup, shutdown, or malfunction. [§60.44b(h)]
3. Except as provided under §60.44b(j), compliance with the emission limits is determined on a 30-day rolling average basis. [§60.44b(i)]
4. Compliance with the emission limits is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that: [§60.44b(j)]
  - a) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less; [§60.44b(j)(1)]
  - b) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and [§60.44b(j)(2)]
5. Affected facilities that meet the criteria described in §60.44b(j)(1), (2), and (3), and that have a heat input capacity of 250 MMBtu/hr or less, are not subject to the NO<sub>x</sub> emission limits. [§60.44b(k)]
6. On and after the date on which the initial performance test is completed or is required to be completed under 60.8, whichever date is first, the permittee shall not cause to be discharged into the atmosphere from that affected facility any gases that contain NO<sub>x</sub> (expressed as NO<sub>2</sub>) in excess of the following limits: [§60.44b(l)]

- a) 0.20 lb/MMBtu heat input if the affected facility combusts coal, oil, or natural gas (or any combination of the three), alone or with any other fuels. The affected facility is not subject to this limit if it is subject to and in compliance with a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, and natural gas (or any combination of the three); or [§60.44b(1)(1)]
- b) If the affected facility has a low heat release rate and combusts natural gas in excess of 30 percent of the heat input on a 30-day rolling average from the combustion of all fuels, a limit determined by use of the following formula: [§60.44b(1)(2)]

$$E_n = \frac{(0.10 \times H_{go}) + (0.20 \times H_r)}{(H_{go} + H_r)}$$

Where:

$E_n$  = NO<sub>x</sub> emission limit, (lb/MMBtu);

$H_{go}$  = 30-day heat input from combustion of natural gas or distillate oil; and

$H_r$  = 30-day heat input from combustion of any other fuel.

**Compliance and Performance Test Methods and Procedures:**

1. The NO<sub>x</sub> emission standards under §60.44b apply at all times. [§60.46b(a)]
2. Compliance with the NO<sub>x</sub> emission standards under §60.44b shall be determined through performance testing under §60.46b(e), or under §60.46b(g), as applicable. [§60.46b(c)]
3. To determine compliance with the emission limits for NO<sub>x</sub> required under §60.44b, the permittee shall conduct the performance test as required under §60.8 using the continuous system for monitoring NO<sub>x</sub> under §60.48(b). [§60.46b(e)]
  - a) For the initial compliance test, NO<sub>x</sub> from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO<sub>x</sub> emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. [§60.46b(e)(1)]
  - b) Following the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, for an affected facility that has a heat input capacity of 250 MMBtu/hr or less and that combusts natural gas shall upon request determine compliance with the NO<sub>x</sub> standards in §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO<sub>x</sub> emissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO<sub>x</sub> emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO<sub>x</sub> emission data for the preceding 30 steam generating unit operating days. [§60.46b(e)(4)]
4. For an affected facility described in §60.44b(j) or §60.44b(k), the permittee shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The permittee shall determine the maximum heat input capacity using the heat loss method or the heat input method described in §§5 and 7.3 of the ASME Power Test Codes 4.1 (incorporated by reference, see §60.17). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of §60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of §60.44b(k). Subsequent demonstrations may be required by the

Director at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used. [§60.46b(g)]

**Monitoring:**

1. Except as provided under §60.48b(g) and (i), the permittee shall comply with either of the following paragraphs:[§60.48b(b)]
  - a) Install, calibrate, maintain, and operate CEMS for measuring NO<sub>x</sub> and O<sub>2</sub> (or CO<sub>2</sub>) emissions discharged to the atmosphere, and shall record the output of the system; or [§60.48b(b)(1)]
  - b) If the permittee has installed a NO<sub>x</sub> emission rate CEMS to meet the requirements of 40 CFR Part 75 and is continuing to meet the ongoing requirements of 40 CFR Part 75, that CEMS may be used to meet the requirements of §60.48b, except that the permittee shall also meet the requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in 40 CFR Part 75, Subpart D, nor shall the data have been bias adjusted according to the procedures of 40 CFR Part 75. [§60.48b(b)(2)]
2. The CEMS required under §60.48b(b) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [§60.48b(c)]
3. The one-hour average NO<sub>x</sub> emission rates measured by the continuous NO<sub>x</sub> monitor required by §60.48b(b) and required under §60.13(h) shall be expressed in lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The one-hour averages shall be calculated using the data points required under §60.13(h)(2). [§60.48b(d)]
4. The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. [§60.48b(e)]
  - a) For affected facilities combusting natural gas, the span value for NO<sub>x</sub> is determined using one of the following procedures: [§60.48b(e)(2)]
    - i) Except as provided under §60.48b(e)(2)(ii), the NO<sub>x</sub> span values for natural gas shall be 500 ppm. [§60.48b(e)(2)(i)]
    - ii) As an alternative to meeting the requirements of §60.48b(e)(2)(i), the permittee may elect to use the NO<sub>x</sub> span values determined according to §2.1.2 in 40 CFR Part 75 Appendix A. [§60.48b(e)(2)(ii)]
5. When NO<sub>x</sub> emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 or 7A of 40 CFR Part 60 Appendix A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days. [§60.48b(f)]
6. For an affected facility that has a heat input capacity of 250 MMBtu/hr or less, and that has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, gasified coal, or any mixture of these fuels, greater than 10 percent, the permittee shall: [§60.48b(g)]
  - a) Comply with the provisions of §60.48b(b), (c), (d), (e)(2), and (f); or [§60.48b(g)(1)]
  - b) Monitor steam generating unit operating conditions and predict NO<sub>x</sub> emission rates as specified in a plan submitted pursuant to §60.49b(c). [§60.48b(g)(2)]
7. For an affected facility described in §60.44b(j) or §60.44b(k), the permittee is not required to install or operate a CEMS for measuring NO<sub>x</sub> emissions. [§60.48b(i)]

**Reporting and Recordkeeping:**

1. For each affected facility, the permittee shall submit notification of the date of initial startup, as provided by §60.7. This notification shall include: [§60.49b(a)]
  - a) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility; [§60.49b(a)(1)]
  - b) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.44b(i), (j), (k), or 60.48b(i); [§60.49b(a)(2)]
  - c) The annual capacity factor at which the permittee anticipates operating the facility based on all fuels fired and based on each individual fuel fired; and [§60.49b(a)(3)]
2. The permittee shall submit to the Director the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in 40 CFR Part 60 Appendix B. For each affected facility described in §60.44b(j) or §60.44b(k), the permittee shall submit to the Director the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility. [§60.49b(b)]
3. For each affected facility subject to the NO<sub>x</sub> standard in §60.44b which seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of §60.48b(g)(2), the permittee shall submit to the Director for approval a plan that identifies the operating conditions to be monitored in §60.48b(g)(2) and the records to be maintained in §60.49b(g). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. If the plan is approved, the permittee shall maintain records of predicted NO<sub>x</sub> emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall: [§60.49b(c)]
  - a) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO<sub>x</sub> emission rates (i.e., lb/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas O<sub>2</sub> level); [§60.49b(c)(1)]
  - b) Include the data and information that the permittee used to identify the relationship between NO<sub>x</sub> emission rates and these operating conditions; and [§60.49b(c)(2)]
  - c) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the permittee during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the permittee under §60.49b(g). [§60.49b(c)(3)]
4. Except as provided in §60.49b(d)(2), the permittee shall record and maintain records as specified in §60.49b(d)(1). [§60.49b(d)]
  - a) The permittee shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for natural gas for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [§60.49b(d)(1)]
  - b) As an alternative to meeting the requirements of §60.49b(d)(1), if the permittee is subject to a federally enforceable permit restricting fuel use to a single fuel such that the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions, the permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month. [§60.49b(d)(2)]

5. Except as provided under §60.49b(p), the permittee shall maintain records of the following information for each steam generating unit operating day: [§60.49b(g)]
  - a) Calendar date; [§60.49b(g)(1)]
  - b) The average hourly NO<sub>x</sub> emission rates (expressed as NO<sub>2</sub>) (lb/MMBtu heat input) measured or predicted; [§60.49b(g)(2)]
  - c) The 30-day average NO<sub>x</sub> emission rates (lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly NO<sub>x</sub> emission rates for the preceding 30 steam generating unit operating days; [§60.49b(g)(3)]
  - d) Identification of the steam generating unit operating days when the calculated 30-day average NO<sub>x</sub> emission rates are in excess of the NO<sub>x</sub> emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken; [§60.49b(g)(4)]
  - e) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken; [§60.49b(g)(5)]
  - f) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data; [§60.49b(g)(6)]
  - g) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted; [§60.49b(g)(7)]
  - h) Identification of the times when the pollutant concentration exceeded full span of the CEMS; [§60.49b(g)(8)]
  - i) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and [§60.49b(g)(9)]
  - j) Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Part 60 Appendix F, Procedure 1. [§60.49b(g)(10)]
6. For any affected facility in any category listed in §60.49b(h)(2), the permittee is required to submit excess emission reports for any excess emissions that occurred during the reporting period. [§60.49b(h)]
  - a) Any affected facility that is subject to the NO<sub>x</sub> standard of §60.44b, and that: [§60.49b(h)(2)]
  - b) Combusts natural gas; or [§60.49b(h)(2)(i)]
  - c) Has a heat input capacity of 250 MMBtu/hr or less and is required to monitor NO<sub>x</sub> emissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2). [§60.49b(h)(2)(ii)]
  - d) For purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NO<sub>x</sub> emission rate, as determined under §60.46b(e), that exceeds the applicable emission limits in §60.44b. [§60.49b(h)(4)]
7. For any affected facility subject to the continuous monitoring requirements for NO<sub>x</sub> under §60.48(b), the permittee shall submit reports containing the information recorded under §60.49b(g). [§60.49b(i)]
8. All records required under §60.49b shall be maintained by the permittee for a period of two years following the date of such record. [§60.49b(o)]
9. For an affected facility described in §60.44b(j) or (k), the permittee shall maintain records of the following information for each steam generating unit operating day: [§60.49b(p)]
  - a) Calendar date; [§60.49b(p)(1)]
  - b) The number of hours of operation; and [§60.49b(p)(2)]
  - c) A record of the hourly steam load. [§60.49b(p)(3)]
10. For an affected facility described in §60.44b(j) or §60.44b(k), the permittee shall submit to the Director a report containing: [§60.49b(q)]

- a) The annual capacity factor over the previous 12 months; [§60.49b(q)(1)]
- b) If the affected facility meets the criteria described in §60.44b(j), the results of any NO<sub>x</sub> emission tests required during the reporting period, the hours of operation during the reporting period, and the hours of operation since the last NO<sub>x</sub> emission test. [§60.49b(q)(3)]
- 11. The permittee may submit electronic quarterly reports for NO<sub>x</sub> in lieu of submitting the written reports required under §60.49b(h) or (i). The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR Part 60, Subpart Db was achieved during the reporting period. Before submitting reports in the electronic format, the permittee shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format. [§60.49b(v)]
- 12. The reporting period for the reports required under this subpart is each six month period. All reports shall be submitted to the Director and shall be postmarked by the 30th day following the end of the reporting period. [§60.49b(w)]
- 13. These records shall be made available immediately for inspection to the Department of Natural Resources personnel upon request.
- 14. All records shall be maintained for five years.
- 15. The permittee shall report any deviations from the requirements of this permit condition in the annual monitoring and compliance certification required by Section V of this permit.

<b>PERMIT CONDITION 003</b>	
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
T61	750,000 gallon Internal Floating Roof Denatured Ethanol Tank #1, Installed 2005
T62	750,000 gallon Internal Floating Roof Denatured Ethanol Tank #2, Installed 2005
T63	100,000 gallon Internal Floating Roof 200-Proof Ethanol Storage Tank, Installed 2005
T64	100,000 gallon Internal Floating Roof Denaturant Storage Tank, Installed 2005
T65	100,000 gallon Internal Floating Roof 190-Proof Ethanol Storage Tank, Installed 2005

**VOC Standards:**

- 1. Each storage vessel containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa, shall be equipped 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)]
  - (3) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof. [§60.112b(a)(1)(ii)(C)]
- 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. Each storage vessel as specified in §60.112b(a) shall meet the requirements of §60.113b(a).  
[§60.113b]
  - a) 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)]
    - i) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal

- floating roof, or both, the permittee shall repair the items before filling the storage vessel. [§60.113b(a)(1)]
- ii) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the 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 Director 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)]
  - iii) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B): [§60.113b(a)(3)]
    - (1) Visually inspect the vessel as specified in §60.113b(a)(4) at least every five years; or [§60.113b(a)(3)(i)]
    - (2) Visually inspect the vessel as specified in §60.113b(a)(2). [§60.113b(a)(3)(ii)]
  - iv) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 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)]
  - v) Notify the Director 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 Director 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 Director 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 Director at least seven days prior to the refilling. [§60.113b(a)(5)]

**Alternative Means of Emission Limitation:**

1. If, in the Director's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in §60.112b, the Director will publish in the federal register a notice permitting the use of the alternative means for purposes of compliance with that requirement. [§60.114b(a)]
2. Any notice under §60.114b(a) will be published only after notice and an opportunity for a hearing. [§60.114b(b)]
3. Any person seeking permission under §60.114b shall submit to the Director a written application including: [§60.114b(c)]
  - a) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure. [§60.114b(c)(1)]
  - b) An engineering evaluation that the Director determines is an accurate method of determining equivalence. [§60.114b(c)(2)]
4. The Director may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in §60.112b. [§60.114b(d)]

**Monitoring:**

1. The permittee shall keep copies of all records required by §60.116b, except for the record required by §60.116b(b), for at least five years. The record required by §60.116b(b) will be kept for the life of the source. [§60.116b(a)]
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 above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [§60.116b(e)(1)]
  - b) 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 Director; or [§60.116b(e)(3)(iii)]
    - iv) Calculated by an appropriate method approved by the Director. [§60.116b(e)(3)(iv)]

**Recordkeeping/Reporting:**

1. The permittee shall keep records and furnish reports as required by §60.115b(a). The permittee shall keep copies of all reports and records required by this section, except for the record required by §60.115b(c)(1), for at least five years. The record required by §60.115b(c)(1) will be kept for the life of the control equipment. [§60.115b]

- a) 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)]
  - i) Furnish the Director 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)]
  - ii) 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)]
  - iii) 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 Director 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)]
  - iv) 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 Director 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. These records shall be made available immediately for inspection to the Department of Natural Resources personnel upon request.
- 3. All records shall be maintained for five years.
- 4. The permittee shall report any deviations from the requirements of this permit condition in the annual monitoring and compliance certification required by Section V of this permit.

<b>PERMIT CONDITION 004</b>	
10 CSR 10-6.075 New Source Performance Regulations	
40 CFR Part 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	
<b>Emission Unit</b>	<b>Description</b>
P120	364 HP Emergency Generator – 2007 Cummins, Inc. QSL9-G2 NR3

**Emission Standards:**

- 1. The permittee shall comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year emergency stationary CI ICE. [§60.4205(b)]
  - a) Stationary CI internal combustion engine manufacturers shall certify their 2007 model year emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than ten liters per cylinder that are not fire pump engines to the emission standards specified in §60.4202(a)(2). [§60.4202(a)]
    - i) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in §89.112 and §89.113 for all pollutants beginning in model year 2007. [§60.4202(a)(2)]

**Fuel Requirements:**

The permittee shall use diesel fuel that meets the requirements of §80.510(b) for nonroad diesel fuel. [§60.4207(b)]

**Monitoring Requirements:**

The permittee shall install a non-resettable hour meter prior to startup of the engine. [§60.4209(a)]

**Compliance Requirements:**

1. The permittee shall operate and maintain stationary CI ICE that achieve the emission standards as required in §60.4205 over the entire life of the engine. [§60.4206]
2. The permittee shall do all of the following, except as permitted under §60.4211(g): [§60.4211(a)]
  - a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions; [§60.4211(a)(1)]
  - b) Change only those emission-related settings that are permitted by the manufacturer; and [§60.4211(a)(2)]
  - c) Meet the requirements of 40 CFR Parts 89, 94 and/or 1068, as they apply. [§60.4211(a)(3)]
3. The permittee shall comply by purchasing an engine certified to the emission standards in §60.4205(b), as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted in §60.4211(g). [§60.4211(c)]
4. The permittee shall operate the emergency stationary ICE according to the requirements in §60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under NSPS IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in §60.4211(f)(1) through (3), is prohibited. If the permittee does not operate the engine according to the requirements in §60.4211(f)(1) through (3), the engine will not be considered an emergency engine under NSPS IIII and shall meet all requirements for non-emergency engines. [§60.4211(f)]
  - a) There is no time limit on the use of emergency stationary ICE in emergency situations. [§60.4211(f)(1)]
  - b) The permittee may operate the emergency stationary ICE for any combination of the purposes specified in §60.4211(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by §60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph. [§60.4211(f)(2)]
    - i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [§60.4211(f)(2)(i)]
    - ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3. [§60.4211(f)(2)(ii)]

- iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of five percent or greater below standard voltage or frequency.  
[§60.4211(f)(2)(iii)]
  - c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in §60.4211(f)(2). Except as provided in §60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [§60.4211(f)(3)]
    - i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:  
[§60.4211(f)(3)(i)]
      - (1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [§60.4211(f)(3)(i)(A)]
      - (2) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [§60.4211(f)(3)(i)(B)]
      - (3) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. [§60.4211(f)(3)(i)(C)]
      - (4) The power is provided only to the facility itself or to support the local transmission and distribution system. [§60.4211(f)(3)(i)(D)]
      - (5) The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the permittee. [§60.4211(f)(3)(i)(E)]
5. If the permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance as follows: [§60.4211(g)]
- a) The permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within one year of startup, or within one year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within one year after you change emission-related settings in a way that is not permitted by the manufacturer. [§60.4211(g)(2)]

**Testing Requirements:**

The permittee shall refer to §60.4212 for testing requirements applicable to the engine under NSPS IIII.

**General Provisions:**

The permittee shall refer to Table 8 to NSPS IIII for NSPS A applicability.

**Notifications, Reporting, and Recordkeeping:**

1. The permittee is not required to submit an initial notification. [§60.4214(b)]
2. If the emergency stationary CI ICE operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), the permittee shall submit an annual report according to the following requirements: [§60.4214(d)]
  - a) The report shall contain the following information: [§60.4214(d)(1)]
    - i) Company name and address where the engine is located. [§60.4214(d)(1)(i)]
    - ii) Date of the report and beginning and ending dates of the reporting period. [§60.4214(d)(1)(ii)]
    - iii) Engine site rating and model year. [§60.4214(d)(1)(iii)]
    - iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place. [§60.4214(d)(1)(iv)]
    - v) Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii). [§60.4214(d)(1)(v)]
    - vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii). [§60.4214(d)(1)(vi)]
    - vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report shall also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. [§60.4214(d)(1)(vii)]
  - b) The first annual report shall cover the calendar year 2015 and shall be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year shall be submitted no later than March 31 of the following calendar year. [§60.4214(d)(2)]
  - c) The annual report shall be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form specific to NSPS IIII is not available in CEDRI at the time that the report is due, the written report shall be submitted to the Administrator at the appropriate address listed in §60.4. [§60.4214(d)(3)]
3. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources’ personnel upon request.
4. The permittee shall report any deviations from the requirements of this permit condition in the annual monitoring report and compliance certification required by Section V of this permit.

