



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

November 12, 2020

Russ Worsley
City Administrator
City of Lamar
1104 Broadway
Lamar, MO 64759

RE: Part 70 Operating Permit Significant Modification – Permit Number: OP2018-071A
Project Number: 2018-12-035; Installation Number: 011-0031

Dear Russ Worsley:

Your Part 70 Operating Permit OP2018-071 is being updated in response to your December 31, 2018 request. Your request was to:

- 1) incorporate special conditions of Construction Permit 092017-007B;
- 2) add a plantwide permit condition for regulatory requirements under 40 CFR Part 63, Subpart ZZZZ;
- 3) revise footnote references to Construction Permit 092017-007A in Attachments B through F to Construction Permit 092017-007B;
- 4) add Construction Permit 092017-007B to the Construction Permit History section in the Statement of Basis;
- 5) revise the language included in the Maximum Achievable Control Technology (MACT) Applicability section in the Statement of Basis; and
- 6) change the responsible official from Lynn Calton, City Administrator to Russ Worsley, City Administrator.

Your permit is revised by:

- 1) replacing Permit Condition PW1 with the revised Permit Conditions PW1 on the attached pages,
- 2) replacing Permit Condition 3 with the revised Permit Condition 3 on the attached pages,
- 3) adding Permit Condition PW2 on the attached pages,
- 4) replacing the language for the MACT Applicability section of the Statement of Basis with the language on the attached pages, and
- 5) changing the responsible official from Lynn Calton to Russ Worsley, City Administrator

In order to ensure you are complying with the correct version of Permit Condition PW1, Permit Condition 3, and the MACT Applicability language, please cross out, blacken, or redact the outdated Permit Condition PW1, Permit Condition 3, and MACT Applicability language.



Russ Worsley
Page Two

Please also revise the portion of “Note 2” included in the footnotes of Attachments B through F that reads “...and/or performance testing required by Construction Permit 092017-007A for new fuel types (i.e. compressed natural gas)...” to read “...and/or performance testing required by Construction Permit 092017-007B for new fuel types (i.e. compressed natural gas)...”

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>.

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 and amendment, please do not hesitate to contact Liberty Sitzes, 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



Kendall B. Hale
Permits Section Chief

KBH:lsj

Enclosures

c: Southwest Regional Office
PAMS File: 2018-12-035
Bob Cheever, EPA R7

PART 70 PERMIT TO OPERATE SIGNIFICANT MODIFICATION

Operating Permit Number: OP2018-071A
Installation Name: City of Lamar
Installation ID: 011-0031
Project Number: 2018-12-035

Description of Part 70 Significant Modification:

The following Permit Condition PW1, Permit Condition 3, and Maximum Achievable Control Technology (MACT) Applicability language replaces Permit Condition PW1, Permit Condition 3, and MACT Applicability language in Part 70 Operating Permit OP2018-071, respectively. The following Permit Condition PW2 is an addition to Part 70 Operating Permit OP2018-071. Modified Permit Condition PW1 reflects the deleted optional control device requirements for EP-09 and EP-10 (15.343 MMBtu/hr Caterpillar G3520C Landfill Gas Engines), which are included with the plantwide conditions, and requires the installation to conduct a new Ambient Air Quality Impact Analysis (AAQIA) on formaldehyde in the event that any new residence or business builds within 0.72 miles of the installation. Modified Permit Condition 3 reflects the deleted formaldehyde emission limitations, formaldehyde performance testing requirements, formaldehyde monitoring and reporting requirements, and formaldehyde recordkeeping requirements for EP-09 and EP-10. Modified MACT Applicability language now considers the installation as a major source of Hazardous Air Pollutants (HAPs). Added Permit Condition PW2 includes regulatory requirements under 40 CFR Part 63, Subpart ZZZZ.

