



Missouri Department of

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NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

JUN 12 2018

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

RE: Intermediate Operating Permit Significant Modification - Permit Number: OP2016-010B
Project Number: 2017-12-054; Installation Number: 195-0046

Dear Mr. Edmundson:

Intermediate Operating Permit OP2016-010A is being modified in response to your December 28, 2017 request to add Special Conditions from Construction Permit 092017-009 to the operating permit. The construction permit was issued September 25, 2017 and increased the production capacity of the facility from 60 million gallons per year to 66 million gallons per year. Construction Permit 092017-009 also superseded all special conditions from Construction Permit 092011-001; therefore, the special conditions of Construction Permit 092011-001 have been removed from the operating permit.

The permit is revised by removing Permit Condition PW001 and Permit Conditions 005 through 015 from Intermediate Operating Permit OP2016-010A and adding the Permit Conditions found in this Modification to Section II and Section III. In order to ensure that the installation is complying with the correct version of the Permit Conditions, redact Permit Condition PW001 and Permit Conditions 005 through 015 from the current operating permit and attach the following pages to the end of their respective sections. Attachment N should be added to the end of Section VI of the operating permit. Please remove Attachments A, B, C, D, E, I, and J as they are no longer necessary for the revised operating permit.

This permit modification 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>.



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Mr. Tyler Edmundson
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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 thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you have any questions regarding this modification, please do not hesitate to contact Justin Spasovski, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

A handwritten signature in cursive script that reads "Kendall B. Hale".

Kendall B. Hale
Permits Section Chief

KBH:jsj

Enclosures

c: NERO Regional Office
PAMS File: 2017-12-054

INTERMEDIATE PERMIT TO OPERATE

Operating Permit Number: OP2016-010B
Installation Name: Mid-Missouri Energy, LLC
Installation ID: 195-0046
Project Number: 2017-12-054

Description of Intermediate Modification:

Mid-Missouri Energy, LLC submitted a request dated December 27, 2017 to include Special Conditions from Construction Permit 092017-009. This Modification supersedes Permit Conditions PW001 and 005 – 015. The following Permit Conditions shall be added to Section II. and Section III. of Intermediate Operating Permit OP2016-010A:

PERMIT CONDITION PW002

10 CSR 10-6.060 Construction Permits Required
 Construction Permit 092017-009, Issued September 25, 2017

Emission Limitations:

- Special Condition 3.A: the permittee shall not discharge acrolein emissions into the atmosphere from the entire installation, or individual stack, in excess of the listed amounts in any consecutive twelve month period. This shall include emissions from startup, shutdown, and malfunction as reported to the Air Pollution Control Program’s Compliance/Enforcement Section in accordance with Missouri State Rules 10 CSR 10-6.050.

Table 1: Acrolein Limits

Emission Point	Description	Limit (tpy)
S40	Fermentation Scrubber	0.0438
S70	DDGS Cooling Cyclone	0.1226
S10	DDGS Dryer/Thermal Oxidizer	0.657

- Special Condition 3.B: The permittee shall not discharge acrolein emissions into the atmosphere in excess of the listed hourly amounts.

Table 2: Hourly Acrolein Limits

Emission Point	Description	Limit (lb/hr)
S40	Fermentation Scrubber	0.29
S70	DDGS Cooling Cyclone	0.16
S10	DDGS Dryer/Thermal Oxidizer	0.48

Operation Limitations:

1. Special Condition 2.A: the permittee shall not exceed the following limit per 12-month rolling period.

Table 3: Truck Limits

Item (truck capacity)	Limit
Grain, DDGS (Dry Distiller's Grain With Solubles), Wetcake, Enzymes, Urea Acid, and Caustic Delivery/Shipment (25 tons per truck capacity)	34,980 trucks
Ethanol Shipment and Denaturant Delivery (7,800 gallons per truck capacity)	8,674 trucks
CO ₂ shipment (20 tons per truck capacity)	5,475 trucks

2. Special Condition 2.B: The permittee shall not exceed a production limit of 66,000,000 gallons of denatured ethanol per 12-month rolling period.
3. Special Condition 12.B: The permittee shall only load ethanol to rail (F55) between the hours of 7 am to 7 pm. It shall not load ethanol to rail (F55) from 7 pm to 7 am.
4. Special Condition 9: Stacks S15 Grain Unloading and S30 Hammermill shall have a minimum height of 21.34 meters (70.0 feet.)