<b>PERMIT CONDITION 005</b>	
10 CSR 10-6.060 Construction Permits Required	
Construction Permit 092011-001, Issued September 1, 2011	
<b>Emission Unit</b>	<b>Description</b>
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers
P40	CO <sub>2</sub> Fermentation Scrubber
P70	DDGS Cooler

**Emission Limitations:**

Special Condition 2.D: The permittee shall not discharge Acrolein (107-02-8) into the atmosphere from the following stacks in excess of the listed amounts:

Stack	Description	Limit (lb/hr)
P40	CO2 Fermentation Scrubber	0.29
P70	DDGS Cooler	0.16
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers	0.48

**Compliance Demonstration**

1. The installation has conducted initial stack testing to demonstrate compliance. The stack testing results are provided in the following table:

Emission Source	Description	Stack Test Date	Stack Test Result	Production Data
P40	CO <sub>2</sub> Fermentation Scrubber	June 2013	0.002 lb/hr	107.9 gpm anhydrous ethanol
P70	DDGS Cooler Cyclone	May 2012	0.0041 lb/hr	58,416,059 gpy denatured ethanol
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers	May 2012	0.006 lb/hr	50,952,931 gpy denatured ethanol

2. The permittee shall conduct repeat performance testing no later than five years after the date of the most recent stack test. During repeat performance testing:
- a) All applicable operating parameters (i.e. water flowrate, pH level, amount of additives, temperature, pressure, etc.) at which the stack tests are conducted shall be used to set the appropriate values used in actual operations of the scrubber and thermal oxidizer.
  - b) The operating parameters to be evaluated shall be determined and agreed upon by the Air Pollution Control Program’s Enforcement Section and the permittee before the start of the performance tests.
  - c) The operating parameters shall be recorded on recordkeeping sheet(s) and be made available to Department of Natural Resources’ personnel upon request. The frequency of the recordkeeping is dependent upon the parameters being kept and should be determined and agreed upon by the Air Pollution Control Program’s Enforcement Section and the permittee before the start of the performance tests.
  - d) The performance tests for P40 CO<sub>2</sub> Fermentation Scrubber shall be conducted for one of the following time periods:
    - i) A complete cycle, defined as the time period between transferring the contents of one fermenter to the beer well and transferring the contents of the next fermenter; or
    - ii) During period(s) of representative emissions. The permittee shall submit, in the proposed test plan, sufficient data to determine the point(s) of representative emissions. The representative emissions are the average of three points identified as highest airflow, lowest airflow, and mid-range airflow going up or down the pressure curve. Testing will consist of three 1-hour runs at each of the three points. These points must be approved by the Air Pollution Control Program’s compliance/assistance section prior to conducting the tests. If sufficient data is not supplied supporting these representative emission points, the permittee must conduct testing for a complete cycle.
  - e) A completed Proposed Test Plan Form must 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.

- f) 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 must 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.
- g) 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.
- h) If the performance testing indicates that any of the emission limitations 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 must demonstrate how the permittee will reduce the acrolein emissions to comply with the emission limitations. The permittee shall implement any such plan immediately upon its approval by the Director.

**Recordkeeping and Reporting:**

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

<b>PERMIT CONDITION 006</b>	
10 CSR 10-6.060 Construction Permits Required	
Construction Permit 092011-001, Issued September 1, 2011	
<b>Emission Unit</b>	<b>Description</b>
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers
P15	Grain Unloading
P30	Hammermill
P40	CO2 Fermentation Scrubber
P70	DDGS Cooler
P90	DDGS Loadout

**Emission Limitations:**

Special Condition 2.E: The permittee shall not discharge PM<sub>10</sub> into the atmosphere from the following stacks in excess of the listed amounts:

<b>Stack</b>	<b>Description</b>	<b>Limit (lb/hr)</b>
P40	CO <sub>2</sub> Fermentation Scrubber	0.17
P15	Grain Unloading	1.67
P30	Hammermill	0.86
P70	DDGS Cooler	1.11
P90	DDGS Loadout	0.39
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers	6.81

**Compliance Demonstration:**

The installation conducted stack testing to demonstrate compliance. The stack testing results are provided in the following table:

Emission Source	Description	May 2012 Stack Test Result	Production Data
P40	CO <sub>2</sub> Fermentation Scrubber	0.07 lb/hr	58,416,059 gpy denatured ethanol
P70	DDGS Cooler Cyclone	0.64 lb/hr	58,416,059 gpy denatured ethanol
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers	4.29 lb/hr	50,952,931 gpy denatured ethanol
P15	Grain Unloading	0.054 lb/hr	43,459,052 gpy denatured ethanol
P30	Hammermill	0.072 lb/hr	55,390,558 gpy denatured ethanol
P90	DDGS Loadout	0.187 lb/hr	44,114,259 gpy denatured ethanol

**Recordkeeping and Reporting:**

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

<b>PERMIT CONDITION 007</b> 10 CSR 10-6.060 Construction Permits Required Construction Permit 092011-001, Issued September 1, 2011	
Emission Unit	Description
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers

**Emission Limitations:**

- Special Condition 2.F: The permittee shall not discharge NO<sub>x</sub> into the atmosphere from P10 Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers in excess of 19.0 lb/hr.
- Special Condition 2.G: The permittee shall not discharge SO<sub>x</sub> into the atmosphere from P10 Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers in excess of 9.03 lb/hr.

**Compliance Demonstration**

- The installation conducted stack testing to demonstrate compliance. The stack testing results are provided in the following table:

Emission Source	Description	Pollutant	May 2012 Stack Test Result	Production Data
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers	NO <sub>x</sub>	17.67 lb/hr	4,029 MMBtu/day
		SO <sub>x</sub>	0.57 lb/hr	50,952,931 gpy denatured ethanol

- The permittee shall conduct repeat performance testing to determine the NO<sub>x</sub> emission rate from P10 no later than five years after the date of the most recent stack test. During repeat performance testing:
  - All applicable operating parameters (i.e. water flowrate, pH level, amount of additives, temperature, pressure, etc.) at which the stack tests are conducted shall be used to set the appropriate values used in actual operations of the scrubber and thermal oxidizer.
  - The operating parameters to be evaluated shall be determined and agreed upon by the Air Pollution Control Program's Enforcement Section and the permittee before the start of the performance tests.
  - The operating parameters shall be recorded on recordkeeping sheet(s) and be made available to Department of Natural Resources' personnel upon request. The frequency of the recordkeeping is dependent upon the parameters being kept and should be determined and agreed upon by the

Air Pollution Control Program’s Enforcement Section and the permittee before the start of the performance tests.

- d) A completed Proposed Test Plan Form must 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.
- e) 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 must 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.
- f) 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.
- g) If the performance testing indicates that any of the emission limitations 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 must demonstrate how the permittee will reduce the acrolein emissions to comply with the emission limitations. The permittee shall implement any such plan immediately upon its approval by the Director.

**Recordkeeping and Reporting:**

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

<b>PERMIT CONDITION 008</b>	
10 CSR 10-6.060 Construction Permits Required	
Construction Permit 092011-001, Issued September 1, 2011	
<b>Emission Unit</b>	<b>Description</b>
P40	CO <sub>2</sub> Fermentation Scrubber

**Operational Limitations:**

1. Special Condition 5.A: P40 CO<sub>2</sub> Fermentation Scrubber shall be in use at all times when the four fermentation tanks and beer well are in operation and shall be operated and maintained in accordance with the manufacturer’s specifications.
2. Special Condition 5.B: P40 CO<sub>2</sub> Fermentation Scrubber shall be equipped with a gauge or meter that indicates the pressure drop across the scrubber. P40 CO<sub>2</sub> Fermentation 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.
3. Special Condition 5.E. The permittee shall use ammonium bisulfite in amounts sufficient to meet emission limits. The addition rate of ammonium bisulfite shall be maintained within a range of 0.36 to 0.44 gallons per hour.

**Monitoring/Recordkeeping:**

1. Special Condition 5.C: The permittee shall monitor and record the operating pressure drop across the scrubber at least once every 24 hours while the equipment is in operation. The operating pressure drop shall be maintained within a range of 18 – 22 in H<sub>2</sub>O.

2. Special Condition 5.D: The permittee shall monitor and record the water flow rate through the scrubber at least once every 24 hours while the equipment is in operation. The flow rate shall be maintained within a range of 40.5 – 49.5 gallons per minute.
3. Special Condition 5.F: The permittee shall maintain an operating and maintenance log for the scrubber using Attachment H or an equivalent form approved by the Air Pollution Control Program 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.
4. Special Condition 15.A: The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

**Reporting:**

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

<b>PERMIT CONDITION 009</b>	
10 CSR 10-6.060 Construction Permits Required	
Construction Permit 092011-001, Issued September 1, 2011	
<b>Emission Unit</b>	<b>Description</b>
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers

**Operational Limitation:**

Special Condition 6.A: P10 Thermal Oxidizer shall be in use at all times when P10 Heat Recovery Boiler/DDGS Dryers or P50 Distillation Operations are in operation or any time that regulated VOC or HAP emissions are possible. The thermal oxidizer shall be operated and maintained in accordance with the manufacturer's specifications.

**Monitoring/Recordkeeping:**

1. Special Condition 6.B: The operating temperature of the thermal oxidizer shall be continuously monitored and recorded during operation. The operating temperature of the thermal oxidizer shall be maintained on a rolling three-hour average at no more than 50°F below the average temperature of the oxidizer recorded during the most recent compliant performance test. The acceptable temperature range may be reestablished by performing a new set of emission tests. The thermal oxidizer shall be operated at all times during operation of P10 Heat Recovery Boiler/DDGS Dryers and P50 Distillation Operations or any time that a regulated VOC or HAP emissions is possible. 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.
2. Special Condition 6.C: The permittee shall maintain an operating and maintenance log for the thermal oxidizer using Attachment H or an equivalent form approved by the Air Pollution Control Program which shall include the following:
  - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions;
  - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.; and

- 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.
- 3. Special Condition 15.A: The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

**Performance Testing:**

- 1. Special Condition 13.B: All applicable operating parameters (i.e. water flowrate, pH level, amount of additives, temperature, pressure, etc.) at which the stack tests are conducted shall be used to set the appropriate values used in actual operations of the following control device:
  - a) P10 Thermal Oxidizer
- 2. Special Condition 13.C: The operating parameters shall be determined and agreed upon by the Air Pollution Control Program's Enforcement Section and the permittee before the start of the performance tests.
- 3. Special Condition 13.D: The operating parameters shall be recorded on recordkeeping sheets and be made available to Department of Natural Resources' personnel upon request. The frequency of the recordkeeping is dependent upon the parameters being kept and should be determined and agreed upon by the Air Pollution Control Program's Enforcement Section and the permittee before the start of the performance tests.
- 4. Special Condition 13.G: These tests shall be performed within 60 days after achieving the maximum production rate of the installation, but not later than 180 days after initial start-up for commercial operation and shall be conducted in accordance with the stack test procedures outlined in Special Condition 14 of Construction Permit 092011-001.
- 5. Special Condition 14.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 shall be approved by the Director prior to conducting the required emission testing.
- 6. Special Condition 14.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.
- 7. Special Condition 14.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.

**Reporting:**

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

<b>PERMIT CONDITION 010</b>	
10 CSR 10-6.060 Construction Permits Required	
Construction Permit 092011-001, Issued September 1, 2011	
Emission Unit	Description
P15	Grain Unloading
P30	Hammermill
P70	DDGS Cooler
P90	DDGS Loadout

**Operational Limitations:**

1. Special Condition 7.A: The baghouses listed below shall be in use at all times when the associated equipment is in operation:

Control Device	Emission Unit	Description
C15	P15	Grain Unloading
C30	P30	Hammermill
C90	P90	DDGS Loadout
C70	P70	DDGS Cooler

2. Special Condition 7.B: The baghouses and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer’s specifications. The baghouses 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 7.C: Replacement bags for all baghouses 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 7.D: The installation shall monitor and record the operating pressure drop across each baghouse at least once in every 24 hour period when the associated equipment is in operation. 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.
2. Special Condition 7.E: The installation shall inspect the baghouse(s) at least once every six months. The permittee shall maintain a maintenance log for each baghouse using Attachment H or an equivalent form approved by the Air Pollution Control Program. The maintenance log shall indicate:
  - 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.
3. Special Condition 15.A: The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources’ personnel upon request.

**Reporting:**

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

<b>PERMIT CONDITION 011</b> 10 CSR 10-6.060 Construction Permits Required Construction Permit 092011-001, Issued September 1, 2011	
Emission Unit	Description
EP22, F55, & F56	Truck and Rail VRS Loadout Flare

**Operational Limitation:**

1. Special Condition 8.A: EP22 Truck VRS Loadout Flare shall be in use at all times during denatured ethanol truck loadout. The flare shall be operated and maintained in accordance with the manufacturer's specifications.
2. Special Condition 12.A: The permittee shall not operate EP22 Truck VRS Loadout Flare more than 4,380 hours per 12-month rolling period.

**Monitoring/Recordkeeping:**

1. Special Condition 8.D: The permittee shall maintain an operating and maintenance log using Attachment H or an equivalent form approved by the Air Pollution Control Program for the flares which shall include the following:
  - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions;
  - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.; and
  - 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 12.C: The permittee shall keep a record of the monthly hours of operation. Attachment I or an equivalent form approved by the Air Pollution Control Program shall be used for this purpose.
3. Special Condition 15.A: The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

**Reporting:**

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

<b>PERMIT CONDITION 012</b> 10 CSR 10-6.060 Construction Permits Required Construction Permit 092011-001, Issued September 1, 2011	
Emission Unit	Description
EP11	Biomethanator Flare
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers

**Operational Limitations:**

1. Special Condition 8.B: The EP11 Biomethanator Flare shall be in use at all times when P10 Heat Recovery Boiler/DDGS Dryers are not in operation to control the biomethanator offgases. During

- times when P10 Heat Recovery Boiler/DDGS Dryers are in operation, the biomethanator off-gases shall be vented to either P10 Heat Recovery Boiler/DDGS Dryers or the EP11 Biomethanator Flare.
2. Special Condition 8.C: The flare shall be operated and maintained in accordance with the manufacturer's specifications.
  3. Special Condition 12.A: The permittee shall not operate EP11 Biomethanator Flare more than 4,380 hours per 12-month rolling period.

**Monitoring/Recordkeeping:**

1. Special Condition 8.D: The permittee shall maintain an operating and maintenance log using Attachment H or an equivalent form approved by the Air Pollution Control Program for the flare which shall include the following:
  - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions;
  - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.; and
  - 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 12.C: The permittee shall keep a record of the monthly hours of operation. Attachment I or an equivalent form approved by the Air Pollution Control Program shall be used for this purpose.
3. Special Condition 15.A: The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

**Reporting:**

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

<b>PERMIT CONDITION 013</b> 10 CSR 10-6.060 Construction Permits Required Construction Permit 092011-001, Issued September 1, 2011	
<b>Emission Unit</b>	<b>Description</b>
P80	Cooling Tower

**Operational Limitations:**

1. Special Condition 9.A: P80 Cooling Tower shall be operated and maintained in accordance with the manufacturer's specifications. Manufacturer's specifications shall be kept on site and made readily available to Department of Natural Resources' employees.
2. Special Condition 9.B: The cooling water circulation rate shall not exceed 1,500,000 gal/hr.
3. Special Condition 9.C: The drift loss from the towers shall not exceed 0.005 percent of the water circulation rate. Verification of drift loss shall be by manufacturer's guaranteed drift loss and shall be kept on site and made readily available to Department of Natural Resources' employees upon request.
4. Special Condition 9.D: The total dissolved solids (TDS) concentration in the circulated cooling water shall not exceed a TDS concentration of 2,500 ppm per sampling event. A TDS sample shall be collected at least once per calendar month.

**Recordkeeping/Reporting:**

1. Special Condition 15.A: The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
2. The permittee shall report any deviations from the requirements of this permit condition in the annual monitoring report and compliance certification required by Section V of this permit.

<b>PERMIT CONDITION 014</b>	
10 CSR 10-6.060 Construction Permits Required Construction Permit 092011-001, Issued September 1, 2011	
<b>Emission Unit</b>	<b>Description</b>
P110	Emergency Fire Pump
P120	Emergency Generator

**Operational Limitation:**

Special Condition 12.B: The permittee shall not operate P110 Emergency Fire Pump and P120 Emergency Generator more than 300 hours, each, per 12-month rolling period.

**Monitoring/Recordkeeping:**

1. Special Condition 12.C: The permittee shall keep a record of the monthly hours of operation. Attachment I or an equivalent form approved by the Air Pollution Control Program shall be used for this purpose.
2. Special Condition 15.A: The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

**Reporting:**

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

<b>PERMIT CONDITION 015</b>	
10 CSR 10-6.060 Construction Permits Required Construction Permit 092011-001, Issued September 1, 2011	
<b>Emission Unit</b>	<b>Description</b>
F100	Truck Traffic on Haul Roads

**Operational Limitations:**

1. Special Condition 4.A: The silt loading shall not exceed 1.0 g/m<sup>2</sup> on the haul roads at this installation.
2. Special Condition 4.B: The permittee shall develop, maintain, and implement a Fugitive Dust Control Plan (FDCP) that will control emissions from haul roads. The FDCP shall at a minimum include control and/or cleaning methods and establish a documentation procedure for the control and/or cleaning methods.
3. Special Condition 4.C: Compliance with the silt loading limitation shall be demonstrated by conducting a series (as defined in Appendix C of AP-42) of silt loading performance tests at least once per quarter during the first year after September 1, 2011. If the average silt loading is less than

75 percent of the limit in four consecutive tests, test frequency shall be reduced to once per calendar year.

- a) If at the time of permit issuance the permittee has already progressed to conducting silt loading performance tests once per calendar year, the permittee may continue conducting silt loading performance test once per calendar year.
- 4. Special Condition 4.D: The silt loading tests shall be representative (as defined in Appendix C of AP-42) and conducted in accordance with ASTM-C-136 method. Testing cannot be done immediately after cleaning. If there is a regular cleaning schedule, testing shall be done at the midpoint of the cleaning cycle (i.e. if cleaning is scheduled every week, then testing must be done at the midpoint of seven days).