PERMIT CONDITION PW1

10 CSR 10-6.060 Construction Permits Required
Construction Permit 092017-007B, Issued November 28, 2018

Emission Limitations:

The permittee shall emit less than 250.0 tons of carbon monoxide (CO) in any consecutive 12-month period from the entire installation which includes the four (4) existing landfill gas (LFG) engines (EP-05, EP-06, EP-07, and EP-08) and the two (2) new Caterpillar LFG engines (EP-09 and EP-10). [Special Condition 2.A]

Alternative Fuel:

The permittee shall install a "T" connection to the existing fuel supply piping which will allow all engines at the facility to accept natural gas as an alternative fuel to landfill gas prior to the startup of operation of EP-09 or EP-10. [Special Condition 4.A]

Future Modeling Evaluations:

1. The permittee shall assess the area surrounding its property every five years to see whether any new residences or businesses have been built within 0.72 miles of the installation. Results of the assessment shall be submitted with the Title V operating permit renewal. In the event the Title V permit is terminated, the results shall be submitted to the Air Pollution Control Program's Compliance/Enforcement Section. [Special Condition 6.A]
2. In the event that any new residence or business builds within 0.72 miles of the facility, a new Ambient Air Quality Impact Analysis (AAQIA) for formaldehyde will need to be completed within 60 days of the assessment and submitted to the Air Pollution Control Program's Permit Section, P.O. Box 176, Jefferson City, MO 65102. [Special Condition 6.B]
3. This permit may be reopened for review based on the results of the AAQIA. [Special Condition 6.C]

Monitoring/Recordkeeping:

1. The permittee shall develop and use forms to demonstrate compliance with the plantwide 250.0 ton CO limitation. The forms shall contain at a minimum the following information, [Special Condition 2.E]
 - a. Installation name
 - b. Installation ID
 - c. Permit number
 - d. Current month
 - e. Current 12-month date range
 - f. Monthly production, electric kilowatt hours (ekWH), for each of the engines (EP-05, EP-06, EP-07, EP-08, EP-09, and EP-10)
 - g. Type of fuel combusted during the month per engine
 - h. Monthly emissions of CO from the six (6) landfill gas engines (EP-05, EP-06, EP-07, EP-08, EP-09, and EP-10) calculated using the following equation.

1) *Pollutant emissions (tons) = Total Power Output for the Month (electrical KWH) x*
$$1.34102 \left(\frac{\text{bhp} - \text{hr}}{\text{KWH}} \right) \times \text{Emission unit specific emission factor} \left(\frac{\text{grams pollutant}}{\text{bhp} - \text{hr}} \right) \times$$
$$\left(\frac{1 \text{ lb Pollutant}}{453.5924 \text{ grams Pollutant}} \right) \times \frac{1 \text{ ton}}{2000 \text{ lbs}}$$

- 2) The permittee shall calculate total CO emissions using the most recent CO emission factors for all engines (EP-05, EP-06, EP-07, EP-08, EP-09, and EP-10) from performance testing.
 - i. 12-month rolling total emissions of CO from the six (6) landfill gas engines (EP-05, EP-06, EP-07, EP-08, EP-09, and EP-10) including CO emissions from startup, shutdown, and malfunction as reported to the Air Pollution Control Program's Compliance/Enforcement Section.
 - j. Indication of compliance with the 250.0 ton CO emission limitation.
2. All records shall be maintained for five years and shall be made available for inspection to the Department of Natural Resources upon request. [§70.6(a)(3)(ii)]
3. Records may be retained electronically or in paper form.

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 and to AirComplianceReporting@dnr.mo.gov, no later than ten (10) days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit. [Special Condition 5.B]
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION PW2

10 CSR 10-6.070 New Source Performance Regulations

40 CFR Part 63 Subpart ZZZZ, National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Monitoring/Recordkeeping:

1. The permittee shall monitor and record fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, the permittee shall operate their stationary RICE in a manner which reasonably minimizes HAP emissions. [40 CFR 63.6625(c)]
2. The permittee shall keep records of their daily fuel usage monitors. [40 CFR 63.6655(c)]

Reporting:

