



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Mike Kehoe
Governor

Jake Buxton
Director

Date

Cassidy Cardena
EHS Manager
Show-Me Ethanol, LLC
26530 Highway 24 East
Carrollton, MO 64633

RE: Part 70 Significant Modification: OP2022-019A
Project: 2026-01-011; Installation ID: 033-0036

Dear Cassidy Cardena:

Your Part 70 Operating Permit OP2022-019A is being modified in response to your January 3, 2026, request. Your request was for the approval to use a Predictive Emissions Monitoring System (PEMS) on Thermal Oxidizer (SME-10) for compliance with the NO_x limit in NSPS Db. The use of PEMS will replace the need for the use of Continuous Emission Monitoring System (CEMS). The facility can use PEMS under §60.48b(g) of NSPS Db: "The owner or operator of an affected facility that has a heat input capacity of 73 MW (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% (0.10) may monitor steam generating unit operating conditions and predict NO_x emission rates as specified in a plan submitted pursuant to §60.49b(c)". The permittee has submitted the required plan specified in §60.49b(c) to the Air Pollution Control Program. This change has been approved by the Air Pollution Control Program and this permit amends OP2022-019 to remove requirements related to CEMS and adds requirements applicable to operating the PEMS.

This change will not affect the maximum hourly design rate (MHDR) of the Thermal Oxidizer and this change will not affect the Thermal Oxidizer's applicability to any NSPS rule as this is not considered a modification that would cause the unit to be "reconstructed" or "modified". No other change is occurring in the Thermal Oxidizer. [§60.2]

Your permit is revised by replacing Permit Condition 002 with the revised Permit Condition 002 on the attached pages. To ensure that you are complying with the correct version of Permit Condition 002, please cross out, blacken, or redact the outdated version of Permit Condition 002, on pages 14 – 16 of OP2022-019A.

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 <https://dnr.mo.gov/about-us/division-environmental-quality/regional-office>. The online CAV request can be found at <https://dnr.mo.gov/compliance-assistance-enforcement/request-visit>.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to §621.250 and §643.078.16 RSMo. To appeal, you must file a petition with the administrative hearing commission within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, <https://ahc.mo.gov/>.

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

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
Permits Section Chief

KBH:ep

Enclosures

c: Northeast Regional Office
PAMS File: 2026-01-011

PART 70 PERMIT TO OPERATE

Operating Permit: OP2022-019A
Expiration Date: 06/13/2027
Installation ID: 033-0036
Project: 2026-01-011

Owner/Operator Name and Address

Show-Me Ethanol, LLC
26530 Highway 24 East
Carrollton, MO 64633
Carroll County, S35, T53N, R23W

Description of Part 70 Significant Modification:

Show-Me Ethanol, LLC submitted a request dated January 3, 2026, to request the approval of PEMS for the Thermal Oxidizer (SME-10) in lieu of CEMS. The following permit condition replaces Permit Condition 002 in Part 70 Operating Permit OP2022-019A:

-Revised Permit Condition 002

Updated to include PEMS language and requirements and removed non-applicable requirements.

PERMIT CONDITION 002

10 CSR 10-6.070 New Source Performance Standards
40 CFR Part 60, Subpart A - General Provisions; and
40 CFR Part 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional
Steam Generating Units

Emission Unit	Description
SME-10	Thermal Oxidizer, 150 MMBtu/hr natural gas, methane, and process off-gasses, with heat routed to HRSG

Emission Limitations:

1. The permittee shall not cause to be discharged into the atmosphere any gases that contain NO_x in excess of 0.10 lb/MMBtu (43 ng/J). [§60.44b(a)(1)(i)]
2. The NO_x standards apply at all times including periods of startup, shutdown, or malfunction. [§60.44b(h)]
3. Compliance with the emission limits under §60.44(b) is determined on a 30-day rolling average basis. [§60.44b(i)]

Predictive Emissions Monitoring Systems (PEMS) Requirements:

1. For an affected facility that has a heat input capacity of 73 MW (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% (0.10), the permittee shall: [§60.48b(g)]
 - a) Monitor steam generating unit operating conditions and predict NO_x emission rates as specified in a plan submitted pursuant to §60.49b(c). [§60.48b(g)(2)]
2. For a facility subject to the NO_x standard in §60.44b that seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of §60.48(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). The permittee shall maintain records of predicted nitrogen oxide 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_x emissions (i.e. ng/J or lbs/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 O₂ level); [§60.49b(c)(1)]
 - b) Include the data and information that is being used to identify the relationship between NO_x emission rates and these operating conditions; and [§60.49b(c)(2)]
 - c) Identify how these operating conditions, including steam generating load, will be monitored under §60.48b(g) on an hourly basis by the permittee during the period of operating of the affect 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 under §60.49b(g). [§60.49b(c)(3)]
3. The PEMS shall be operated and data recorded during all periods of operation, including startup and shutdown, of the affected facility except for PEMS breakdowns and repairs.[10 CSR 10-6.065(5)(C)1.C]