**Monitoring/Recordkeeping:**

- 1. Special Condition 4.E: For each day truck traffic occurs, the permittee shall conduct a survey of the plant property and haul roads to determine if visible fugitive emissions are being generated and if these emissions are leaving the plant property. Documentation of all corrective actions and daily surveys shall be maintained using Attachment K or an equivalent form approved by the Air Pollution Control Program. The permittee shall water haul roads whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.
- 2. Special Condition 15.A: The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

**Reporting:**

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

<b>PERMIT CONDITION 016</b> 10 CSR 10-6.075 Maximum Achievable Control Technology Regulations 40 CFR Part 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	
<b>Emission Unit</b>	<b>Description</b>
P120	Emergency Generator

**Operational Limitation:**

As a new stationary RICE located at an area source, P120 Emergency Generator shall meet the requirements of MACT ZZZZ by meeting the requirements of NSPS IIII. No further requirements apply under MACT ZZZZ. [§63.6590(c)]

**Reporting:**

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

<b>PERMIT CONDITION 017</b>	
10 CSR 10-6.075 Maximum Achievable Control Technology Regulations 40 CFR Part 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	
Emission Unit	Description
P110	Emergency Fire Pump

**Emission Limitations:**

The permittee shall comply with the requirements in Table 2d to MACT ZZZZ. [§63.6603(a)]

**Table 2d to MACT ZZZZ**

<b>The permittee shall meet the following requirements<sup>6</sup>, except during periods of startup . . .</b>
a. Change oil and filter every 500 hours of operation or annually, whichever comes first; <sup>7</sup>
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

**Fuel Requirements:**

Beginning January 1, 2015, if the existing emergency CI stationary RICE operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), the permittee shall use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. [§63.6604(b)]

**Monitoring, Installation, Collection, Operation, and Maintenance Requirements:**

1. The permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan which shall provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [§63.6625(e)]
2. The permittee shall install a non-resettable hour meter if one is not already installed. [§63.6625(f)]
3. The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Table 2d to MACT ZZZZ apply. [§63.6625(h)]
4. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Table 2d to MACT ZZZZ. The oil analysis shall be performed at the same

<sup>6</sup> If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of MACT ZZZZ, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources shall report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

<sup>7</sup> Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of MACT ZZZZ.

frequency specified for changing the oil in Table 2d to MACT ZZZZ. The analysis program shall at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee shall change the oil within two business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee shall change the oil within two business days or before commencing operation, whichever is later. The permittee shall keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program shall be part of the maintenance plan for the engine. [§63.6625(i)]

**Continuous Compliance Requirements:**

1. The permittee shall be in compliance with the emission limitations and operating limitations in MACT ZZZZ that apply at all times. [§63.6605(a)]
2. At all times the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.6605(b)]
3. The permittee shall demonstrate continuous compliance with each operating limitation in Table 2d to MACT ZZZZ that applies according to methods specified in Table 6 to MACT ZZZZ. [§63.6640(a)]
4. The permittee shall also report each instance in which the permittee did not meet the requirements in Table 8 to MACT that apply. [§63.6640(e)]
5. The permittee shall operate the emergency stationary RICE according to the requirements in §63.6640(f)(1) through (4). In order for the engine to be considered an emergency stationary RICE under MACT ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in nonemergency situations for 50 hours per year, as described in §63.6640(f)(1) through (4), is prohibited. If the permittee does not operate the engine according to the requirements in §63.6640(f)(1) through (4), the engine will not be considered an emergency engine under MACT ZZZZ and shall meet all requirements for non-emergency engines. [§63.6640(f)]
  - a) There is no time limit on the use of emergency stationary RICE in emergency situations. [§63.6640(f)(1)]
  - b) The permittee may operate the emergency stationary RICE for any combination of the purposes specified in §63.6640(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by §63.6640(f)(3) and (4) counts as part of the 100 hours per calendar year allowed by this paragraph. [§63.6640(f)(2)]
    - i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for

- maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. [§63.6640(f)(2)(i)]
- ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3. [§63.6640(f)(2)(ii)]
  - iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of five percent or greater below standard voltage or frequency. [§63.6640(f)(2)(iii)]
- c) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in §63.6640(f)(2). Except as provided in §63.6640(f)(4)(i) and (ii), the 50 hours per year for nonemergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [§63.6640(f)(4)]
- i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or nonemergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system. [§63.6640(f)(4)(i)]
  - ii) The 50 hours per year for nonemergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [§63.6640(f)(4)(ii)]
    - (1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator. [§63.6640(f)(4)(ii)(A)]
    - (2) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [§63.6640(f)(4)(ii)(B)]
    - (3) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. [§63.6640(f)(4)(ii)(C)]
    - (4) The power is provided only to the facility itself or to support the local transmission and distribution system. [§63.6640(f)(4)(ii)(D)]
    - (5) The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the permittee. [§63.6640(f)(4)(ii)(E)]

**Table 6 to MACT ZZZZ**

**The permittee shall demonstrate continuous compliance by . . .**

- |   |
|---|
| i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or  |
| ii. Develop and follow their own maintenance plan which shall provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. |

**Recordkeeping:**

1. The permittee shall keep the following records: [§63.6655(a)]
  - a) Records of the occurrence and duration of each malfunction of the engine. [§63.6655(a)(2)]
  - b) Records of all required maintenance performed on the engine. [§63.6655(a)(4)]
  - c) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore the malfunctioning engine to its normal or usual manner of operation. [§63.6655(a)(5)]
2. The permittee shall keep the records required in Table 6 of MACT ZZZZ to show continuous compliance with each emission or operating limitation that applies. [§63.6655(d)]
3. The permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to their maintenance plan. [§63.6655(e)]
4. The permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the permittee shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [§63.6655(f)]

**General Provisions:**

The permittee shall refer to Table 8 to MACT ZZZZ for MACT A applicability. [§63.6665]

**Reporting:**

1. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of MACT ZZZZ, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources shall report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. [Footnote 2 to Table 2d to MACT ZZZZ]
2. If the emergency stationary RICE operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), the permittee shall submit an annual report according to the following requirements: [§63.6650(h)]
  - a) The report shall contain the following information: [§63.6650(h)(1)]
    - i) Company name and address where the engine is located. [§63.6650(h)(1)(i)]

- ii) Date of the report and beginning and ending dates of the reporting period. [§63.6650(h)(1)(ii)]
  - iii) Engine site rating and model year. [§63.6650(h)(1)(iii)]
  - iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place. [§63.6650(h)(1)(iv)]
  - v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii). [§63.6650(h)(1)(v)]
  - vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii). [§63.6650(h)(1)(vi)]
  - vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report shall also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. [§63.6650(h)(1)(vii)]
  - viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period. [§63.6650(h)(1)(viii)]
  - ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken. [§63.6650(h)(1)(ix)]
- b) The first annual report shall cover the calendar year 2015 and shall be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year shall be submitted no later than March 31 of the following calendar year. [§63.6650(h)(2)]
- c) The annual report shall be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form specific to MACT ZZZZ is not available in CEDRI at the time that the report is due, the written report shall be submitted to the Administrator at the appropriate address listed in §63.13. [§63.6650(h)(3)]
3. The permittee shall report any deviations from the requirements of this permit condition in the annual monitoring report and compliance certification required by Section V of this permit.

<b>PERMIT CONDITION 018</b>	
10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds <sup>8</sup>	
10 CSR 10-6.261 Control of Sulfur Dioxide Emissions <sup>9</sup>	
Emission Unit	Description
P110	Emergency Fire Pump
P120	Emergency Generator

**Emission Limitation:**

The permittee shall not cause or permit the emission into the atmosphere of gases containing more than

<sup>8</sup> 10 CSR 10-6.260 is federally enforceable only as it was rescinded from the Code of State Regulations on November 30, 2015, but remains in Missouri’s currently approved State Implementation Plan.

<sup>9</sup> 10 CSR 10-6.261 is currently state enforceable only as it is not contained within Missouri’s currently approved State Implementation Plan.

500 ppmv of SO<sub>2</sub> or more than 35 mg/m<sup>3</sup> of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three-hour time period. [10 CSR 10-6.260(3)(A)2]<sup>10</sup>

**Operational Limitation:**

The permittee shall limit the fuel sulfur content to 8,812 ppm. [10 CSR 10-6.261(3)(C)]

**Recordkeeping and Reporting:**

1. The permittee shall — [10 CSR 10-6.261(4)(A)]
  - a) Report any excess emissions other than startup, shutdown, and malfunction excess emissions already required to be reported under 10 CSR 10-6.050 to the Director for each calendar quarter within 30 days following the end of the quarter. In all cases, the notification shall be a written report and shall include, at a minimum, the following: [10 CSR 10-6.261(4)(A)1]
    - i) Name and location of source; [10 CSR 10-6.261(4)(A)1.A]
    - ii) Name and telephone number of person responsible for the source; [10 CSR 10-6.261(4)(A)1.B]
    - iii) Identity and description of the equipment involved; [10 CSR 10-6.261(4)(A)1.C]
    - iv) Time and duration of the period of SO<sub>2</sub> excess emissions; [10 CSR 10-6.261(4)(A)1.D]
    - v) Type of activity; [10 CSR 10-6.261(4)(A)1.E]
    - vi) Estimate of the magnitude of the SO<sub>2</sub> excess emissions expressed in the units of the applicable emission control regulation and the operating data and calculations used in estimating the magnitude; [10 CSR 10-6.261(4)(A)1.F]
    - vii) Measures taken to mitigate the extent and duration of the SO<sub>2</sub> excess emissions; and [10 CSR 10-6.261(4)(A)1.G]
    - viii) Measures taken to remedy the situation which caused the SO<sub>2</sub> excess emissions and the measures taken or planned to prevent the recurrence of these situations; [10 CSR 10-6.261(4)(A)1.H]
  - b) Maintain a list of modifications to the source's operating procedures or other routine procedures instituted to prevent or minimize the occurrence of any excess SO<sub>2</sub> emissions; [10 CSR 10-6.261(4)(A)2]
  - c) Maintain a record of data, calculations, results, records, and reports from any fuel deliveries, and/or fuel sampling tests; and [10 CSR 10-6.261(4)(A)3]
2. If using fuel delivery records for compliance, the permittee shall maintain the fuel supplier certification information to certify all fuel deliveries. Bills of lading and/or other fuel delivery documentation containing the following information for all fuel purchases or deliveries are deemed acceptable to comply with the requirements of this rule: [10 CSR 10-6.261(4)(C)]
  - a) The name, address, and contact information of the fuel supplier; [10 CSR 10-6.261(4)(C)1]
  - b) The type of fuel (bituminous or subbituminous coal, diesel, #2 fuel oil, etc.); [10 CSR 10-6.261(4)(C)2]
  - c) The moisture content of the coal (if applicable); [10 CSR 10-6.261(4)(C)3]
  - d) The sulfur content or maximum sulfur content expressed in percent sulfur by weight or in ppm sulfur; and [10 CSR 10-6.261(4)(C)4]
  - e) The heating value of the fuel. [10 CSR 10-6.261(4)(C)5]

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<sup>10</sup> The permittee is in compliance with this requirement as AP-42 Table 3.3-1 (October 1996) indicates that engines of less than 600 hp emit 0.29 lb/MMBtu SO<sub>x</sub>. Using an F factor of 10,320 wscf/MMBtu from NSPS Appendix A Method 19 Table 19-1 and a conversion factor of 1.660E-7 lb/scf per ppmv from NSPS Appendix A Method 19, 0.29 lb/MMBtu SO<sub>x</sub> converts to 169 ppmv SO<sub>2</sub>.

3. If using fuel sampling and analysis for compliance, the permittee shall determine the sulfur weight percent, or equivalent, of the fuel(s). [10 CSR 10-6.261(4)(D)]
4. All required reports and records shall be retained on-site for a minimum of five years and made available within five business days upon written or electronic request by the Director. [10 CSR 10-6.261(4)(F)]
5. The permittee shall furnish the director all data necessary to determine compliance status. [10 CSR 10-6.261(4)(G)]
6. The permittee shall report any deviations from the requirements of this permit condition in annual monitoring report and compliance certification required by Section V of this permit.

**PERMIT CONDITION 019**

10 CSR 10-6.070 New Source Performance Regulations

40 CFR Part 60, Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After November 7, 2006

**Emission Unit and Description**

NSPS VVa applies to all equipment in VOC service between Fermenters #1, #2, #3, and #4 (TF-3101, TF-3102, TF-3103, and TF-3104) and the 190 Proof Day Tank (TF-8301) - See the schematic in Attachment L

**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 60.482-10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485a. [§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, 60.482-3a, 60.482-5a, 60.482-6a, 60.482-7a, 60.482-8a, and 60.482-10a as provided in §60.484a. [§60.482-1a(c)(1)]
4. If the Director makes a determination that a means of emission limitation is at least equivalent to the requirements of §§60.482-2a, 60.482-3a, 60.482-5a, 60.482-6a, 60.482-7a, 60.482-8a, or 60.482-10a, 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 60.482-10a 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 hr/yr is excluded from the requirements of §§60.482-2a through 60.482-10a 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 (percent of hours during year)	Equivalent monitoring frequency time in use		
	Monthly	Quarterly	Semiannually
0 to <25	Quarterly	Annually	Annually
25 to <50	Quarterly	Semiannually	Annually
50 to <75	Bimonthly	Three quarters	Semiannually
75 to 100	Monthly	Quarterly	Semiannually

8. Pumps and valves that are shared among two or more batch process units 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 semiannually (*i.e.*, once every two quarters), monitoring events shall be separated by at least 60 calendar days. [§60.482-1a(f)(3)(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)(3)(iii)]
  - d) When monitoring is conducted annually, monitoring events shall be separated by at least 120 calendar days. [§60.482-1a(f)(3)(iv)]

**Light Liquid Service Pump Standards:**

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 must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in §60.482-1a(c) and (f) 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. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of §60.482-2a(a), provided the following requirements are met: [§60.482-2a(d)]
  - a) Each dual mechanical seal system is: [§60.482-2a(d)(1)]
    - i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or [§60.482-2a(d)(1)(i)]
    - ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482-10a; or [§60.482-2a(d)(1)(ii)]
    - iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere. [§60.482-2a(d)(1)(iii)]
  - b) The barrier fluid system is in heavy liquid service or is not in VOC service. [§60.482-2a(d)(2)]
  - c) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both. [§60.482-2a(d)(3)]
  - d) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals. [§60.482-2a(d)(4)(i)]
  - e) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the permittee shall follow one of the following procedures prior to the next required inspection: [§60.482-2a(d)(4)(ii)]
    - i) Monitor the pump within five days as specified in §60.485a(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected. [§60.482-2a(d)(4)(ii)(A)]
    - ii) Designate the visual indications of liquids dripping as a leak. [§60.482-2a(d)(4)(ii)(B)]
  - f) Each sensor as described in §60.482-2a(d)(3) is checked daily or is equipped with an audible alarm. [§60.482-2a(d)(5)(i)]
  - g) The permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. [§60.482-2a(d)(5)(ii)]
  - h) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in §60.482-2a(d)(5)(ii), a leak is detected. [§60.482-2a(d)(5)(iii)]
  - i) When a leak is detected pursuant to §60.482-2a(d)(4)(ii)(A), it shall be repaired as specified in §60.482-2a(c). [§60.482-2a(d)(6)(i)]
  - j) A leak detected pursuant to §60.482-2a(d)(5)(iii) shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor. [§60.482-2a(d)(6)(ii)]
  - k) A designated leak pursuant to §60.482-2a(d)(4)(ii)(B) shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping. [§60.482-2a(d)(6)(iii)]

8. 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), (c), and (d) 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 Director. [§60.482-2a(e)(3)]
9. If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of §60.482-10a, it is exempt from §60.482-2a(a) through (e). [§60.482-2a(f)]
10. 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) and (d)(4) through (6) 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)]
11. 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) and (d)(4), and the daily requirements of §60.482-2a(d)(5), provided that each pump is visually inspected as often as practicable and at least monthly. [§60.482-2a(h)]

**Compressor Standards:**

1. Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482-1a(c) and §60.482-3a(h), (i), and (j). [§60.482-3a(a)]
2. Each compressor seal system as required in §60.482-3a(a) shall be: [§60.482-3a(b)]
  - a) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or [§60.482-3a(b)(1)]
  - b) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482-10a; or [§60.482-3a(b)(2)]
  - c) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere. [§60.482-3a(b)(3)]
3. The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. [§60.482-3a(c)]
4. Each barrier fluid system as described in §60.482-3a(a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. [§60.482-3a(d)]
5. Each sensor as required in §60.482-3a(d) shall be checked daily or shall be equipped with an audible alarm. [§60.482-3a(e)(1)]
6. The permittee shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. [§60.482-3a(e)(2)]

7. If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under §60.482-3a(e)(2), a leak is detected. [§60.482-3a(f)]
8. 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. [§60.482-3a(g)(1)]
9. A first attempt at repair shall be made no later than five calendar days after each leak is detected. [§60.482-3a(g)(2)]
10. A compressor is exempt from the requirements of §60.482-3a(a) and (b), if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of §60.482-10a, except as provided in §60.482-3a(i). [§60.482-3a(h)]
11. Any compressor that is designated, as described in §60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of §60.482-3a(a) through (h) if the compressor: [§60.482-3a(i)]
  - a) 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 [§60.482-3a(i)(1)]
  - b) Is tested for compliance with §60.482-3a(i)(1) initially upon designation, annually, and at other times requested by the Director. [§60.482-3a(i)(2)]
12. Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of §60.14 or §60.15 is exempt from §60.482-3a(a) through (e) and (h), provided the permittee demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of §60.482-3a(a) through (e) and (h). [§60.482-3a(j)]

**Gas/Vapor Service Pressure Relief Device Standards:**

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 routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in §60.482-10a is exempted from the requirements of §60.482-4a(a) and (b). [§60.482-4a(c)]
5. 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)]
6. 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)]

**Sampling Connection System Standards:**

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) Capture and transport all the purged process fluid to a control device that complies with the requirements of §60.482-10a. [§60.482-5a(b)(4)(iii)]
    - iv) 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 Part 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)]

**Open-ended Valve (or Line) Standards:**

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)]

**Gas/Vapor/Light Liquid Service Valve Standards:**

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 Director. [§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 either: [§60.482-7a(h)(2)]
    - i) Becomes an affected facility through §60.14 or §60.15 and was constructed on or before January 5, 1981; or [§60.482-7a(h)(2)(i)]
    - ii) 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)]

**Heavy Liquid Service Pumps, Valves, and Connectors and Light or Heavy Liquid Service Pressure Relief Device Standards:**

1. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, the permittee shall follow either one of the following procedures: [§60.482-8a(a)]
  - a) The permittee shall monitor the equipment within five days by the method specified in §60.485a(b) and shall comply with the requirements of §60.482-8a(b) through (d). [§60.482-8a(a)(1)]
  - b) The permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak within five calendar days of detection. [§60.482-8a(a)(2)]
2. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [§60.482-8a(b)]
3. 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. [§60.482-8a(c)(1)]
4. The first attempt at repair shall be made no later than five calendar days after each leak is detected. [§60.482-8a(c)(2)]
5. First attempts at repair include, but are not limited to, the best practices described under §60.482-2a(c)(2) and 60.482-7a(e). [§60.482-8a(d)]