Recordkeeping and Reporting:

1. Special Condition 2.C: The permittee shall demonstrate compliance with Special Conditions 2.A. and 2.B. by recording the following information.
 - a) Monthly gallons of denatured ethanol produced;
 - b) Monthly material hauled by the trucks;
 - c) Monthly total number of trucks hauling each specific material,
 - d) The 12-month rolling total number of trucks for each material category in Table 3;
 - e) The 12-month rolling total gallons of denatured ethanol produced;
 - f) Compliance limits; and
 - g) Indication of compliance with the limits.
2. Special Condition 3.C: The permittee shall demonstrate compliance with the limits in Special Condition 3.A. by recording the monthly and the 12-month rolling total of acrolein emissions from this installation. Attachment N, or equivalent forms, shall be used for this purpose.
3. Special Condition 3.D: The permittee shall demonstrate compliance with the limits in Special Condition 3.B. using the performance tests required in Special Condition 10 (See Permit Condition 029).
4. Special Condition 12.C: The permittee shall note the time of each loadout of ethanol to rail (F55).

PERMIT CONDITION 021

10 CSR 10-6.060 Construction Permits Required
Construction Permit 092017-009, Issued September 25, 2017

Emission Unit	Description
P40	CO ₂ Fermentation Scrubber

Operational Limitations:

1. Special Condition 4.A: Emissions from the four (4) fermentation tanks and the beer well shall be controlled using a wet scrubber (S40). The wet scrubber shall be operated and maintained in accordance with the manufacturer's specifications.
2. Special Condition 4.B: The scrubber shall be equipped with a gauge or meter that indicates the pressure drop across the scrubber. The scrubber shall be equipped with a flow meter that indicates the flow through the scrubber. This gauge and meter shall be located in such a way they may be easily observed by Department of Natural Resources' employees.
3. Special Condition 4.E: The permittee shall use sodium bisulfite or ammonium bisulfite (or other additive) to control acetaldehyde emissions according to the rate specified by the most recent stack testing data. The rate shall be determined by the first stack test conducted after the issuance of this permit.

Monitoring/Recordkeeping:

1. Special Condition 4.C: The permittee shall monitor and record the operating pressure drop across the scrubber at least once every twenty-four (24) hours while the equipment is in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
2. Special Condition 4.D: The permittee shall monitor and record the water flow rate through the scrubber at least once every twenty-four (24) hours while the equipment is in operation. The flow rate shall be maintained equal to or greater than 45 gallon per minute (gpm).
3. Special Condition 4.F: The permittee shall maintain an operating and maintenance log for the scrubber using Attachment H or equivalent form 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 14.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.

PERMIT CONDITION 022

10 CSR 10-6.060 Construction Permits Required
Construction Permit 092017-009, Issued September 25, 2017

Emission Unit	Description
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers

Operational Limitation:

1. Special Condition 5.A: The thermal oxidizer (Control Device C10) must be in use at all times when the DDGS Dryers (Device P10) or distillation operations (P50) are in operation or any time that regulated VOC or HAP emissions are being vented to the thermal oxidizer.
2. Special Condition 5.B: The thermal oxidizer shall be operated and maintained in accordance with the manufacturer's specifications.

Monitoring/Recordkeeping:

1. Special Condition 5.C: Emission rates of VOC and HAPs shall be tested, as detailed in Special Condition 10 (see Permit Condition 029), to verify the thermal oxidizer is operating as assumed.
2. Special Condition 5.D: 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 3-hour average at no more than 50 degrees Fahrenheit below 1526.5 °F. The acceptable temperature range may be reestablished by performing a new set of emission tests.
3. Special Condition 5.E: The permittee shall maintain an operating and maintenance log for the thermal oxidizer using Attachment H or equivalent form 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 inspection including any actions or maintenance activities that result from that inspection.
4. Special Condition 14.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.