1. The permittee shall comply with the initial notification requirements in Table 8 to Subpart ZZZZ. [40 CFR 63.6640(e)]
 - a. The permittee of an affected source that has an initial startup before the effective date of a relevant standard under Part 63 shall notify the Director in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after the effective date of the relevant standard (or within 120 calendar days after the source becomes subject to the relevant standard), shall provide the following information: [40 CFR 63.9(b)(2)]
 - i. The name and address of the permittee; [40 CFR 63.9(b)(2)(i)]
 - ii. The address (i.e., physical location) of the affected source; [40 CFR 63.9(b)(2)(ii)]
 - iii. An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date; [40 CFR 63.9(b)(2)(iii)]
 - iv. A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and [40 CFR 63.9(b)(2)(iv)]
 - v. A statement of whether the affected source is a major source or an area source. [40 CFR 63.9(b)(2)(v)]
2. If the permittee starts up their new or reconstructed stationary Reciprocating Internal Combustion Engine (RICE) with a site rating of more than 500 brake Horsepower (HP) located at a major source of HAP emissions on or after August 16, 2004, the permittee shall submit an Initial Notification not later than 120 days after the permittee becomes subject to Subpart ZZZZ. [40 CFR 63.6645(c)]
3. If the permittee is required to submit an Initial Notification but is otherwise not affected by the requirements of Subpart ZZZZ, in accordance with §63.6590(b), the permittee's notification should include the information in §63.9(b)(2)(i) through (v), and a statement that the permittee's stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions). [§63.6645(f)]

4. The permittee shall submit an annual report according to Table 7 of Subpart ZZZZ by the date specified unless the Director has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of §63.6650. The permittee shall report the data specified in (g)(1) through (g)(3) of §63.6650. [40 CFR 63.6650(g)]
 - a. Fuel flow rate of each fuel and the heating values that were used in the permittee's calculations. The permittee shall also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis. [40 CFR 63.6650(g)(1)]
 - b. The operating limits provided in the permittee's federally enforceable permit, and any deviations from these limits. [40 CFR 63.6650(g)(2)]
 - c. Any problems or errors suspected with the meters. [40 CFR 63.6650(g)(3)]

PERMIT CONDITION 3 10 CSR 10-6.060 Construction Permits Required Construction Permit 092017-007B, Issued November 28, 2018

Emission Unit	Description	Manufacturer/Model #
EP-09	15.343 MMBtu/hr landfill gas engine; Alternative Fuel: Natural Gas	Caterpillar G3520C
EP-10	15.343 MMBtu/hr landfill gas engine; Alternative Fuel: Natural Gas	Caterpillar G3520C

Emission Limitations:

1. The permittee shall emit less than 100.0 tons of CO in any consecutive 12-month period from the two (2) 2242 bhp Caterpillar LFG engines (EP-09 and EP-10). [Special Condition 2.B]
2. The permittee shall emit less than 40.0 tons of nitrogen oxides (NO_x) in any consecutive 12-month period from the two (2) 2242 bhp Caterpillar LFG engines (EP-09 and EP-10). [Special Condition 2.C]
3. The permittee shall emit less than 40.0 tons of Volatile Organic Compounds (VOCs) in any consecutive 12-month period from the two (2) 2242 bhp Caterpillar LFG engines (EP-09 and EP-10). [Special Condition 2.D]

Performance Testing:

1. The permittee shall conduct performance testing of the (2) Caterpillar engines (EP-09 and EP-10) for NO_x, CO, and VOC. All test methods shall be authorized by the Air Pollution Control Program's Compliance/Enforcement Section prior to testing. [Special Condition 3.A]
2. Testing shall be performed at permitted capacity of 90 to 100 percent of the Maximum Hourly Design Rate (MHDR) defined as 1622 EKW from each engine. The test shall note fuel consumption rate in Standard Cubic Feet per Minute (SCFM) and fuel higher heating value in British thermal unit per Standard Cubic Feet (Btu/SCF). If it is impractical to test at permitted capacity, emission unit(s) may be tested at less than the permitted capacity; in this case, subsequent operation of the emission unit(s) is limited to 110 percent of the test rate until a new test is conducted. Once the emission units are so limited, operation at higher capacities is allowed for no more than 15 total days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Special Condition 3.B]
3. The initial stack tests shall be performed within 60 days after achieving the maximum production rate of the engine, but not later than 180 days after initial start-up for commercial operation [Initial tests were conducted on May 1st and 2nd, 2018. Therefore, this condition has been fulfilled]. [Special Condition 3.C]