**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 shall 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 valves and connectors will be allowed if: [§60.482-9a(c)]
  - a) The permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and [§60.482-9a(c)(1)]
  - b) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482-10a. [§60.482-9a(c)(2)]
4. 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)]
5. 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)]
6. 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)]

**Closed Vent Systems and Control Device Standards:**

1. Closed vent systems and control devices used to comply with provisions of NSPS VVa shall comply with the provisions of §60.482-10a. [§60.482-10a(a)]
2. Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, whichever is less stringent. [§60.482-10a(b)]
3. Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, on a dry basis, corrected to three percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816°C. [§60.482-10a(c)]
4. Flares used to comply with NSPS VVa shall comply with the requirements of §60.18. [§60.482-10a(d)]
5. The permittee shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. [§60.482-10a(e)]
6. Except as provided in §60.482-10a(i) through (k), each closed vent system shall be inspected according to the procedures and schedule specified in §60.482-10a(f)(1) and (2). [§60.482-10a(f)]
  - a) If the vapor collection system or closed vent system is constructed of hard-piping, the permittee shall comply with the following requirements: [§60.482-10a(f)(1)]

- i) Conduct an initial inspection according to the procedures in §60.485a(b); and [§60.482-10a(f)(1)(i)]
    - ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§60.482-10a(f)(1)(ii)]
  - b) If the vapor collection system or closed vent system is constructed of ductwork, the permittee shall: [§60.482-10a(f)(2)]
    - i) Conduct an initial inspection according to the procedures in §60.485a(b); and [§60.482-10a(f)(2)(i)]
    - ii) Conduct annual inspections according to the procedures in §60.485a(b). [§60.482-10a(f)(2)(ii)]
7. Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, shall be repaired as soon as practicable except as provided in §60.482-10a(h). [§60.482-10a(g)]
  - a) A first attempt at repair shall be made no later than five calendar days after the leak is detected. [§60.482-10a(g)(1)]
  - b) Repair shall be completed no later than 15 calendar days after the leak is detected. [§60.482-10a(g)(2)]
8. Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown. [§60.482-10a(h)]
9. If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of §60.482-10a(f)(1)(i) and (f)(2). [§60.482-10a(i)]
10. Any parts of the closed vent system that are designated, as described in §60.482-10a(l)(1), as unsafe to inspect are exempt from the inspection requirements of §60.482-10a(f)(1)(i) and (f)(2) if they comply with the following requirements: [§60.482-10a(j)]
  - a) The permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with §60.482-10a(f)(1)(i) or (f)(2); and [§60.482-10a(j)(1)]
  - b) The permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times. [§60.482-10a(j)(2)]
11. Any parts of the closed vent system that are designated, as described in §60.482-10a(l)(2), as difficult to inspect are exempt from the inspection requirements of §60.482-10a(f)(1)(i) and (f)(2) if they comply with the following requirements: [§60.482-10a(k)]
  - a) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than two meters above a support surface; and [§60.482-10a(k)(1)]
  - b) The process unit within which the closed vent system is located becomes an affected facility through §§60.14 or 60.15, or the permittee designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and [§60.482-10a(k)(2)]
  - c) The permittee has a written plan that requires inspection of the equipment at least once every five years. A closed vent system is exempt from inspection if it is operated under a vacuum. [§60.482-10a(k)(3)]
12. The permittee shall record the following information: [§60.482-10a(l)]
  - a) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment. [§60.482-10a(l)(1)]

- b) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment. [§60.482-10a(l)(2)]
  - c) For each inspection during which a leak is detected, a record of the information specified in §60.486a(c). [§60.482-10a(l)(3)]
  - d) For each inspection conducted in accordance with §60.485a(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§60.482-10a(l)(4)]
  - e) For each visual inspection conducted in accordance with §60.482-10a(f)(1)(ii) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§60.482-10a(l)(5)]
13. Closed vent systems and control devices used to comply with provisions of NSPS VVa shall be operated at all times when emissions may be vented to them. [§60.482-10a(m)]

**Alternative Standards for Valves—allowable percentage of valves leaking:**

The permittee may elect to comply with alternative standards for the allowable percentage of leaking valves as specified in §60.483-1a.

**Alternative Standards for Valves—skip period leak detection and repair:**

The permittee may elect to comply with one of the alternative standards for LDAR as specified in §60.483-2a.

**Equivalence of Means of Emission Limitation:**

The permittee may apply to the EPA for determination of equivalence for any means of emission limitation that achieves an equivalent reduction in VOC emissions as specified in §60.484a.

**Test Methods and Procedures:**

The permittee shall follow the test methods and procedures specified in §60.485a.

**Recordkeeping:**

1. The permittee shall comply with the recordkeeping requirements of §60.486a. [§60.486a(a)(1)]
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, 60.482-3a, 60.482-7a, 60.482-8a, 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, 60.482-3a, 60.482-7a, 60.482-8a, 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, 60.482-3a, 60.482-7a, 60.482-8a, and 60.483-2a, the following information shall be recorded in a log and shall be kept for two 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 effected 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 the design requirements for closed vent systems and control devices described in §60.482-10a shall be recorded and kept in a readily accessible location: [§60.486a(d)]
  - a) Detailed schematics, design specifications, and piping and instrumentation diagrams. [§60.486a(d)(1)]
  - b) The dates and descriptions of any changes in the design specifications. [§60.486a(d)(2)]
  - c) A description of the parameter or parameters monitored, as required in §60.482-10a(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring. [§60.486a(d)(3)]
  - d) Periods when the closed vent systems and control devices required in §§60.482-2a, 60.482-3a, 60.482-4a, and 60.482-5a are not operated as designed, including periods when a flare pilot light does not have a flame. [§60.486a(d)(4)]
  - e) Dates of startups and shutdowns of the closed vent systems and control devices required in §§60.482-2a, 60.482-3a, 60.482-4a, and 60.482-5a. [§60.486a(d)(5)]
6. The following information pertaining to all equipment subject to the requirements in §§60.482-1a to 60.482-10a 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), 60.482-3a(i), 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), §60.482-3a(i), or §60.482-7a(f) shall be signed by the owner or operator. 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), 60.482-3a(i), 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)(iii)]
  - 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)(iv)]
  - l) Records of each release from a pressure relief device subject to §60.482-4a. [§60.486a(e)(10)]
7. 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, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector. [§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)]
8. 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)]
9. 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 60.482-3a(e)(2) 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)]
- 10. The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in §60.480a(d): [§60.486a(i)]
  - a) An analysis demonstrating the design capacity of the affected facility, [§60.486a(i)(1)]
  - b) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and [§60.486a(i)(2)]
  - c) An analysis demonstrating that equipment is not in VOC service. [§60.486a(i)(3)]
- 11. 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)]
- 12. The provisions of §60.7(b) and (d) do not apply to affected facilities subject to NSPS VVa. [§60.486a(k)]
- 13. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

**Reporting:**

- 1. The permittee shall submit semiannual reports to the Director beginning six months after the initial startup date. [§60.487a(a)]
- 2. The initial semiannual report to the Director 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)]
  - d) Number of compressors subject to the requirements of §60.482-3a, excluding those compressors designated for no detectable emissions under the provisions of §60.482-3a(i) and those compressors complying with §60.482-3a(h). [§60.487a(b)(4)]
- 3. All semiannual reports to the Director 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 semiannual 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) Number of compressors for which leaks were detected as described in §60.482-3a(f), [§60.487a(c)(2)(v)]
    - vi) Number of compressors for which leaks were not repaired as required in §60.482-3a(g)(1), and [§60.487a(c)(2)(vi)]
    - vii) 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 semiannual reporting period. [§60.487a(c)(3)]
- d) Revisions to items reported according to §60.487a(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 Director 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 Director 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 annual monitoring report and compliance certification required by Section V of this permit.

**PERMIT CONDITION 020**

10 CSR 10-6.070 New Source Performance Regulations

40 CFR Part 60, Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006

**Emission Unit and Description**

NSPS VV applies to all equipment in VOC service between the 190 Proof Day Tank (TF-8301) and Ethanol Loadout - See schematic in Attachment M

**General Standards:**

- 1. The permittee shall demonstrate compliance with the requirements of §§60.482-1 through 60.482-10 or §60.480(e) for all equipment within 180 days of initial startup. [§60.482-1(a)]
- 2. Compliance with §§60.482-1 to 60.482-10 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485. [§60.482-1(b)]
- 3. The permittee may request a determination of equivalence of a means of emission limitation to the requirements of §§60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8, and 60.482-10 as provided in §60.484. [§60.482-1(c)(1)]
- 4. If the Director makes a determination that a means of emission limitation is at least equivalent to the requirements of §§60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8, or 60.482-10, the permittee shall comply with the requirements of that determination. [§60.482-1(c)(2)]
- 5. Equipment that is in vacuum service is excluded from the requirements of §§60.482-2 to 60.482-10 if it is identified as required in §60.486(e)(5). [§60.482-1(d)]
- 6. Equipment that the permittee designates as being in VOC service less than 300 hr/yr is excluded from the requirements of §§60.482-2 through 60.482-10 if it is identified as required in §60.486(e)(6) and it meets any of the following conditions: [§60.482-1(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. [§60.482-1(e)(1)]

- b) The equipment is in VOC service only during process malfunctions or other emergencies. [§60.482-1(e)(2)]
- c) The equipment is backup equipment that is in VOC service only when the primary equipment is out of service. [§60.482-1(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 and valves at the frequency specified in the following table instead of monitoring as specified in §§60.482-2, 60.482-7, and 60.483-2: [§60.482-1(f)(1)]

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

- 8. Pumps and valves that are shared among two or more batch process units may be monitored at the frequencies specified in §60.482-1(f)(1), provided the operating time of all such process units is considered. [§60.482-1(f)(2)]
- 9. The monitoring frequencies specified in §60.482-1(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: [§60.482-1(f)(3)]
  - a) When monitoring is conducted quarterly, monitoring events shall be separated by at least 30 calendar days. [§60.482-1(f)(3)(i)]
  - b) When monitoring is conducted semiannually ( i.e. , once every two quarters), monitoring events must be separated by at least 60 calendar days. [§60.482-1(f)(3)(ii)]
  - c) When monitoring is conducted in three quarters per year, monitoring events shall be separated by at least 90 calendar days. [§60.482-1(f)(3)(iii)]
  - d) When monitoring is conducted annually, monitoring events must be separated by at least 120 calendar days. [§60.482-1(f)(3)(iv)]

**Light Liquid Service Pump Standards:**

- 1. Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §60.485(b), except as provided in §60.482-1(c) and (f) and §60.482-2(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 §60.482-1(c) and (f) and §60.482-2(d), (e), and (f). [§60.482-2(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 §60.482-1(f). [§60.482-2(a)(2)]
- 3. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [§60.482-2(b)(1)]
- 4. If there are indications of liquids dripping from the pump seal, the permittee shall follow the procedure specified in either §60.482-2(b)(2)(i) or (ii). This requirement does not apply to a pump that was monitored after a previous weekly inspection if the instrument reading for that monitoring event was less than 10,000 ppm and the pump was not repaired since that monitoring event. [§60.482-2(b)(2)]

- a) Monitor the pump within five days as specified in §60.485(b). If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. The leak shall be repaired using the procedures in §60.482-2(c). [§60.482-2(b)(2)(i)]
- b) Designate the visual indications of liquids dripping as a leak, and repair the leak within 15 days of detection by eliminating the visual indications of liquids dripping. [§60.482-2(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 §60.482-9. [§60.482-2(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. [§60.482-2(c)(2)]
  - a) Tightening the packing gland nuts; [§60.482-2(c)(2)(i)]
  - b) Ensuring that the seal flush is operating at design pressure and temperature. [§60.482-2(c)(2)(ii)]
7. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of §60.482-2(a), provided the following requirements are met: [§60.482-2(d)]
  - a) Each dual mechanical seal system is—[§60.482-2(d)(1)]
    - i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or [§60.482-2(d)(1)(i)]
    - ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482-10; or [§60.482-2(d)(1)(ii)]
    - iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere. [§60.482-2(d)(1)(iii)]
  - b) The barrier fluid system is in heavy liquid service or is not in VOC service. [§60.482-2(d)(2)]
  - c) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both. [§60.482-2(d)(3)]
  - d) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals. [§60.482-2(d)(4)(i)]
  - e) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the permittee shall follow one of the following procedures: [§60.482-2(d)(4)(ii)]
    - i) Monitor the pump within five days as specified in §60.485(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [§60.482-2(d)(4)(ii)(A)]
    - ii) Designate the visual indications of liquids dripping as a leak. [§60.482-2(d)(4)(ii)(B)]
  - f) Each sensor as described in §60.482-2(d)(3) is checked daily or is equipped with an audible alarm. [§60.482-2(d)(5)(i)]
  - g) The permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. [§60.482-2(d)(5)(ii)]
  - h) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in §60.482-2(d)(5)(ii), a leak is detected. [§60.482-2(d)(5)(iii)]
  - i) When a leak is detected pursuant to §60.482-2(d)(4)(ii)(A), it shall be repaired as specified in §60.482-2(c). [§60.482-2(d)(6)(i)]
  - j) A leak detected pursuant to §60.482-2(d)(5)(iii) shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor. [§60.482-2(d)(6)(ii)]
  - k) A designated leak pursuant to §60.482-2(d)(4)(ii)(B) shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping. [§60.482-2(d)(6)(iii)]

8. Any pump that is designated, as described in §60.486(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 §60.482-2(a), (c), and (d) if the pump: [§60.482-2(e)]
  - a) Has no externally actuated shaft penetrating the pump housing, [§60.482-2(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 §60.485(c), and [§60.482-2(e)(2)]
  - c) Is tested for compliance with §60.482-2(e)(2) initially upon designation, annually, and at other times requested by the Director. [§60.482-2(e)(3)]
9. If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of §60.482-10, it is exempt from §60.482-2(a) through (e). [§60.482-2(f)]
10. Any pump that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of §60.482-2(a) and (d)(4) through (6) if: [§60.482-2(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 §60.482-2(a); and [§60.482-2(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 §60.482-2(c) if a leak is detected. [§60.482-2(g)(2)]
11. Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of §60.482-2(a)(2) and (d)(4), and the daily requirements of §60.482-2(d)(5), provided that each pump is visually inspected as often as practicable and at least monthly. [§60.482-2(h)]

**Compressor Standards:**

1. Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482-1(c) and §60.482-3(h), (i), and (j). [§60.482-3(a)]
2. Each compressor seal system as required in §60.482-3(a) shall be: [§60.482-3(b)]
  - a) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or [§60.482-3(b)(1)]
  - b) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482-10; or [§60.482-3(b)(2)]
  - c) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere. [§60.482-3(b)(3)]
3. The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. [§60.482-3(c)]
4. Each barrier fluid system as described in §60.482-3(a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. [§60.482-3(d)]
5. Each sensor as required in §60.482-3(d) shall be checked daily or shall be equipped with an audible alarm. [§60.482-3(e)(1)]
6. The permittee shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. [§60.482-3(e)(2)]

7. If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under §60.482-3(e)(2), a leak is detected. [§60.482-3(f)]
8. 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 §60.482-9. [§60.482-3(g)(1)]
9. A first attempt at repair shall be made no later than five calendar days after each leak is detected. [§60.482-3(g)(2)]
10. A compressor is exempt from the requirements of §60.482-3(a) and (b), if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of §60.482-10, except as provided in §60.482-3(i). [§60.482-3(h)]
11. Any compressor that is designated, as described in §60.486(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 §60.482-3(a) through (h) if the compressor: [§60.482-3(i)]
  - a) 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 §60.485(c); and [§60.482-3(i)(1)]
  - b) Is tested for compliance with §60.482-3(i)(1) initially upon designation, annually, and at other times requested by the Director. [§60.482-3(i)(2)]
12. Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of §60.14 or §60.15 is exempt from §60.482-3(a) through (e) and (h), provided the permittee demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of §60.482-3(a) through (e) and (h). [§60.482-3(j)]

**Gas/Vapor Service Pressure Relief Device Standards:**

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 §60.485(c). [§60.482-4(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 §60.482-9. [§60.482-4(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 §60.485(c). [§60.482-4(b)(2)]
4. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in §60.482-10 is exempted from the requirements of §60.482-4(a) and (b). [§60.482-4(c)]
5. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of §60.482-4(a) and (b), provided the permittee complies with the requirements in §60.482-4(d)(2). [§60.482-4(d)(1)]
6. 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 §60.482-9. [§60.482-4(d)(2)]

**Sampling Connection System Standards:**

1. Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482-1(c) and §60.482-5(c). [§60.482-5(a)]
2. Each closed-purge, closed-loop, or closed-vent system as required in §60.482-5(a) shall comply with the following requirements: [§60.482-5(b)]
  - a) Gases displaced during filling of the sample container are not required to be collected or captured. [§60.482-5(b)(1)]
  - b) Containers that are part of a closed-purge system shall be covered or closed when not being filled or emptied. [§60.482-5(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. [§60.482-5(b)(3)]
  - d) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet one of the following requirements: [§60.482-5(b)(4)]
    - i) Return the purged process fluid directly to the process line. [§60.482-5(b)(4)(i)]
    - ii) Collect and recycle the purged process fluid to a process. [§60.482-5(b)(4)(ii)]
    - iii) Capture and transport all the purged process fluid to a control device that complies with the requirements of §60.482-10. [§60.482-5(b)(4)(iii)]
    - iv) Collect, store, and transport the purged process fluid to any of the following systems or facilities: [§60.482-5(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; [§60.482-5(b)(4)(iv)(A)]
      - (2) A treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265, or 266; [§60.482-5(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; [§60.482-5(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 [§60.482-5(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. [§60.482-5(b)(4)(iv)(E)]
3. In situ sampling systems and sampling systems without purges are exempt from the requirements of §60.482-5(a) and (b). [§60.482-5(c)]

**Open-ended Valve (or Line) Standards:**

1. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1(c) and §60.482-6(d) and (e). [§60.482-6(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. [§60.482-6(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. [§60.482-6(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 §60.482-6(a) at all other times. [§60.482-6(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 §60.482-6(a), (b) and (c). [§60.482-6(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 §60.482-6(a) through (c) are exempt from the requirements of §60.482-6(a) through (c). [§60.482-6(e)]