PERMIT CONDITION 023

10 CSR 10-6.060 Construction Permits Required
 Construction Permit 092017-009, Issued September 25, 2017

Emission Unit	Description
P15	Grain Unloading
P30	Hammermill
P70	DDGS Cooler
P90	DDGS Loadout

Operational Limitations:

1. Special Condition 6.A: The baghouses listed below shall be in use at all times when the associated equipment is in operation:

Table 4: Equipment Controlled by Baghouses

Control ID No.	Emission Point	Emission Unit controlled
C15	S15	Grain Unloading
C30	S30	Hammermill
C90	S90	DDGS Loading
C70	S70	DDGS Cooler

2. Special Condition 6.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 indicated 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 6.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 6.D: The installation shall monitor and record the operating pressure drop across each baghouse at least once in every twenty four (24) hour period when the associated equipment is operated. The operating pressure drop shall be maintained within the normal operating range specified by the manufacturer’s performance warranty. If the pressure drop reading should fall outside of this normal operating range, then the associated equipment shall be shut down as quickly as is reasonably practical. “As quickly as reasonably practical” shall not be longer than 8 hours. 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 re-starting the equipment.
2. Special Condition 6.E: The installation shall maintain an operating and maintenance log for the baghouse(s) using Attachment H or equivalent form 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.
3. Special Condition 14.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.

PERMIT CONDITION 024	
10 CSR 10-6.060 Construction Permits Required	
Construction Permit 092017-009, Issued September 25, 2017	
Emission Unit	Description
EP22, F55, & F56	Truck and Rail VRS Loadout Flare

Operational Limitation:

Special Condition 7.A: The VRS flare (EP22) must be in use at all times during denatured ethanol truck loadout. The flare shall comply with §60.18(b).

Monitoring/Recordkeeping:

1. Special Condition 7.D: The permittee shall maintain an operating and maintenance log for the flares using Attachment H or equivalent form 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 14.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.

PERMIT CONDITION 025	
10 CSR 10-6.060 Construction Permits Required	
Construction Permit 092017-009, Issued September 25, 2017	
Emission Unit	Description
EP11	Biomethanator Flare
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers

Operational Limitations:

1. Special Condition 7.B: The Biomethanator flare (EP11) must be in use at all times when the DDGS Dryers (P10) are not in operation to control the biomethanator off-gases. During times when the DDGS Dryers (P10) are in operation, the biomethanator off-gases shall be vented to either the DDGS Dryers (P10) or the Biomethanator flare (EP11).
2. Special Condition 7.C: The flares shall comply with §60.18(b).

Monitoring/Recordkeeping:

1. Special Condition 7.D: The permittee shall maintain an operating and maintenance log for the flares using Attachment H or equivalent form 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 14.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.

PERMIT CONDITION 026	
10 CSR 10-6.060 Construction Permits Required	
Construction Permit 092017-009, Issued September 25, 2017	
Emission Unit	Description
P80	Cooling Tower

Operational Limitations:

1. Special Condition 8.A: The cooling tower(s) shall be operated and maintained in accordance with the manufacturer's specifications.
2. Special Condition 8.B: The cooling water circulation rate shall not exceed 1,500,000 gallons per hour (25,000 gallons per minute).
3. Special Condition 8.C: The drift loss from the towers shall not exceed 0.005 percent of the water circulation rate.
4. Special Condition 8.D: The total dissolved solids (TDS) concentration in the circulated cooling water shall not exceed a TDS concentration of 2,500 parts per million (ppm) per sampling event.