4. The permittee shall monitor the following parameters on an hourly basis: [§60.49b(c) and 10 CSR 10-6.065(5)(C)1.C]
 - a) Primary Inputs:
 - i) Total Gas Flow for the Thermal Oxidizer and Dryers (MMBtu/hr)
 - ii) HRSG Steam Flow (lb/hr)
 - iii) Combustion Air Flow (acfm)
 - b) Secondary Inputs:
 - i) Force Direct (FD) Fan Speed Control (%)
 - ii) Damper Position – Combustion Air (%)
 - iii) Damper Position – Preheater Outlet (%)
 - iv) Valve Position – Thermal Oxidizer Natural Gas (%)
 - v) Thermal Oxidizer Stack Temperature (°F)
 - c) Tertiary Inputs:
 - i) Boiler Feedwater Flow (gph)
 - ii) Feedwater Valve Position (%)
 - iii) Temperature – Steam Header (°F)
 - iv) Temperature - Fresh Air (°F)
 - v) Temperature Stack Gas (°F)
5. When any monitored primary input value is outside the defined operating envelope, the PEMS output shall be deemed invalid and cannot be used for compliance purposes. These periods of operation will be reported as PEMS downtime. [§60.49b(c) and 10 CSR 10-6.065(5)(C)1.C]
6. When any secondary or tertiary input value is outside the defined operating envelope, the value shall not be used by the PEMS for the PEMS output to be considered valid. [§60.49b(c) and 10 CSR 10-6.065(5)(C)1.C]
7. The PEMS shall use data obtained by the previous CEMS and any data generated during Performance Specification 16 tests of the PEMS. [§60.49b(c) and 10 CSR 10-6.065(5)(C)1.C]
8. The permittee shall conduct testing of the PEMS no later than 120 days after issuance of this permit modification in accordance with NSPS Appendix B Performance Specification 16. And shall conduct ongoing relative accuracy audits and relative accuracy test audits in accordance with and on the frequency specified in NSPS Appendix B Performance Specification 16. [§60.49b(c) and 10 CSR 10-6.065(5)(C)1.C]
 - a) 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.
 - 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 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.
 - c) The test report is to fully account for all operational and emission parameters addressed within this permit condition and Performance Specification 16.
9. The existing CEMS shall not be removed until passing PEMS results are obtained from NSPS Appendix B Performance Specification 16. [§60.49b(c) and 10 CSR 10-6.065(5)(C)1.C]
10. The PEMS will predict one-minute average NO_x and O₂ concentrations (ppmvd). These concentrations shall be converted to lb/MMBtu using Equation 19-1 in NSPS Appendix A Method 19. The one minute average data shall be compiled into 15-minute averages and hourly averages.

These hourly averages shall be used to calculate the 30-day rolling average according to §60.46b(e)(4). [§60.49b(c) and 10 CSR 10-6.065(5)(C)1.C]

11. The permittee shall provide emissions data for a minimum of 75% of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days. If process data cannot be obtained and correlated to emissions data for the minimum time specified then the permittee shall obtain data by using standby monitoring systems, Method 7 of NSPS Appendix A, Method 7A of NSPS Appendix A, or other approved reference methods. [§60.48b(f) and 10 CSR 10-6.065(5)(C)1.C]

Compliance and Performance Test Methods and Procedures for NO_x:

1. Compliance with the NO_x emission standards under §60.44b shall be determined through performance testing under §60.46b(e). [§60.46b(c)]
2. To determine compliance with the emission limits for NO_x required under §60.44b, the permittee shall conduct the performance test as required under §60.8. [§60.46b(e)]
 - a) The permittee shall upon request determine compliance with the NO_x standards in §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_x emissions data collected pursuant to §60.48(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_x emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all the hourly NO_x emission data for the preceding 30 steam generating unit operating days. [§60.46b(e)(4)]

Reporting/Recordkeeping:

1. 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 month. [§60.49b(d)(1)]
2. 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_x emissions rates (expressed as NO₂) (ng/J or lb/MMBtu heat input) measured or predicted; [§60.49b(g)(2)]
 - c) The 30-day average NO_x emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide 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_x emission rates are in excess of the NO_x 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/process data have been excluded from the calculation average emission rates and the reasons for excluding data; and [§60.49b(g)(6) and 10 CSR 10-6.065(5)(C)1.C]

- 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 primary, secondary, or tertiary inputs were outside their defined operating envelope. [10 CSR 10-6.065(5)(C)1.C]
 - i) Description of any modifications to the PEMS that could affect the ability of the PEMS to comply with Performance Specification 16. [10 CSR 10-6.065(5)(C)1.C]
 - j) Results of quarterly relative accuracy audits. [10 CSR 10-6.065(5)(C)1.C]
3. The permittee shall submit excess emissions reports for any excess emissions that occurred during the reporting period. These reports shall be submitted quarterly in accordance with §60.7(c) and (d). [§60.49b(h) and 10 CSR 10-6.065(5)(C)1.C]
4. The permittee may submit electronic quarterly reports for NO_x in lieu of submitting the written reports under §60.49b(h). Each quarterly electronic report shall contain the information in §60.7(c) and (d). 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 responsible official, indicating whether compliance with the applicable emission standards and minimum data requirements of NSPS Db was achieved during the reporting period. [§60.49b(v) and 10 CSR 10-6.065(5)(C)1.C]
5. The permittee shall maintain all records required by this permit for not less than five years and shall make them available to Missouri Department of Natural Resources’ personnel upon request. [10 CSR 10-6.065(5)(C)1.C(II)(b)I and 10 CSR 10-6.065(5)(C)1.G(V)]
6. The permittee shall report no later than 10 days after records indicate an exceedance of any of the limitations to the Air Pollution Control Program’s Compliance/Enforcement Section at: [10 CSR 10-6.065(5)(C)1.C(III)(c)II]
- a) PO Box 176, Jefferson City, MO 65102 and AirComplianceReporting@dnr.mo.gov **or**
 - b) Any means that comply with 40 CFR Part 3.
8. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [10 CSR 10-6.065(5)(C)1.C(III)(b)]