**Gas/Vapor/Light Liquid Service Valve Standards:**

1. Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485(b) and shall comply with §60.482-7(b) through (e), except as provided in §60.482-7(f), (g), and (h), §60.482-1(c) and (f), and §§60.483-1 and 60.483-2. [§60.482-7(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 §60.482-7(a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in §60.482-7(f), (g), and (h), §60.482-1(c), and §§60.483-1 and 60.483-2. [§60.482-7(a)(2)]
  - a) Monitor the valve as in §60.482-7(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. [§60.482-7(a)(2)(i)]
  - b) If the valves on the process unit are monitored in accordance with §60.483-1 or §60.483-2, count the new valve as leaking when calculating the percentage of valves leaking as described in §60.483-2(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. [§60.482-7(a)(2)(ii)]
3. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [§60.482-7(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. [§60.482-7(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. [§60.482-7(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. [§60.482-7(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 §60.482-9. [§60.482-7(d)(1)]
8. A first attempt at repair shall be made no later than five calendar days after each leak is detected. [§60.482-7(d)(2)]
9. First attempts at repair include, but are not limited to, the following best practices where practicable: [§60.482-7(e)]
  - a) Tightening of bonnet bolts; [§60.482-7(e)(1)]
  - b) Replacement of bonnet bolts; [§60.482-7(e)(2)]
  - c) Tightening of packing gland nuts; [§60.482-7(e)(3)]
  - d) Injection of lubricant into lubricated packing. [§60.482-7(e)(4)]

10. Any valve that is designated, as described in §60.486(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 §60.482-7(a) if the valve: [§60.482-7(f)]
  - a) Has no external actuating mechanism in contact with the process fluid, [§60.482-7(f)(1)]
  - b) Is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485(c), and [§60.482-7(f)(2)]
  - c) Is tested for compliance with §60.482-7(f)(2) initially upon designation, annually, and at other times requested by the Director. [§60.482-7(f)(3)]
11. Any valve that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of §60.482-7(a) if: [§60.482-7(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 §60.482-7(a), and [§60.482-7(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. [§60.482-7(g)(2)]
12. Any valve that is designated, as described in §60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of §60.482-7(a) if: [§60.482-7(h)]
  - a) The permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than two meters above a support surface. [§60.482-7(h)(1)]
  - b) The process unit within which the valve is located either becomes an affected facility through §60.14 or §60.15 or the permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and [§60.482-7(h)(2)]
  - c) The permittee follows a written plan that requires monitoring of the valve at least once per calendar year. [§60.482-7(h)(3)]

**Heavy Liquid Service Pumps, Valves, and Connectors and Light or Heavy Liquid Service Pressure Relief Device Standards:**

1. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the permittee shall follow either one of the following procedures: [§60.482-8(a)]
  - a) The permittee shall monitor the equipment within five days by the method specified in §60.485(b) and shall comply with the requirements of §60.482-8(b) through (d). [§60.482-8(a)(1)]
  - b) The permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak within five calendar days of detection. [§60.482-8(a)(2)]
2. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [§60.482-8(b)]
3. 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 §60.482-9. [§60.482-8(c)(1)]
4. The first attempt at repair shall be made no later than five calendar days after each leak is detected. [§60.482-8(c)(2)]
5. First attempts at repair include, but are not limited to, the best practices described under §§60.482-2(c)(2) and 60.482-7(e). [§60.482-8(d)]

**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. [§60.482-9(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. [§60.482-9(b)]
  3. Delay of repair for valves will be allowed if: [§60.482-9(c)]
    - a) The permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and [§60.482-9(c)(1)]
    - b) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482-10. [§60.482-9(c)(2)]
  4. Delay of repair for pumps will be allowed if: [§60.482-9(d)]
    - a) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and [§60.482-9(d)(1)]
    - b) Repair is completed as soon as practicable, but not later than six months after the leak was detected. [§60.482-9(d)(2)]
  5. 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. [§60.482-9(e)]
  6. When delay of repair is allowed for a leaking pump or valve that remains in service, the pump or valve 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. [§60.482-9(f)]

**Closed Vent Systems and Control Device Standards:**

1. Closed vent systems and control devices used to comply with provisions of NSPS VV shall comply with the provisions of §60.482-10. [§60.482-10(a)]
2. Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, whichever is less stringent. [§60.482-10(b)]
3. Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, on a dry basis, corrected to three percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C. [§60.482-10(c)]
4. Flares used to comply with NSPS VV shall comply with the requirements of §60.18. [§60.482-10(d)]
5. The permittee shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. [§60.482-10(e)]
6. Except as provided in §60.482-10(i) through (k), each closed vent system shall be inspected according to the following procedures and schedule: [§60.482-10(f)]
  - a) If the vapor collection system or closed vent system is constructed of hard-piping, the permittee shall comply with the following requirements: [§60.482-10(f)(1)]
    - i) Conduct an initial inspection according to the procedures in §60.485(b); and [§60.482-10(f)(1)(i)]
    - ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§60.482-10(f)(1)(ii)]

- b) If the vapor collection system or closed vent system is constructed of ductwork, the permittee shall: [§60.482-10(f)(2)]
  - i) Conduct an initial inspection according to the procedures in §60.485(b); and [§60.482-10(f)(2)(i)]
  - ii) Conduct annual inspections according to the procedures in §60.485(b). [§60.482-10(f)(2)(ii)]
7. Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, shall be repaired as soon as practicable except as provided in §60.482-10(h). [§60.482-10(g)]
  - a) A first attempt at repair shall be made no later than five calendar days after the leak is detected. [§60.482-10(g)(1)]
  - b) Repair shall be completed no later than 15 calendar days after the leak is detected. [§60.482-10(g)(2)]
8. Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown. [§60.482-10(h)]
9. If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of §60.482-10(f)(1)(i) and (f)(2). [§60.482-10(i)]
10. Any parts of the closed vent system that are designated, as described in §60.482-10(l)(1), as unsafe to inspect are exempt from the inspection requirements of §60.482-10(f)(1)(i) and (f)(2) if they comply with the following requirements: [§60.482-10(j)]
  - a) The permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with §60.482-10(f)(1)(i) or (f)(2); and [§60.482-10(j)(1)]
  - b) The permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times. [§60.482-10(j)(2)]
11. Any parts of the closed vent system that are designated, as described in §60.482-10(l)(2), as difficult to inspect are exempt from the inspection requirements of §60.482-10(f)(1)(i) and (f)(2) if they comply with the following requirements: [§60.482-10(k)]
  - a) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than two meters above a support surface; and [§60.482-10(k)(1)]
  - b) The process unit within which the closed vent system is located becomes an affected facility through §§60.14 or 60.15, or the permittee designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and [§60.482-10(k)(2)]
  - c) The permittee has a written plan that requires inspection of the equipment at least once every five years. A closed vent system is exempt from inspection if it is operated under a vacuum. [§60.482-10(k)(3)]
12. The permittee shall record the following information: [§60.482-10(l)]
  - a) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment. [§60.482-10(l)(1)]
  - b) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment. [§60.482-10(l)(2)]
  - c) For each inspection during which a leak is detected, a record of the information specified in §60.486(c). [§60.482-10(l)(3)]

- d) For each inspection conducted in accordance with §60.485(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§60.482-10(l)(4)]
  - e) For each visual inspection conducted in accordance with §60.482-10(f)(1)(ii) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§60.482-10(l)(5)]
13. Closed vent systems and control devices used to comply with provisions of NSPS VV shall be operated at all times when emissions may be vented to them. [§60.482-10(m)]

**Alternative Standards for Valves—allowable percentage of valves leaking:**

The permittee may elect to comply with an alternative standard for allowable percentage of leaking valves as specified in §60.483-1.

**Alternative Standards for Valves—skip period leak detection and repair:**

The permittee may elect to comply with one of the alternative standards for leak detection and repair as specified in §60.483-2.

**Equivalence of Means of Emission Limitation:**

The permittee may apply to the EPA for determination of equivalence for any means of emission limitation that achieves an equivalent reduction in VOC emissions as specified in §60.484.

**Test Methods and Procedures:**

The permittee shall follow the test methods and procedures as specified in §60.485.

**Recordkeeping:**

1. The permittee shall comply with the recordkeeping requirements of §60.486. [§60.486(a)(1)]
2. When each leak is detected as specified in §§60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply: [§60.486(b)]
  - a) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [§60.486(b)(1)]
  - b) The identification on a valve may be removed after it has been monitored for two successive months as specified in §60.482-7(c) and no leak has been detected during those two months. [§60.486(b)(2)]
  - c) The identification on equipment except on a valve, may be removed after it has been repaired. [§60.486(b)(3)]
3. When each leak is detected as specified in §§60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log and shall be kept for two years in a readily accessible location: [§60.486(c)]
  - a) The instrument and operator identification numbers and the equipment identification number. [§60.486(c)(1)]
  - b) The date the leak was detected and the dates of each attempt to repair the leak. [§60.486(c)(2)]
  - c) Repair methods applied in each attempt to repair the leak. [§60.486(c)(3)]
  - d) “Above 10,000” if the maximum instrument reading measured by the methods specified in §60.485(a) after each repair attempt is equal to or greater than 10,000 ppm. [§60.486(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. [§60.486(c)(5)]

- f) The signature of the responsible official whose decision it was that repair could not be effected without a process shutdown. [§60.486(c)(6)]
- g) The expected date of successful repair of the leak if a leak is not repaired within 15 days. [§60.486(c)(7)]
- h) Dates of process unit shutdowns that occur while the equipment is unrepaired. [§60.486(c)(8)]
- i) The date of successful repair of the leak. [§60.486(c)(9)]
4. The following information pertaining to the design requirements for closed vent systems and control devices described in §60.482–10 shall be recorded and kept in a readily accessible location: [§60.486(d)]
  - a) Detailed schematics, design specifications, and piping and instrumentation diagrams. [§60.486(d)(1)]
  - b) The dates and descriptions of any changes in the design specifications. [§60.486(d)(2)]
  - c) A description of the parameter or parameters monitored, as required in §60.482–10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring. [§60.486(d)(3)]
  - d) Periods when the closed vent systems and control devices required in §§60.482–2, 60.482–3, 60.482–4, and 60.482–5 are not operated as designed, including periods when a flare pilot light does not have a flame. [§60.486(d)(4)]
  - e) Dates of startups and shutdowns of the closed vent systems and control devices required in §§60.482–2, 60.482–3, 60.482–4, and 60.482–5. [§60.486(d)(5)]
5. The following information pertaining to all equipment subject to the requirements in §§60.482–1 to 60.482–10 shall be recorded in a log that is kept in a readily accessible location: [§60.486(e)]
  - a) A list of identification numbers for equipment subject to the requirements of this subpart. [§60.486(e)(1)]
  - b) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482–2(e), 60.482–3(i) and 60.482–7(f). [§60.486(e)(2)(i)]
  - c) The designation of equipment as subject to the requirements of §60.482–2(e), §60.482–3(i), or §60.482–7(f) shall be signed by the responsible official. Alternatively, the permittee may establish a mechanism with their permitting authority that satisfies this requirement. [§60.486(e)(2)(ii)]
  - d) A list of equipment identification numbers for pressure relief devices required to comply with §60.482–4. [§60.486(e)(3)]
  - e) The dates of each compliance test as required in §§60.482–2(e), 60.482–3(i), 60.482–4, and 60.482–7(f). [§60.486(e)(4)(i)]
  - f) The background level measured during each compliance test. [§60.486(e)(4)(ii)]
  - g) The maximum instrument reading measured at the equipment during each compliance test. [§60.486(e)(4)(iii)]
  - h) A list of identification numbers for equipment in vacuum service. [§60.486(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 §60.482–1(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. [§60.486(e)(6)]
6. The following information pertaining to all valves subject to the requirements of §60.482–7(g) and (h) and to all pumps subject to the requirements of §60.482–2(g) shall be recorded in a log that is kept in a readily accessible location: [§60.486(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. [§60.486(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. [§60.486(f)(2)]
7. The following information shall be recorded for valves complying with §60.483–2: [§60.486(g)]
  - a) A schedule of monitoring. [§60.486(g)(1)]
  - b) The percent of valves found leaking during each monitoring period. [§60.486(g)(2)]
8. The following information shall be recorded in a log that is kept in a readily accessible location: [§60.486(h)]
  - a) Design criterion required in §§60.482–2(d)(5) and 60.482–3(e)(2) and explanation of the design criterion; and [§60.486(h)(1)]
  - b) Any changes to this criterion and the reasons for the changes. [§60.486(h)(2)]
9. The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in §60.480(d): [§60.486(i)]
  - a) An analysis demonstrating the design capacity of the affected facility, [§60.486(i)(1)]
  - b) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and [§60.486(i)(2)]
  - c) An analysis demonstrating that equipment is not in VOC service. [§60.486(i)(3)]
10. 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. [§60.486(j)]
11. The provisions of §60.7 (b) and (d) do not apply to affected facilities subject to NSPS VV. [§60.486(k)]
12. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

**Reporting:**

1. The permittee shall submit semiannual reports to the Director beginning six months after the initial startup date. [§60.487(a)]
2. The initial semiannual report to the Director shall include the following information: [§60.487(b)]
  - a) Process unit identification. [§60.487(b)(1)]
  - b) Number of valves subject to the requirements of §60.482–7, excluding those valves designated for no detectable emissions under the provisions of §60.482–7(f). [§60.487(b)(2)]
  - c) Number of pumps subject to the requirements of §60.482–2, excluding those pumps designated for no detectable emissions under the provisions of §60.482–2(e) and those pumps complying with §60.482–2(f). [§60.487(b)(3)]
  - d) Number of compressors subject to the requirements of §60.482–3, excluding those compressors designated for no detectable emissions under the provisions of §60.482–3(i) and those compressors complying with §60.482–3(h). [§60.487(b)(4)]
3. All semiannual reports to the Director shall include the following information, summarized from the information in §60.486: [§60.487(c)]
  - a) Process unit identification. [§60.487(c)(1)]
  - b) For each month during the semiannual reporting period, [§60.487(c)(2)]

- i) Number of valves for which leaks were detected as described in §60.482–7(b) or §60.483–2, [§60.487(c)(2)(i)]
- ii) Number of valves for which leaks were not repaired as required in §60.482–7(d)(1), [§60.487(c)(2)(ii)]
- iii) Number of pumps for which leaks were detected as described in §60.482–2(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii), [§60.487(c)(2)(iii)]
- iv) Number of pumps for which leaks were not repaired as required in §60.482–2(c)(1) and (d)(6), [§60.487(c)(2)(iv)]
- v) Number of compressors for which leaks were detected as described in §60.482–3(f), [§60.487(c)(2)(v)]
- vi) Number of compressors for which leaks were not repaired as required in §60.482–3(g)(1), and [§60.487(c)(2)(vi)]
- vii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible. [§60.487(c)(2)(vii)]
- c) Dates of process unit shutdowns which occurred within the semiannual reporting period. [§60.487(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. [§60.487(c)(4)]
4. If the permittee elects to comply with the provisions of §§60.483–1 or 60.483–2, the permittee shall notify the Director of the alternative standard selected 90 days before implementing either of the provisions. [§60.487(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 VV except that the permittee shall notify the Director of the schedule for the initial performance tests at least 30 days before the initial performance tests. [§60.487(e)]
6. The requirements of §60.487(a) through (c) remain in force until and unless EPA, in delegating enforcement authority to a state under §111(c) of the Act, 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 §60.487(a) through (c), provided that they comply with the requirements established by the state. [§60.487(f)]
7. The permittee shall report any deviations from the requirements of this permit condition in the annual monitoring report and compliance certification required by Section V of this permit.

## IV. Core Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the CFR, CSR, and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect on the date of permit issuance.

### **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(5)(B)1.A(III)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065(5)(C)(1)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources' personnel upon request. [10 CSR 10-6.065(5)(C)(1)]

### **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 submit a full EIQ for the 2014, 2017, and 2020 reporting years. In the interim years the installation may submit a Reduced Reporting Form; however, if the installation's emissions increase or decrease by more than five tons when compared to their last submitted full EIQ, the installation shall submit a full EIQ rather than a Reduced Reporting Form.
5. In addition to the EIQ submittal schedule outlined above, any permit issued under 10 CSR 10-6.060 §5 or §6 triggers a requirement that a full EIQ be submitted in the first full calendar year after the permitted equipment initially operates.
6. The fees shall be payable to the Department of Natural Resources and shall be accompanied by the emissions report.
7. 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.
8. 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.
9. 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 to occur 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 to occur 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 PM 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 K 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 10-6.045 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 a residential premise 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. The permittee 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 the permittee 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 §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 10-6.165 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.

#### **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 10-6.250 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 promulgated pursuant to 40 CFR Part 82, Subpart G - Significant New Alternatives Policy Program. *Federal Only - 40 CFR Part 82*

**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(5)(E)2 and (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(5)(C)1 and (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) April 1st for monitoring which covers the January through December time period.
    - ii) Exception. Monitoring requirements which require reporting more frequently than 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.
  - 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(5)(C)1 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 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(5)(C)1 and (6)(C)1.D Risk Management Plan Under §112(r)**

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:

1. June 21, 1999;
2. Three years after the date on which a regulated substance is first listed under §68.130; or
3. The date on which a regulated substance is first present above a threshold quantity in a process.

#### **10 CSR 10-6.065(5)(C)1.A 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 under this rule.
6. Failure to comply with the limitations and conditions that qualify the installation for an Intermediate permit make the installation subject to the provisions of 10 CSR 10-6.065(6) and enforcement action for operating without a valid Part 70 operating permit.

#### **10 CSR 10-6.065(5)(C)1.C Reasonably Anticipated Operating Scenarios**

None.

**10 CSR 10-6.065(5)(B)4, (5)(C)1, (5)(C)3, (6)(C)3.B, (6)(C)3.D, and (6)(C)3.E(I) – (III) and (V) – (VI) 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 semiannually (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 the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and exceedances 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(5)(C)1 and (6)(C)7 Emergency Provisions**

1. An emergency or upset as defined in 10 CSR 10-6.065(5)(C)1 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(5)(C)5 Off-Permit Changes**

1. Except as noted below, the permittee may make any change in its permitted installation's operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. 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 a Title I modification; Please Note: Changes at the installation which affect the emission limitation(s) classifying the installation as an intermediate source (add additional equipment to the recordkeeping requirements, increase the emissions above major source level) do not qualify for off-permit changes.
  - 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 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; and
  - 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.

#### **10 CSR 10-6.020(2)(R)34 Responsible Official**

The application utilized in the preparation of this permit was signed by Mr. Tyler Edmundson, Plant 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(5)(E)4 and (6)(E)6.A(III)(a) – (c) Reopening-Permit for Cause**

This permit may be reopened for cause if:

1. 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,
2. Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
  - a) The permit has a remaining term of less than three years;
  - b) The effective date of the requirement is later than the date on which the permit is due to expire;  
or
  - c) 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,
3. 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(5)(E)1.A 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 N contains a list of abbreviations and acronyms used throughout this permit.