Monitoring/Recordkeeping/Reporting:

1. Special Condition 8.A: Manufacturer's specifications shall be kept on site and made readily available to Department of Natural Resource's employees.
2. Special Condition 8.C: 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.
3. Special Condition 8.D: A TDS sample shall be collected and analyzed for the TDS concentration at least once per calendar month.
4. Special Condition 14.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.
5. The permittee shall retain records of pumps manufacturer's specifications on-site to demonstrate compliance with the Operational Limitations.
6. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, or AirComplianceReporting@dnr.mo.gov, no later than ten days after the records indicate an exceedance of the emission limitation.
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 027	
10 CSR 10-6.060 Construction Permits Required Construction Permit 092017-009, Issued September 25, 2017	
Emission Unit	Description
P110	Emergency Fire Pump
P120	364 HP Emergency Generator – 2007 Cummins, Inc. QSL9-G2 NR3

Operational Limitation:

Special Condition 12.A: The permittee shall not operate the emergency fire pump (S110) and emergency generator (S120) more than 300 hours, each, per 12-month rolling period.

Monitoring/Recordkeeping:

1. The permittee shall keep records of the monthly and 12-month rolling total hours of operation of the engine that is recorded through the non-resettable hour meter as required in Permit Condition 004 and 015.
2. Special Condition 14.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:

1. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, or AirComplianceReporting@dnr.mo.gov, no later than ten days after the records indicate an exceedance of the emission 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.

PERMIT CONDITION 028	
10 CSR 10-6.060 Construction Permits Required Construction Permit 092017-009, Issued September 25, 2017	
Emission Unit	Description
F100	Truck Traffic on Haul Roads

Operational Limitation:

Special Condition 13: The permittee shall develop, maintain, and implement a Fugitive Dust Control Plant (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.

Monitoring/Recordkeeping:

Special Condition 14.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.

PERMIT CONDITION 029	
10 CSR 10-6.060 Construction Permits Required	
Construction Permit 092017-009, Issued September 25, 2017	
Emission Unit	Description
P10	Thermal Oxidizer/Heat Recovery Boiler/DDGS Dryers
P40	CO ₂ Fermentation Scrubber
P70	DDGS Cooler Cyclone

Performance Testing:

1. Special Condition 10.A: The permittee shall conduct performance tests every five years to establish the VOC, combined HAP, Acetaldehyde, Acrolein, Formaldehyde, and Methanol emission rates from the fermentation scrubber outlet (S40), the thermal oxidizer outlet (S10), and the DDGS cooler outlet (S70).
2. Special Condition 10.B: Testing shall occur at production rates representative of normal operating conditions. The maximum production rate after the performance testing shall be limited to 110% of the average production rate during the performance testing event.
3. Special Condition 10.C: All applicable operating parameters (i.e. scrubber water flowrate, pH level, scrubber additive addition rate, scrubber type of additive, thermal oxidizer average temperature, pressure drop across the control device, etc.) at which the stack tests are conducted shall be used to set the appropriate values used in actual operations of the wet scrubber and the thermal oxidizer.
4. Special Condition 10.D: The operating parameters in Special Condition 10.C. shall be recorded on record keeping sheet(s) and be made available to Department of Natural Resources' personnel upon request. The frequency of the record keeping is dependent upon the parameters being kept and should be determined and agreed upon by the Air Pollution control Program's Compliance/Enforcement Section and the permittee before the start of the performance test.
5. Special Condition 10.E: The performance tests for the fermentation scrubbers (S40) shall be conducted for one of the following time periods:
 - a) A complete cycle, defined as the time period between transferring the contents of the next fermenter; or
 - b) During period(s) of representative emissions, the permittee shall submit, in the proposed test plant required in Special Condition 11.A. sufficient data to determine the point(s) of representative emissions. The representative emissions are the average of 3 points identified as highest airflow, lowest airflow, and mid-range airflow going up or down the pressure curve. Testing will consist of three (3) 1-hour runs at each of the 3 points. These points must be approved by the Air Pollution Control Program's Compliance/Enforcement section prior to conducting the tests. If sufficient data is not supplied supporting these representative emission points, the permittee shall conduct testing for the time period outlined in Special Condition 10.F.1)
6. Special Condition 10.F: If the performance testing indicates that any of the emission rates specified in Permit Condition PW002 (Special Condition 3) are being exceeded, the permittee shall propose a plan to the Air Pollution Control Program within thirty (30) days of submitting the performance test results. This plan must demonstrate how the permittee will reduce the emission rates below those stated in Permit Condition PW002. The permittee shall implement any such plan immediately upon its approval by the Director.

Proposed Test Plan and Final Report:

1. Special Condition 11.A: For testing required in Special Condition 10.A., a completed Proposed Test Plan Form must be submitted to the Air Pollution Control Program at stacktesting@dnr.mo.gov 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.

2. Special Condition 11.B: One electronic copy of a written report of the performance test results shall be submitted to stacktesting@dnr.mo.gov within 60 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.
3. Special Condition 11.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, specifically:
 - a) The production rate during each performance test run. Production rates for the fermentation scrubber outlet (S40) and the thermal oxidizer outlet (S10) shall be indicated in terms of gallons of anhydrous ethanol. Production rates for the DDGS Cooler outlet (S70) shall be indicated in terms of tons of DDGS.
 - b) The pressure drop across the scrubber and the liquid flow rate through the scrubber during each performance test run for the fermentation tanks (S40).
 - c) The operating temperature of the thermal oxidizer (S10) during each performance test run.
 - d) The amount of sodium bisulfite or ammonium bisulfate (or other additives) used during each performance test run for the fermentation tanks (S40).
 - e) The type of additive.
4. Special Condition 11.D: The test report shall also include calculations to show that the potential VOC emissions of the entire installation remain below the major source threshold of 100.0 tons per year, that the individual HAP emissions of the entire installation remain below their respective SMAL (except for acrolein), and that the combined HAP emissions of the entire installation remain below the major source threshold of 25.0 tons per year when using the tested rates. If the calculations show that the potential emissions of either HAPs or VOCs from the entire installation are greater than their respective SMAL or major source levels, the permittee shall submit a new construction permit application no later than 90 days after the submittal of the stack test report to account for the increase emission rates.

ATTACHMENT N
 Acrolein Compliance Tracking Record

This sheet covers the month of _____ in the year _____

Emission point _____

(Copy this sheet as needed)

Column A	Column B	Column C	Column D	Column E
Emission Point(s)	Description	Amount Processed (tons or Mgal)	(a) Acrolein Emission Factor (EF) in lb/ton or lb/Mgal	(b) Acrolein Emissions (tons)
S10	DDGS Dryer/Thermal Oxidizer		4.89E-04 (lb/ton)	
S40	Fermentation scrubber		2.25E-01 (lb/Mgal)	
S70	DDGS Cyclone		1.56E-04 (lb/ton)	
(c) The total amount of acrolein from the previous eleven (11) months (tons):				
(d) Acrolein Emissions from Startup, Shutdown, and Malfunctions (tons):				
(e) Current 12-month Total of Individual HAP Emissions in Tons: [(c) + (d) - (e)]				

- (a) EF for the fermentation scrubber (S40), DDGS Cyclone (S70), and the DDGS Dryer/Thermal Oxidizer (S10) shall be taken from the most recent stack tests. EF from 2017 stack tests included in table.
- (b) [Column E] = [Column C] × [Column D] ÷ 2,000 lb/ton.
- (c) Sum the acrolein emissions (tons) from the previous eleven (11) months.
- (d) Input the acrolein emissions from startup, shutdown, and malfunction for this month and the previous eleven (11) months as reported to the Compliance/Enforcement Section in accordance with Missouri State Rules 10 CSR 10-6.050.
- (e) Calculate the new 12-month rolling acrolein emissions total by adding the acrolein emissions of this month, emissions from startup, shutdown, and malfunction, and the emissions of the previous eleven (11) months.

A 12-Month acrolein emissions rolling total (d) of less than the following indicates compliance:

- For S40, 0.0438 tpy**
- For S70, 0.1226 tpy**
- For S10, 0.657 tpy**