**ATTACHMENT A**  
**VOC Tracking Sheet**

Emission Source	Description	Monthly Throughput	VOC Emission Factor	Emission Factor Source	VOC Emissions <sup>11</sup> (tons)
F60	Equipment Leaks – Gas Valves	# components	1.25 lb/component/month <sup>12</sup>	Protocol for Equipment Leak Emission Estimates (November 1995)	
	Equipment Leaks – Light Liquid Valves	# components	1.04 lb/component/month <sup>13</sup>		
	Equipment Leaks – Light Liquid/Gas Pumps	# components	9.93 lb/component/month <sup>14</sup>		
EP22	Truck VRS Loadout Flare	MMBtu	0.063 lb/MMBtu	AP-42 Table 13.5-2, less methane	
EP11	Biomethanator Flare	MMBtu			
F55	Rail Loadout	gallons denatured ethanol	$5.8898 \times 10^{-4}$ lb/gal	AP-42 Section 5.2.2 Eq. 1 <sup>15</sup>	
F56	Truck Loadout	gallons denatured ethanol	$2.4121 \times 10^{-4}$ lb/gal	AP-42 Section 5.2.2 Eq. 1 <sup>16</sup>	
T61	750,000 gallon Tank	gallons denatured ethanol	$4.4323 \times 10^{-6}$ lb/gal	TANKS 4.0.9d working loss	
T62	750,000 gallon Tank	gallons denatured ethanol			
T64	100,000 gallon Tank	gallons denaturant			$7.5467 \times 10^{-6}$ lb/gal
T65	100,000 gallon Tank	gallons 190 proof ethanol			$8.9046 \times 10^{-6}$ lb/gal
T63	100,000 gallon Tank	gallons 200 proof ethanol			$8.9046 \times 10^{-6}$ lb/gal
P40	CO <sub>2</sub> Fermentation Scrubber	gallons anhydrous ethanol	$1.2048 \times 10^{-3}$ lb/gal	June 2013 Stack Test	
P10	TO/Distillation/Heat Recovery Boiler/DDGS Dryers	MMscf	5.5 lb/MMscf	AP-42 Table 1.4-2	
P70	DDGS Cooler Cyclone	gallons denatured ethanol	$1.1547 \times 10^{-4}$ lb/gal	May 2012 Stack Test	

<sup>11</sup> VOC Emissions (tons) = Monthly Throughput x VOC Emission Factor x 0.0005 lb/ton

<sup>12</sup> Includes 87% control for NSPS VV/VVa LDAR requirements.

<sup>13</sup> Includes 84% control for NSPS VV/VVa LDAR requirements.

<sup>14</sup> Includes 69% control for NSPS VV/VVa LDAR requirements.

<sup>15</sup> Assumes denatured ethanol contains 97.5% anhydrous ethanol and 2.5% gasoline, a saturation factor of 0.6 for submerged loading and dedicated normal service, a gasoline vapor pressure of 8.1621 psia, an anhydrous ethanol vapor pressure of 0.619 psia, a gasoline molecular weight of 62 lb/lb-mole, an anhydrous ethanol molecular weight of 46.07 lb/lb-mole, and a temperature of 513.51°R (the average temperature for Columbia, Missouri - the nearest city in TANK 4.0.9d's meteorological database).

<sup>16</sup> Assumes 100% gasoline as the trucks being loaded may have previously contained gasoline, a saturation factor of 0.6 for submerged loading and dedicated normal service, a vapor pressure of 8.1621 psia, a molecular weight of 62 lb/lb-mole, a temperature of 513.51°R, and 98% control for the VRS Loadout Flare required by Permit Condition 011 and 98.7% capture (AP-42 Section 5.2.2.1.1 for NSPS certified trucks).

P110	Emergency Fire Water Pump Engine	MMBtu	0.33186 lb/MMBtu	Tier 1 Engine Standards	
P120	Diesel Emergency Generator Engine	MMBtu	0.36 lb/MMBtu	AP-42 Table 3.3-1	
Start-up, Shutdown, and Malfunction Emissions <sup>17</sup>					
<b>Installation Monthly VOC Emissions<sup>18</sup> (tons):</b>					
<b>Installation 12-Month Rolling Total VOC Emissions<sup>19</sup> (tons):</b>					

<sup>17</sup> The permittee shall include start-up, shutdown, and malfunction emissions emissions for the entire installation during the calendar month here. The permittee shall maintain separate emission calculations to support the total reported SSM value for the installation. Start-up and shutdown emissions reporting on this line is only required for operations in which start-up and shutdown emissions differ from emissions during normal operation.

<sup>18</sup> Installation Monthly VOC Emissions (tons) = The sum of each emission sources' VOC Emissions (tons).

<sup>19</sup> Installation 12-Month Rolling Total VOC Emissions (tons) = The sum of the 12 most recent month's Installation Monthly VOC Emissions (tons) + 2.16 tons of VOC from tank breathing losses. Installation 12-Month Rolling Total VOC Emissions of less than 100 tons per year indicates compliance with Permit Condition PW001.

**ATTACHMENT B**  
**CO Tracking Sheet**

<b>Emission Source</b>	<b>Description</b>	<b>Monthly Throughput</b>	<b>CO Emission Factor</b>	<b>Emission Factor Source</b>	<b>CO Emissions<sup>20</sup> (tons)</b>
EP22	Truck VRS Loadout Flare	MMBtu	0.37 lb/MMBtu	AP-42 Table 13.5-2	
EP11	Biomethanator Flare	MMBtu			
P10	TO/Distillation/Heat Recovery Boiler/DDGS Dryers	gallons anhydrous ethanol	1.559 x 10 <sup>-3</sup> lb/gal	May 2012 Stack Test	
P110	Emergency Fire Water Pump Engine	MMBtu	2.9102 lb/MMBtu	Tier 1 Engine Standards	
P120	Diesel Emergency Generator Engine	MMBtu	0.95 lb/MMBtu	AP-42 Table 3.3-1	
Start-up, Shutdown, and Malfunction Emissions <sup>21</sup>					
<b>Installation Monthly CO Emissions<sup>22</sup> (tons):</b>					
<b>Installation 12-Month Rolling Total CO Emissions<sup>23</sup> (tons):</b>					

<sup>20</sup> CO Emissions (tons) = Monthly Throughput x CO Emission Factor x 0.0005 lb/ton

<sup>21</sup> The permittee shall include start-up, shutdown, and malfunction emissions for the entire installation during the calendar month here. The permittee shall maintain separate emission calculations to support the total reported SSM value for the installation. Start-up and shutdown emissions reporting on this line is only required for operations in which start-up and shutdown emissions differ from emissions during normal operation.

<sup>22</sup> Installation Monthly CO Emissions (tons) = The sum of each emission sources' CO Emissions (tons).

<sup>23</sup> Installation 12-Month Rolling Total CO Emissions (tons) = The sum of the 12 most recent month's Installation Monthly CO Emissions (tons). Installation 12-Month Rolling Total CO Emissions of less than 100 tons per year indicates compliance with Permit Condition PW001.

**ATTACHMENT C**  
 Individual HAP Tracking Sheets

<b>Emission Source</b>	<b>Description</b>	<b>Monthly Throughput</b>	<b>Hexane (110-54-3) Emission Factor</b>	<b>Emission Factor Source</b>	<b>Hexane Emissions<sup>24</sup> (tons)</b>
EP22	Truck VRS Loadout Flare	MMBtu	$1.7647 \times 10^{-3}$ lb/MMBtu	AP-42 Table 1.4-3	
F60	Equipment Leaks – Light Liquid Valves	# components	0.21 lb/component/month <sup>25</sup>	20% of VOC Emission s Factor based on hexane vapor fraction of gasoline	
	Equipment Leaks – Light Liquid/Gas Pumps	# components	1.99 lb/component/month <sup>26</sup>		
F55	Rail Loadout	gallons denatured ethanol	$3.6837 \times 10^{-5}$ lb/gal		
F56	Truck Loadout	gallons denatured ethanol	$4.8242 \times 10^{-5}$ lb/gal		
T61	750,000 gallon Tank	gallons denatured ethanol	$1.8667 \times 10^{-8}$ lb/gal		
T62	750,000 gallon Tank	gallons denatured ethanol			
T64	100,000 gallon Tank	gallons denaturant	$1.4867 \times 10^{-6}$ lb/gal		
P10	TO/Distillation/Heat Recovery Boiler/DDGS Dryers	MMscf	1.8 lb/MMscf	AP-42 Table 1.4-3	
Start-up, Shutdown, and Malfunction Emissions <sup>27</sup>					
<b>Installation Monthly Hexane Emissions<sup>28</sup> (tons):</b>					
<b>Installation 12-Month Rolling Total Hexane Emissions<sup>29</sup> (tons):</b>					

<sup>24</sup> Hexane Emissions (tons) = Monthly Throughput x Hexane Emission Factor x 0.0005 lb/ton

<sup>25</sup> Includes 84% control for NSPS VV/VVa LDAR requirements.

<sup>26</sup> Includes 69% control for NSPS VV/VVa LDAR requirements.

<sup>27</sup> The permittee shall include start-up, shutdown, and malfunction emissions emissions for the entire installation during the calendar month here. The permittee shall maintain separate emission calculations to support the total reported SSM value for the installation. Start-up and shutdown emissions reporting on this line is only required for operations in which start-up and shutdown emissions differ from emissions during normal operation.

<sup>28</sup> Installation Monthly Hexane Emissions (tons) = The sum of each emission sources' Hexane Emissions (tons).

<sup>29</sup> Installation 12-Month Rolling Total Hexane Emissions (tons) = The sum of the 12 most recent month's Installation Monthly Hexane Emissions (tons) + 0.09 tons of Hexane from tank breathing losses. Installation 12-Month Rolling Total Hexane Emissions of less than 10 tons per year indicates compliance with Permit Condition PW001.

Emission Source	Description	MHDR	Acetaldehyde (75-07-0) Emission Factor	Emission Factor Source	Acetaldehyde Emissions <sup>30</sup> (tpy)
F60	Equipment Leaks – Gas Valves	# components	$2.4981 \times 10^{-4}$ lb/component/month <sup>31</sup>	0.02% of VOC emission factor (200 ppm)	
	Equipment Leaks – Light Liquid Valves	# components	$2.0754 \times 10^{-4}$ lb/component/month <sup>32</sup>		
	Equipment Leaks – Light Liquid/Gas Pumps	# components	$1.9856 \times 10^{-3}$ lb/component/month <sup>33</sup>		
P40	CO <sub>2</sub> Fermentation Scrubber	gallons anhydrous ethanol	$8.3411 \times 10^{-5}$ lb/gal	June 2013 Stack Test	
P10	TO/Distillation/Heat Recovery Boiler/DDGS Dryers	gallons denatured ethanol	$1.6952 \times 10^{-5}$ lb/gal	May 2012 Stack Test	
P70	DDGS Cooler Cyclone	gallons denatured ethanol	$1.6046 \times 10^{-6}$ lb/gal		
P110	Emergency Fire Water Pump Engine	MMBtu	$7.67 \times 10^{-4}$ lb/MMBtu	AP-42 Table 3.3-1	
P120	Diesel Emergency Generator Engine	MMBtu			
Start-up, Shutdown, and Malfunction Emissions <sup>34</sup>					
<b>Installation Monthly Acetaldehyde Emissions<sup>35</sup> (tons):</b>					
<b>Installation 12-Month Rolling Total Acetaldehyde Emissions<sup>36</sup> (tons):</b>					

<sup>30</sup> Acetaldehyde Emissions (tons) = Monthly Throughput x Acetaldehyde Emission Factor x 0.0005 lb/ton

<sup>31</sup> Includes 87% control for NSPS VV/VVa LDAR requirements.

<sup>32</sup> Includes 84% control for NSPS VV/VVa LDAR requirements.

<sup>33</sup> Includes 69% control for NSPS VV/VVa LDAR requirements.

<sup>34</sup> The permittee shall include start-up, shutdown, and malfunction emissions for the entire installation during the calendar month here. The permittee shall maintain separate emission calculations to support the total reported SSM value for the installation. Start-up and shutdown emissions reporting on this line is only required for operations in which start-up and shutdown emissions differ from emissions during normal operation.

<sup>35</sup> Installation Monthly Acetaldehyde Emissions (tons) = The sum of each emission sources' Acetaldehyde Emissions (tons).

<sup>36</sup> Installation 12-Month Rolling Total Acetaldehyde Emissions (tons) = The sum of the 12 most recent month's Installation Monthly Acetaldehyde Emissions (tons). Installation 12-Month Rolling Total Acetaldehyde Emissions of less than 10 tons per year indicates compliance with Permit Condition PW001.

Emission Source	Description	MHDR	Acrolein (107-02-8) Emission Factor	Emission Factor Source	Acrolein Emissions <sup>37</sup> (tons)
F60	Equipment Leaks – Gas Valves	# components	$2.4981 \times 10^{-4}$ lb/component /month <sup>38</sup>	0.02% of VOC emission factor (200 ppm)	
	Equipment Leaks – Light Liquid Valves	# components	$2.0754 \times 10^{-4}$ lb/component /month <sup>39</sup>		
	Equipment Leaks – Light Liquid/Gas Pumps	# components	$1.9856 \times 10^{-3}$ lb/component /month <sup>40</sup>		
P40	CO <sub>2</sub> Fermentation Scrubber	gallons anhydrous ethanol	$3.0893 \times 10^{-7}$ lb/gal	June 2013 Stack Test	
P10	TO/Distillation/Heat Recovery Boiler/DDGS Dryers	gallons denatured ethanol	$1.0315 \times 10^{-6}$ lb/gal	May 2012 Stack Test	
P70	DDGS Cooler Cyclone	gallons denatured ethanol	$6.1483 \times 10^{-7}$ lb/gal		
P110	Emergency Fire Water Pump Engine	MMBtu	$9.25 \times 10^{-5}$ lb/MMBtu	AP-42 Table 3.3-1	
P120	Diesel Emergency Generator Engine	MMBtu			
Start-up, Shutdown, and Malfunction Emissions <sup>41</sup>					
<b>Installation Monthly Acrolein Emissions<sup>42</sup> (tons):</b>					
<b>Installation 12-Month Rolling Total Acrolein Emissions<sup>43</sup> (tons):</b>					

<sup>37</sup> Acrolein Emissions (tons) = Monthly Throughput x Acrolein Emission Factor x 0.0005 lb/ton

<sup>38</sup> Includes 87% control for NSPS VV/VVa LDAR requirements.

<sup>39</sup> Includes 84% control for NSPS VV/VVa LDAR requirements.

<sup>40</sup> Includes 69% control for NSPS VV/VVa LDAR requirements.

<sup>41</sup> The permittee shall include start-up, shutdown, and malfunction emissions for the entire installation during the calendar month here. The permittee shall maintain separate emission calculations to support the total reported SSM value for the installation. Start-up and shutdown emissions reporting on this line is only required for operations in which start-up and shutdown emissions differ from emissions during normal operation.

<sup>42</sup> Installation Monthly Acrolein Emissions (tons) = The sum of each emission sources' Acrolein Emissions (tons).

<sup>43</sup> Installation 12-Month Rolling Total Acrolein Emissions (tons) = The sum of the 12 most recent month's Installation Monthly Acrolein Emissions (tons). Installation 12-Month Rolling Total Acrolein Emissions of less than 0.835 tons per year indicates compliance with Permit Condition PW001.

**ATTACHMENT D**  
 Combined HAP Tracking Sheet

Emission Source	Description	Monthly Throughput	Combined HAP Emission Factor	Emission Source	Combined HAP Emissions <sup>44</sup> (tons)
EP22	Truck VRS Loadout Flare	MMBtu	$1.8515 \times 10^{-3}$ lb/MMBtu	AP-42 Tables 1.4-3 & 1.4-4	
F60	Equipment Leaks – Gas Valves in ethanol service	# components	$9.9923 \times 10^{-4}$ lb/component/month <sup>45</sup>	0.08% of VOC emission factor (800 ppm)	
	Equipment Leaks – Light Liquid Valves in ethanol service	# components	$8.3018 \times 10^{-4}$ lb/component/month <sup>46</sup>		
	Equipment Leaks – Light Liquid/Gas Pumps in ethanol service	# components	$7.9426 \times 10^{-3}$ lb/component/month <sup>47</sup>		
	Equipment Leaks – Light Liquid Valves in denaturant service	# components	0.32 lb/component/month <sup>43</sup>	31% of VOC Emission s Factor based on combined HAP vapor fraction of gasoline	
	Equipment Leaks – Light Liquid/Gas Pumps in denaturant service	# components	3.08 lb/component/month <sup>44</sup>		
F55	Rail Loadout	gallons denatured ethanol	$5.7097 \times 10^{-5}$ lb/gal		
F56	Truck Loadout	gallons denatured ethanol	$7.4775 \times 10^{-5}$ lb/gal		
T61	750,000 gallon Tank	gallons denatured ethanol	$2.6 \times 10^{-8}$ lb/gal		
T62	750,000 gallon Tank	gallons denatured ethanol			
T64	100,000 gallon Tank	gallons denaturant	$2.2733 \times 10^{-6}$ lb/gal		
P10	TO/Distillation/Heat Recovery Boiler/DDGS Dryers	MMscf	5.6211 lb/MMscf	AP-42 Tables 1.4-3 & 1.4-4 & May 2012 Stack Test	
P40	CO <sub>2</sub> Fermentation Scrubber	gallons anhydrous ethanol	$1.330 \times 10^{-4}$ lb/gal	June 2013 Stack Test	
P70	DDGS Cooler Cyclone	gallons denatured ethanol	$3.7186 \times 10^{-5}$ lb/gal	May 2012	

<sup>44</sup> Combined HAP Emissions (tons) = Monthly Throughput x Combined HAP Emission Factor x 0.0005 lb/ton

<sup>45</sup> Includes 87% control for NSPS VV/VVa LDAR requirements.

<sup>46</sup> Includes 84% control for NSPS VV/VVa LDAR requirements.

<sup>47</sup> Includes 69% control for NSPS VV/VVa LDAR requirements.

				Stack Test	
P110	Emergency Fire Water Pump Engine	MMBtu	6.3704 x 10 <sup>-3</sup> lb/MMBtu	AP-42 Table 3.3-1	
P120	Diesel Emergency Generator Engine	MMBtu			
Start-up, Shutdown, and Malfunction Emissions <sup>48</sup>					
<b>Installation Monthly Combined HAP Emissions<sup>49</sup> (tons):</b>					
<b>Installation 12-Month Rolling Total Combined HAP Emissions<sup>50</sup> (tons):</b>					

<sup>48</sup> The permittee shall include start-up, shutdown, and malfunction emissions for the entire installation during the calendar month here. The permittee shall maintain separate emission calculations to support the total reported SSM value for the installation. Start-up and shutdown emissions reporting on this line is only required for operations in which start-up and shutdown emissions differ from emissions during normal operation.

<sup>49</sup> Installation Monthly Combined HAP Emissions (tons) = The sum of each emission sources' Combined HAP Emissions (tons).

<sup>50</sup> Installation 12-Month Rolling Total Combined HAP Emissions (tons) = The sum of the 12 most recent month's Installation Monthly Combined HAP Emissions (tons) + 0.11 tons of Combined HAP from tank breathing losses. Installation 12-Month Rolling Total Combined HAP Emissions of less than 25 tons per year indicates compliance with Permit Condition PW001.



**ATTACHMENT F**  
 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



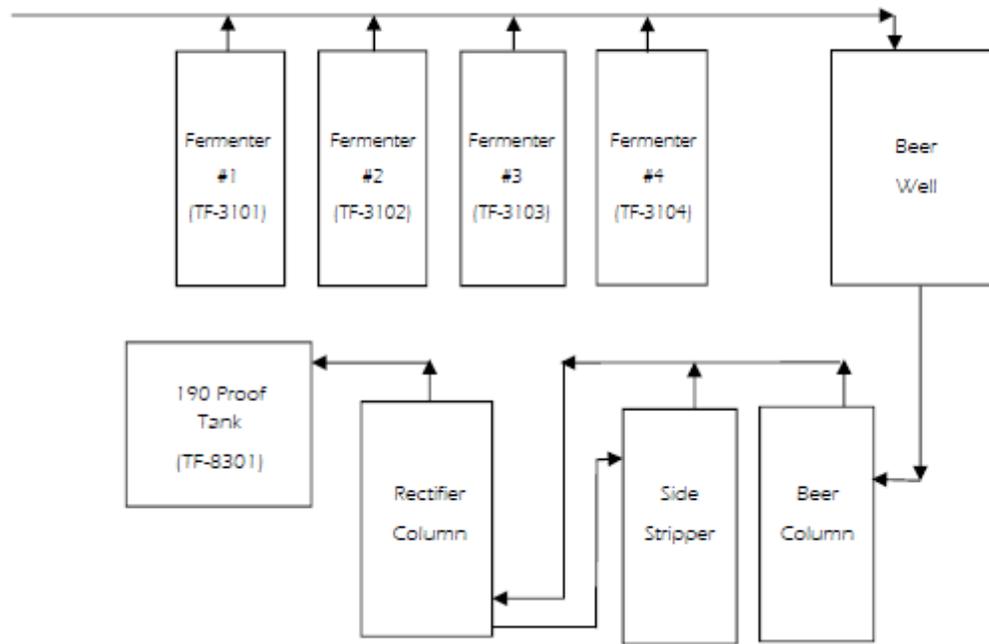




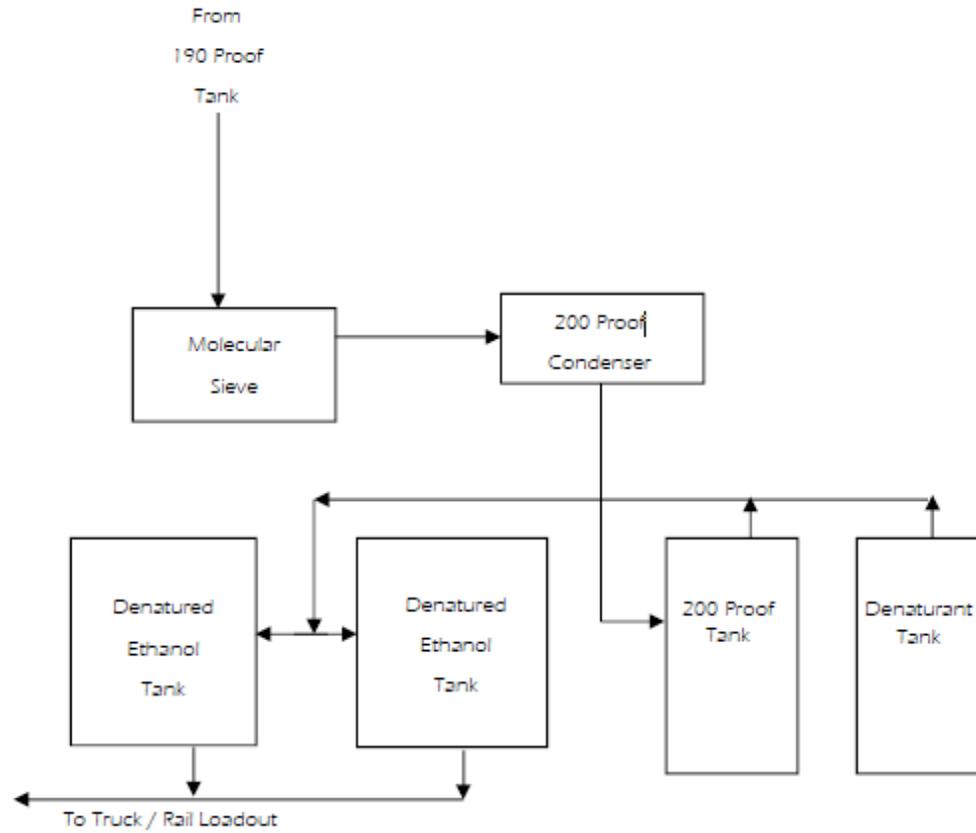




**ATTACHMENT L**  
NSPS VVa Emission Sources



**ATTACHMENT M**  
NSPS VV Emission Sources



# STATEMENT OF BASIS

## **Voluntary Limitations**

In order to qualify for this Intermediate State Operating Permit, the permittee has accepted voluntary, federally enforceable emission limitations. Per 10 CSR 10-6.065(5)(C)1.A(VI), if these limitations are exceeded, the installation immediately becomes subject to 10 CSR 10-6.065(6) and enforcement action for operating without a valid part 70 operating permit. It is the permittee's responsibility to monitor emission levels and apply for a part 70 operating permit far enough in advance to avoid this situation. This may mean applying more than eighteen months in advance of the exceedance, since it can take that long or longer to obtain a part 70 operating permit.

## **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) Intermediate Operating Permit OP2009-037
- 2) Intermediate Operating Permit Amendment Application, Received June 8, 2012
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition

## **Other Air Regulations Determined Not to Apply to the Operating Permit**

The Air Pollution Control Program has determined that the following requirements are not applicable to this installation at this time for the reasons stated.

10 CSR 10-6.100 *Alternate Emission Limits* is not applicable because the installation is in an ozone attainment area.

10 CSR 10-6.400 *Restriction of Emission of Particulate Matter From Industrial Processes* is not applicable to the installation and has not been applied within this permit.

- F100 Truck Traffic on Haul Roads and P80 Cooling Tower exempt from this regulation per 10 CSR 10-6.400(1)(B)7 as emissions from these sources are fugitive.
- P10 Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers is exempt from this regulation per 10 CSR 10-6.400(1)(B)6 as this source combusts fuel for indirect heating.
- P15 Grain Unloading, P30 Hammermill, and P70 DDGS Cooler are exempt from this regulation per 10 CSR 10-6.400(1)(B)15 as Permit Condition 010 requires a control device (a baghouse) with greater than 90 percent PM control for each emission source.
- P40 CO<sub>2</sub> Fermentation Scrubber, P90 DDGS Loadout, S110 Emergency Fire Pump, and S120 Emergency Generator are exempt from this regulation per 10 CSR 10-6.400(1)(B)12 as potential PM emissions from each emission unit are below 0.5 lb/hr.

10 CSR 10-6.405 *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating* is not applicable to the installation and was not applied within this permit. Installation combusting only natural gas and fuel oil #2 are exempt from this regulation per 10 CSR 10-6.405(1)(E).

**Construction Permits**

Construction Permit 102003-011, Issued October 24, 2003:

Construction Permit 102003-011A, Issued July 7, 2004:

Construction Permit 102003-011B, Issued December 13, 2007:

- The conditions of these permits were superseded by Special Condition 1 of Construction Permit 092011-001.

Construction Permit 092011-001, Issued September 1, 2011:

- This general construction permit is for increasing production of ethanol to 60,000,000 gallons per year from 45,000,000 gallons per year.
- Special Condition 1 supersedes all special conditions of Construction Permit 102003-011, 102003-011A, and 102003-011B.
- Special Conditions 2.A, 2.B, 2.C have been applied within this permit (see Permit Condition PW001).
- Special Condition 2.D has been applied within this permit (see Permit Condition 005).
- Special Condition 2.E has been applied within this permit (see Permit Condition 006).
- Special Conditions 2.F and 2.G have been applied within this permit (see Permit Condition 007).
- Special Condition 3 has been applied within this permit (see Permit Condition PW001).
- Special Condition 4 has been applied within this permit (see Permit Condition 015).
- Special Condition 5 has been applied within this permit (see Permit Condition 008).
- Special Condition 6 has been applied within this permit (see Permit Condition 009).
- Special Condition 7 has been applied within this permit (see Permit Condition 010).
- Special Condition 8 has been applied within this permit (see Permit Conditions 011 and 012).
- Special Condition 9 has been applied within this permit (see Permit Condition 013).
- Special Conditions 10 – 11 have been applied within this permit (see Permit Condition PW001).
- Special Condition 12 has been applied within this permit (see Permit Conditions 011, 012, and 014).
- Special Conditions 13 and 14 required one time performance testing. All required testing has been completed. The performance testing results are available in the following table:

Emission Source	Description	Stack Test Date	Pollutant	Stack Test Result	Production Data
P40	CO <sub>2</sub> Fermentation Scrubber	May 2012	PM	0.07 lb/hr	58,416,059 gpy denatured ethanol
		June 2013	VOC	7.8 lb/hr	107.9 gpm anhydrous ethanol
			Acrolein	0.002 lb/hr	
			Acetaldehyde	0.54 lb/hr	
			Methanol	0.03 lb/hr	
Formaldehyde	0.01 lb/hr				
P70	DDGS Cooler Cyclone	May 2012	PM	0.64 lb/hr	58,416,059 gpy denatured ethanol
			VOC	0.77 lb/hr	
			Acrolein	0.0041 lb/hr	
			Acetaldehyde	0.0107 lb/hr	
			Methanol	0.076 lb/hr	
Formaldehyde	0.0055 lb/hr				

P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers	May 2012	NO <sub>x</sub>	17.67 lb/hr	4,029 MMBtu/day  50,952,931 gpy denatured ethanol
			PM	4.29 lb/hr	
			SO <sub>x</sub>	0.57 lb/hr	
			VOC	0.57 lb/hr	
			Acrolein	0.006 lb/hr	
			Acetaldehyde	0.0986 lb/hr	
			Methanol	0.0818 lb/hr	
			Formaldehyde	0.0248 lb/hr	
			CO	9.07 lb/hr	
P15	Grain Unloading	May 2012	PM	0.054 lb/hr	43,459,052 gpy denatured ethanol
P30	Hammermill	May 2012	PM	0.072 lb/hr	55,390,558 gpy denatured ethanol
P90	DDGS Loadout	May 2012	PM	0.187 lb/hr	44,114,259 gpy denatured ethanol

No Construction Permit Required Determination, Issued July 27, 2012:

- This no construction permit required determination is for the installation of P20 a new 750,000 bushel Grain Storage Silo to allow for additional storage during the planting and harvesting seasons.

#### **New Source Performance Standards Applicability**

40 CFR Part 60, Subpart Db - *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units* is applicable to P10 Thermal Oxidizer/Heat Recovery Boiler and has been applied within this permit (see Permit Condition 002).

40 CFR Part 60, Subpart Dc – *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* is not applicable to the installation and has not been applied within this permit. This regulation is not applicable to the Thermal Oxidizer/Heat Recovery Boiler as they are rated above 100 MMBtu/hr.

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 T61, T62, T63, T64, and T65 Internal Floating Roof Ethanol Storage Tanks and has been applied within this permit (see Permit Condition 003).

40 CFR Part 60 Subpart DD - *Standards of Performance for Grain Elevators* is not applicable to the installation and has not been applied in this permit. The installation's total permanent grain storage capacity is 1,130,000 bushels which is less than the 2,500,000 bushel threshold for grain terminal elevators at §60.301(c).

40 CFR Part 60, Subpart VV – *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006* is applicable between the 190

Proof Day Tank (TF-8301) and Ethanol Loadout and has been applied within this permit (see Permit Condition 020).

40 CFR Part 60, Subpart VVa - *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006* is applicable between Fermenters #1, #2, #3, and #4 (TF-3101, TF-3102, TF-3103, and TF-3104) and the 190 Proof Day Tank (TF-8301) and has been applied within this permit (see Permit Condition 019). Construction Permit 092011-001 allowed the installation to construct TF-3104 Fermenter #4. The definition of *process unit* at §60.481a states:

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

As the new fermenter was installed a component of the existing process unit and cannot operate independently of the existing process unit, the addition of the new fermenter is considered a modification of the process unit; therefore, all of the process unit is subject to NSPS VVa.

40 CFR Part 60, Subpart XX - *Standards of Performance for Bulk Gasoline Terminals* is not applicable since the fuel ethanol (alcohol/petroleum distillate blend) manufactured by the facility does not satisfy the 40 CFR Part 60, Subpart XX definition of gasoline.

40 CFR Part 60, Subpart NNN - *Standards of Performance for Volatile Organic Compound Emissions from SOCFI Distillation Operations* is not applicable to the installation and has not been applied in this permit. Ethanol is listed as a chemical affected by both NSPS NNN. However, background documentation created during the development of the standard indicates creation of ethanol by fermentation (biological synthesis) was excluded from the scope of the NSPS NNN.

40 CFR Part 60, Subpart RRR - *Standards of Performance for Volatile Organic Compound Emissions from SOCFI Reactor Processes* is not applicable to the installation and has not been applied in this permit. Ethanol is listed as a chemical affected by both NSPS RRR. However, background documentation created during the development of the standard indicates creation of ethanol by fermentation (biological synthesis) was excluded from the scope of the NSPS RRR.

40 CFR Part 60, Subpart IIII – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* is applicable to P120 Emergency Generator and has been applied within this permit (see Permit Condition 004). This regulation is not applicable to P110 Emergency Fire Pump as the fire pump is a 2004 model year.

#### **Maximum Achievable Control Technology Applicability**

40 CFR Part 63, Subpart ZZZZ – *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* is applicable to emergency engines P110 and P120 and has been applied within this permit (see Permit Conditions 016 and 017).

40 CFR Part 63, Subpart JJJJJ – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* is not applicable to the installation and has not been applied within this permit. P10 Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers only combusts natural gas.

**National Emission Standards for Hazardous Air Pollutants 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).

**Other Regulatory Determinations**

The facility sells some of the gases coming from P40 CO<sub>2</sub> Fermentation Scrubber. (This stream is mainly CO<sub>2</sub> but does contain some VOC and HAPs). Any emissions of VOC, and HAP contained within the gases that are sold are not required to be included in the 100 tpy VOC, and 25.0 tpy combined HAP plantwide emission limitations.

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 001). This regulation is applicable to P40 CO<sub>2</sub> Fermentation Scrubber and P90 DDGS Loadout, however, the emission units are not expected to exceed the opacity limits while being properly maintained and operated as potential PM emissions from the emissions units are below 0.5 lb/hr. This regulation is not applicable to P110 Emergency Fire Pump and P120 Emergency Generator as 10 CSR 10-6.220(1)(A) exempts internal combustion engines.

10 CSR 10-6.260 *Restriction of Emission of Sulfur Compounds* is applicable to the emergency engines P110 and P120 and has been applied within this permit (see Permit Condition 018). This regulation is federally enforceable only as it was rescinded from the Code of State Regulations on November 30, 2015, but remains in Missouri’s State Implementation Plan. All other sulfur emission sources at the installation are from the combustion of pipeline grade natural gas and are exempt from this regulation per 10 CSR 10-6.260(1)(A)2.

10 CSR 10-6.261 *Control of Sulfur Dioxide Emissions* is applicable to the emergency engines P110 and P120 and has been applied within this permit (see Permit Condition 018). This regulation is currently state enforceable only as it has not yet been approved into Missouri’s State Implementation Plan.

An updated Potential to Emit was calculated for the installation:

Pollutant	Potential to Emit <sup>64</sup> (tpy)
PM <sub>10</sub>	49.86
PM <sub>2.5</sub>	11.73
SO <sub>x</sub>	37.78
NO <sub>x</sub>	82.69
VOC	<100
CO	<100
Combined HAPs	<25
Hexane (110-54-3)	<10
Acetaldehyde (75-07-0)	<10
Formaldehyde (50-00-0)	0.26
Acrolein (107-02-8)	<0.835
Methanol (67-56-1)	0.90
Benzene (71-43-2)	0.47
Toluene (108-88-3)	0.26

**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.

<sup>64</sup> The potential to emit is based on 8,760 hours of uncontrolled annual operation unless noted otherwise:

- ◆ P15, P30, P70, and P90 are required to use baghouses by Permit Condition 010.
- ◆ Emissions from P40 and P70 are limited by the 60,000,000 gallon per year denatured ethanol production limit in Permit Condition PW001.
- ◆ Process emissions of VOC and HAP from P10 are limited by the 60,000,000 gallons per year denatured ethanol production limit in Permit Condition PW001. The distillation process, heat recovery boiler, and DDGS dryers are required to use a thermal oxidizer by Permit Condition 009.
- ◆ EP11 and EP22 are each limited to 4,380 hours of annual operation by Permit Conditions 011 and 012.
- ◆ F55 is limited to 30,000,000 gallons per year by Permit Condition PW001
- ◆ F60 was given 87% control for gas valves, 84% control for light liquid valves, and 69% control for pumps due to the LDAR requirements of NSPS VV and VVa contained in Permit Conditions 019 and 020.
- ◆ T61, T62, T63, T64, and T65 are required to be equipped with internal floating roofs to reduce emissions by NSPS Kb contained in Permit Condition 003.
- ◆ P110 and P120 are limited to 300 hours of annual operation by Permit Condition 014.
- ◆ The cooling tower is limited to a maximum TDS concentration of 2,500 ppm by Permit Condition 013.
- ◆ Haul road usage is limited by Permit Condition PW001 to 31,800 trucks: grain, DDGS, wetcake, enzymes, urea, acid, and caustic; 7,884 trucks: denatured ethanol shipment and denaturant delivery; and 5,475 trucks: CO<sub>2</sub> shipment.
- ◆ Natural gas usage is limited to 1,660 MMscf per year by Permit Condition PW001.

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).

### **Response to EPA Comments**

The draft Intermediate Operating Permit, Project 2014-06-016, for Mid-Missouri Energy, LLC (195-0046) was placed on public notice as of March 27, 2015, 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 Friday, March 27, 2015.

On April 17, 2015, the Air Pollution Control Program received comments from Mark A. Smith, Air Permitting and Compliance Branch Chief for EPA Region VII.

#### **EPA Comment #1:**

Permit Condition PW001 incorporates synthetic minor limits on VOC, CO, and HAPs which are intended to restrict these air pollutants below major source thresholds. However, EPA cannot determine whether or not Permit Condition PW001 is enforceable from a practical matter. In response to a petition against an operating permit issued to Hu Honua Bioenergy Facility, EPA granted the petitioners contention that the operating permit failed to ensure the enforceability as a practical matter because the permit was unclear whether all actual emissions were considered in determining compliance. Specifically, the permit failed to include emissions from malfunctions or upset conditions, although the permit did address start-up and shutdown emissions. Permit Condition PW001, in the Mid-Missouri - Malta Bend draft operating permit, is unclear whether or not start-up, shutdown, malfunction and upset emissions are considered in the determination of compliance. Therefore, EPA believes Permit Condition PW001 is not practically enforceable and recommends MDNR clarify how the Mid-Missouri-Malta Bend VOC, CO and HAP emissions shall be determined for assuring compliance.

#### **Missouri Air Pollution Control Program Response:**

Each recordkeeping attachment has been updated to require the reporting of SSM emissions.

#### **EPA Comment #2:**

Permit Condition 002 is included in the draft operating permit to incorporate applicable requirements for the NSPS Db as related to the Thermal Oxidizer/Heat Recovery Boiler emission unit P10. However, Permit Condition 002 includes only record keeping/reporting requirements. NSPS Db includes emission standards for NO<sub>x</sub>; compliance and performance testing for NO<sub>x</sub> and emission monitoring for NO<sub>x</sub>; all of which EPA believes are applicable to emission point P10 and should be included in Permit Condition 002. Additionally, §60.49b(d)(1), which is to be incorporated into this operating permit as record keeping requirement #1, requires the permittee to maintain records of amounts of fuel combusted each day, and calculate the annual capacity factor for a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. This annual capacity factor determination is missing from the draft operating permit currently on public notice. Therefore, EPA recommends MDNR review NSPS

Db and include all applicable requirements in the operating permit in accordance with the requirements of 10 CSR 10-6.065(5)(C)l.

**Missouri Air Pollution Control Program Response:**

Emission point P10 receives emissions from three different emission units: the thermal oxidizer, the heat recovery boiler, and the DDGS dryers. NSPS Db only applies to steam generating units; therefore, the thermal oxidizer and DDGS dryers are not subject to this regulation. The heat recovery boiler is a steam generating unit subject to NSPS Db. The heat recovery boiler covers waste heat given off by the thermal oxidizer to produce process steam for plant operations. The applicable NO<sub>x</sub> provisions from NSPS Db for the heat recovery boiler have been added to the permit as requested.

**EPA Comment #3:**

Permit Condition 003 incorporates new source performance standards for volatile organic liquid storage vessels (NSPS Kb) that are applicable to emission units T61, T62, T63, T64, and T65. In this draft operating permit, Permit Condition 003 has several references to the "Administrator." MDNR has adopted by reference NSPS Kb and therefore EPA believes the "Director" may be the more appropriate individual for the permittee to communicate with in many of the instances indicated in Permit Condition 003. Additionally, monitoring requirement #3 requires the permittee to maintain volatile organic liquid (VOL) storage records.

MDNR's customary practice is to include copies of record keeping documents as attachments to the operating permit for public review and comment. Therefore, EPA recommends MDNR consider the use of "Director" in lieu of "Administrator" and include the VOL storage tank data record keeping document as an attachment.

**Missouri Air Pollution Control Program Response:**

All references to Administrator in Permit Condition 003 have been replaced with Director. The required recordkeeping is not complex in nature; therefore, the Missouri Air Pollution Control Program does not believe an example recordkeeping form is necessary. EPA may request to review the installation records to determine compliance. The Air Pollution Control Program regularly reviews recordkeeping forms during site inspections.

**EPA Comment #4:**

Permit Conditions 005, 006 and 007 base permittee compliance verification on a "one-time" stack sampling event conducted either in May 2012 or June 2013. EPA believes that periodic monitoring to confirm that the permittee remains in compliance as an applicable requirement that should be included in Permit Conditions 005, 006, and 007. Therefore, in accordance with the authority provided MDNR in 10 CSR 10-6.065(5)(C)l.C(I)(b), EPA recommends MDNR include periodic stack testing, at least once during the term of the operating permit, for PM<sub>10</sub>, NO<sub>x</sub>, and HAPs in Permit Conditions 005, 006 and 007, respectively.

**Missouri Air Pollution Control Program Response:**

Special Conditions 2.E, 2.F, and 2.G contained limits on PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>x</sub> to ensure that the construction permit project remained below the de minimis thresholds for PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>x</sub>. PM<sub>10</sub> and SO<sub>x</sub> test results indicate each emission sources is less than 75% of their respective emission limits; therefore, further testing is deemed unnecessary. The tested NO<sub>x</sub> emission rate was 93% of the standard; therefore, to ensure that the project

remains below de minimis repeat NO<sub>x</sub> performance testing is being required by this permit.

Special Condition 2.D contains acrolein emission limits which were used in the installation's modeling analysis to demonstrate compliance with Missouri's RALs. An exceedance of these emission rates would invalidate the modeling results and could negatively affect the health of the citizens of Missouri; therefore, repeat performance testing is being required by this permit.

**EPA Comment #5:**

Permit Condition 008 requires the permittee to monitor and record operating pressure drop across the fermentation scrubber and water flow rate through the fermentation scrubber. MDNRs customary practice is to include data record keeping examples as attachments in operating permits for public review and comment. Therefore, EPA recommends MDNR include an example(s) of Mid-Missouri - Malta Bend fermentation scrubber operating log sheet as an attachment to the operating permit.

**Missouri Air Pollution Control Program Response:**

The required recordkeeping is not complex in nature; therefore, the Missouri Air Pollution Control Program does not believe an example recordkeeping form is necessary. EPA may request to review the installation records to determine compliance. The Air Pollution Control Program regularly reviews recordkeeping forms during site inspections.

**EPA Comment #6:**

Permit Condition 009 includes an operational limitation for the Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers (Emission Unit P10) which contains a reference to Special Condition 13 and Special Condition 14 of Construction Permit #092011-001. However, construction permit #092011-001 is not attached to this operating permit and therefore compliance verification for the operational limitation is not enforceable from a practical matter. However, the applicable requirements in Special Condition 13 and Special Condition 14 of Construction Permit #092011-001, with the exception of Special Condition 13A, appear to be included in Permit Condition 009 section on performance testing. Therefore, EPA recommends MDNR modify the testing requirement reference in the operational limitation of Permit Condition 009 and include all applicable requirements from the construction permit special conditions identified in the performance testing section of Permit Condition 009.

**Missouri Air Pollution Control Program Response:**

The VOC and HAP emission rates from the RTO have already been established; therefore, the reference to Special Conditions 13 and 14 in the permit condition have been removed.

**EPA Comment #7:**

The performance testing requirements in Permit Condition 009, as drafted, are worded as if the testing is a future event. Initial performance testing is in fact a one-time activity that would appear to have already been completed and therefore these are no longer applicable requirements. However, EPA believes periodic testing to confirm the proper operating conditions, to ensure compliance, is an applicable requirement that MDNR should include in Permit Condition 009. Therefore, in accordance with the authority provided in 10 CSR 10-

6.065(5)(C)1.C(I)(b), EPA recommends MDNR include periodic testing, at least once during the term of the operating permit, to ensure approved operating conditions continue to meet compliance criteria.

**Missouri Air Pollution Control Program Response:**

Special Conditions 13.A.1 and 13.A.2 of Construction Permit 092011-004 required testing to establish VOC, HAP, and CO emission rates as no emission factors were available. The performance testing has been conducted and emission factors have been established; therefore, no further testing is required.

Special Conditions 13.A.4, 13.A.5, and 13.A.6 required testing of PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>x</sub> emission rates. This testing was required to demonstrate compliance with Special Conditions 2.E, 2.F, and 2.G which contained limits on PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>x</sub> to ensure that the project remained below the de minimis thresholds for PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>x</sub>. PM<sub>10</sub> and SO<sub>x</sub> test results indicate each emission sources is less than 75% of their respective emission limit; therefore, further testing is deemed unnecessary. The tested NO<sub>x</sub> emission rate was 93% of the standard; therefore, to ensure that the project remains below de minimis repeat NO<sub>x</sub> performance testing is being required by this permit.

Special Condition 13.A.3 required testing of acrolein to demonstrate compliance with Special Condition 2.D. Special Condition 2.D contains acrolein emission limits which were used in the installation's modeling analysis to demonstrate compliance with Missouri's RALs. An exceedance of these emission rates would invalidate the modeling results and could negatively affect the health of the citizens of Missouri; therefore, repeat performance testing is being required by this permit.

**EPA Comment #8:**

Permit Condition 013 requires permittee to operate and maintain its cooling tower (Emission Unit P80) cooling water circulation rate, total dissolved solids (TDS) in circulated cooling water and drift loss. However, there are no requirements in Permit Condition 013 for the permittee to record any compliance information, even though Permit Condition 013 requires the permittee to maintain records. EPA recommends MDNR use the authority given in 10 CSR 10-6.065(5)(C)1.C(I)(b) and include periodic monitoring to verify compliance with the cooling tower operating requirements. Also, EPA recommends MDNR include the record keeping document as an attachment to the operating permit for public review and comment.

**Missouri Air Pollution Control Program Response:**

The cooling water circulation rate and drift loss are both based on design specifications and cannot be changed without physical modification of the cooling tower; therefore, no monitoring or recordkeeping is necessary. Operational Limitation #4 already requires periodic monitoring of the TDS concentration to ensure that the limit is met. The required recordkeeping is not complex in nature; therefore, the Missouri Air Pollution Control Program does not believe an example recordkeeping form is necessary. EPA may request to review the installation records to determine compliance. The Air Pollution Control Program regularly reviews recordkeeping forms during site inspections.

**EPA Comment #9:**

Operational limitation #3, in Permit Condition 015, requires the permittee to conduct silt loading performance tests "after permit issuance." (emphasis added) EPA is unclear as to whether it is

the issuance of the operating permit or the issuance of Construction Permit #092011-001 that triggers the silt loading performance test activity. EPA recommends MDNR clarify the trigger date of silt loading performance tests. If silt loading tests were completed quarterly, beginning September 1, 2011, and have been reduced to yearly, then EPA recommends MDNR consider rewriting this operational limitation #3, in Permit Condition 015 to include the requirements applicable at the time of this operating permit issuance.

**Missouri Air Pollution Control Program Response:**

The permit condition has been modified to clarify that quarterly testing for the first year began September 1, 2011.

**EPA Comment #10:**

Permit Condition 017 incorporates the applicable requirements from MACT ZZZZ. Mid-Missouri - Malta Bend is an area source of HAPs and therefore, MDNR relies on EPA to manage compliance with the area source MACT ZZZZ and with Permit Condition 017. Reporting requirement #3, in Permit Condition 017, directs the permittee to follow the reporting requirements found in Section V of the operating permit. However, if EPA is managing RICE MACT compliance, then EPA should be the primary recipient of the compliance reports with MDNR receiving secondary copies. EPA recommends MDNR add specific clarifying language into this permit condition to show EPA as the primary compliance information recipient related to MACT ZZZZ and MDNR as secondary.

**Missouri Air Pollution Control Program Response:**

EPA does not require deviation reporting for area sources in MACT ZZZZ. Reporting Condition 3 was included in the permit to comply with §70.6(a)(3)(iii). Missouri's regulations (10 CSR 10-6.060) do not require submittal of deviation reports to EPA.

**EPA Comment #11:**

Permit Condition 019 incorporates the applicable requirements from NSPS VVa. The draft operating permit condition attempts to incorporate by reference Alternative Standards for Valves - allowable percentage of leaking; Alternative Standards for Valves - skip period leak detection and repair; Equivalence of Means of Emission Limitation; and Test Methods and Procedures. Each of these requirements, that appear to have been incorporated by reference, require the permittee to refer to NSPS VVa for information (emphasis added). The requirement to refer for information is so vague it may not be enforceable from a practical matter.

A Part 70 operating permit must not only contain all applicable requirements; it must be sufficiently clear and specific to ensure that those requirements are enforceable as a practical matter. As stated by EPA, the requirement of "practical enforceability" can be described as: "A permit is enforceable as a practical matter (or practically enforceable) if permit conditions establish a clear legal obligation for the source [and] allow compliance to be verified. Providing the source with clear information goes beyond identifying the applicable requirement. It is also important that permit conditions be unambiguous and do not contain language which may intentionally or unintentionally prevent enforcement." Permit conditions must contain sufficient detail to ensure that the facility and the public clearly understand obligations in the permit and how compliance with these requirements will be evaluated. The Office of Inspector General reported to the EPA that "the presence of vague permit language ... makes a permit virtually unenforceable, or not practically enforceable." Vague permit provisions preclude the permittee

from understanding its obligations and preclude regulators and the public from ensuring that the permittee is complying with its obligations.

EPA recommends MDNR consider rewording these requirements as follow:

- ◆ Alternative Standards for Valves - allowable percentage of leaking  
The permittee may elect to comply with an alternative standards for allowable percentage of leaking valves as specified in §60.483-1a
- ◆ Alternative Standards for Valves-skip period leak detection and repair  
The permittee may elect to comply with one of the alternative standards of leak detection and repair as specified in §60.483-2a
- ◆ Equivalence of Means of Emission Limitation  
The permittee may apply to the EPA for determination of equivalence for any means of emission limitation that achieves an equivalent reduction in VOC emissions as specified in §60.483-3a
- ◆ Test Methods and Procedures  
The permittee shall follow the test methods and procedures as specified in §60.483-4a

**Missouri Air Pollution Control Program Response:**

The permit has been modified as requested, with the exception that Equivalence of Means of Emission Limitation is found at §60.484a and Test Methods and Procedures are found at §60.485a.

**EPA Comment #12:**

Permit Condition 020 incorporates the applicable requirements from NSPS VV. The draft operating permit condition attempts to incorporate by reference Alternative Standards for Valves - allowable percentage of leaking; Alternative Standards for Valves-skip period leak detection and repair; Equivalence of Means of Emission Limitation; and Test Methods and Procedures. Each of these requirements, that, appear to have been incorporated by reference, require the permittee to refer to NSPS VV for information (emphasis added). The requirement to refer for information is so vague it may not be enforceable from a practical matter.

A Part 70 operating permit must not only contain all applicable requirements; it must be sufficiently clear and specific to ensure that those requirements are enforceable as a practical matter. As stated by EPA, the requirement of "practical enforceability" can be described as: "A permit is enforceable as a practical matter (or practically enforceable) if permit conditions establish a clear legal obligation for the source [and] allow compliance to be verified. Providing the source with clear information goes beyond identifying the applicable requirement. It is also important that permit conditions be unambiguous and do not contain language which may intentionally or unintentionally prevent enforcement." Permit conditions must contain sufficient detail to ensure that the facility and the public clearly understand obligations in the permit and how compliance with these requirements will be evaluated. The Office of Inspector General reported to the EPA that "the presence of vague permit language ... makes a permit virtually unenforceable, or not practically enforceable." Vague permit provisions preclude the permittee from understanding its obligations and preclude regulators and the public from ensuring that the permittee is complying with its obligations.

EPA recommends MDNR consider rewording these requirements as follow:

- ◆ Alternative Standards for Valves - allowable percentage of leaking  
The permittee may elect to comply with an alternative standards for allowable percentage of leaking valves as specified in §60.483-1
- ◆ Alternative Standards for Valves-skip period leak detection and repair  
The permittee may elect to comply with one of the alternative standards of leak detection and repair as specified in §60.483-2
- ◆ Equivalence of Means of Emission Limitation  
The permittee may apply to the EPA for determination of equivalence for any means of emission limitation that achieves an equivalent reduction in VOC emissions as specified in §60.483-3
- ◆ Test Methods and Procedures  
The permittee shall follow the test methods and procedures as specified in §60.483-4

**Missouri Air Pollution Control Program Response:**

The permit has been modified as requested, with the exception that Equivalence of Means of Emission Limitation is found at §60.484 and Test Methods and Procedures are found at §60.485.

**EPA Comment #13:**

The reporting requirements in Permit Condition 019 and Permit Condition 020 reference the "Administrator" in several of the permittee's tasks. MDNR has adopted authority of both NSPS VV and NSPS VVa and therefore the term "Director" may be the more appropriate individual to receive the permittee's report. EPA recommends MDNR review the reporting requirements in Permit Conditions 019 and 020 and replace the "Administrator" with "Director," as appropriate.

**Missouri Air Pollution Control Program Response:**

The permit has been modified as requested.

**EPA Comment #14:**

The language regarding the written notification requirement for Off-Permit Changes in Section V used in operating permits has recently been modified to more closely match the wording in 10 CSR 10-6.065(5)(C)5. Therefore, EPA recommends MDNR use the newer Off-Permit Change wording in the Mid-Missouri - Malta Bend operating permit.

**Missouri Air Pollution Control Program Response:**

The permit has been modified as requested.

**EPA Comment #15:**

Attachments A, B, C, and D identify the Thermal Oxidizer/Distillation/Heat Recovery Boiler/DDGS Dryers as Emission Unit S10. However, the list of emission units with limitations in Section I identifies the Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers as P10. EPA suggests MDNR settle on a single emission unit identification number convention throughout the operating permit to reduce potential confusion.

**Missouri Air Pollution Control Program Response:**

The permit has been modified such that the Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers are always referred to as P10.

**EPA Comment #16:**

The Statement of Basis contains a list of "Construction Permits" and the last bullet item under Construction Permit #092011-001 says: "Special Condition 13 and 14 required one time performance testing. Most of this testing has been completed." Permit Condition 009 includes Performance Testing and references Special Condition 13 and 14 which would indicate these are still applicable requirements. However, the wording in the Statement of Basis indicates some but not all of the special condition one time requirements have been completed. EPA recommends MDNR detail what testing has yet to be completed and include these requirements in Permit Condition 009.

**Missouri Air Pollution Control Program Response:**

All required testing has been conducted. The permit wording has been modified to provide to clarification.

**EPA Comment #17:**

The Statement of Basis includes an updated potential-to-emit (PTE) table. It is MDNR's customary practice to include a notation with the PTE table highlighting the basis for the calculated tpy for each of the pollutants. EPA recommends MDNR provide the basis for the PTE in the Statement of Basis.

**Missouri Air Pollution Control Program Response:**

The permit has been modified as requested.



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

## DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

**MAR 30 2016**

Mr. Tyler Edmundson  
Plant Manager  
Mid-Missouri Energy, LLC  
15311 N. Saline 65 Highway  
Malta Bend, MO 65339

Re: Mid-Missouri Energy, LLC, 195-0046  
Permit Number: **OP2016-010**

Dear Mr. Edmundson:

Enclosed with this letter is your amended intermediate 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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

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 you send your appeal by registered or certified mail, we will deem it filed on the date you mailed it. If you send your appeal by a method other than registered or certified mail, we will deem it filed on the date the AHC receives it.

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

Sincerely,

AIR POLLUTION CONTROL PROGRAM

A handwritten signature in black ink that reads "Michael J. Stansfield". The signature is written in a cursive style with a large, stylized initial "M".

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

MJS:ah

Enclosures

c: PAMS File: 2014-06-016