4. Following the initial stack test, the permittee shall test EP-09 and EP-10 engines as required by 40 CFR 60 JJJJ. (i.e. every 8760 hours or every 3 years of operation, whichever comes sooner). [Special Condition 3.D]
5. The permittee shall conduct stack testing within 45 days of using a new type of fuel (i.e. compressed natural gas). The testing shall only be required for those engines which utilize the new fuel type. [Special Condition 3.E]
6. A completed Proposed Test Plan Form (enclosed) 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. [Special Condition 3.F]

Monitoring/Recordkeeping:

1. The permittee shall develop and use forms to demonstrate compliance with the emission unit-specific CO, NO_x, and VOC limitations applicable to EP-09 and EP-10. The forms shall at a minimum include the following information, [Special Condition 2.E]
 - a. Installation name
 - b. Installation ID
 - c. Permit number
 - d. Current month
 - e. Current 12-month date range
 - f. Monthly production, electric kilowatt hours (ekWH), for each of the engines (EP-09 and EP-10)
 - g. Type of fuel combusted during the month per engine
 - h. Emission factors for NO_x, CO, and VOC for EP-09 and EP-10 from the most recent stack test and fuel type
 - i. Emissions that result from the operation of EP-09 and EP-10 shall be calculated using the most recent emission factors determined through testing.
 - i. Monthly emissions for EP-09 and EP-10 are calculated using the following equation (Pollutants include NO_x, VOC, and CO).
 - 1)
$$\text{Pollutant emissions (tons)} = \text{Total Power Output for the Month (electrical KWH)} \times 1.34102 \left(\frac{\text{bhp} - \text{hr}}{\text{KWH}} \right) \times \text{Emission unit specific emission factor} \left(\frac{\text{grams pollutant}}{\text{bhp} - \text{hr}} \right) \times \left(\frac{1 \text{ lb Pollutant}}{453.5924 \text{ grams Pollutant}} \right) \times \frac{1 \text{ ton}}{2000 \text{ lbs}}$$
 - j. 12-month rolling total NO_x, CO, and VOC emissions from EP-09 and EP-10 and the sum of all NO_x, CO, and VOC emissions from startup, shutdown, and malfunction as reported to the Air Pollution Control Program's Compliance/Enforcement Section.
 - k. Indication of compliance with the 100.0 ton CO, 40.0 ton NO_x, and 40.0 ton VOC emission limitations.
2. All records shall be maintained for five years and shall be made available for inspection to the Department of Natural Resources upon request. [§70.6(a)(3)(ii)]
 3. Records may be retained electronically or in paper form.

Reporting:

1. One electronic copy of a written report of the performance test results shall be submitted to the 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. [Special Condition 3.G]
2. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 and to AirComplianceReporting@dnr.mo.gov, no later than ten (10) days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit. [Special Condition 5.B]
3. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

Statement of Basis

Note: the following language shall replace the MACT Applicability section of the Statement of Basis within Part 70 Operating Permit OP2018-071

Maximum Achievable Control Technology (MACT) Applicability

40 CFR Part 63 Subpart ZZZZ, *National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*.

Subpart ZZZZ applies to emission units EP-05 through EP-10. Since the RICEs are located at a major source of HAPs, in addition to meeting the requirements within 40 CFR 60 Subpart JJJJ, Subpart ZZZZ requires daily recordkeeping of the amount of landfill gas used and an annual report to demonstrate at least ten (10) percent (%) or more of the gross heat input on an annual basis was from landfill gas fuel. No emission or operational limitations apply according to 40 CFR 63.6590(b)(2). The requirements of Subparts ZZZZ and JJJJ are included in the operating permit.

Response to Public Comments

A draft of the installation's operating permit was posted to the Department's website at <https://dnr.mo.gov/env/apcp/permit-public-notices.htm> on September 18, 2020; beginning the public notice period related to this permit. The public notice period lasted for 30 days; ending on October 18, 2020. The United States Environmental Protection Agency (EPA) submitted one (1) comment on October 6, 2020 to the Air Pollution Control Program.

Comment 1: "...with this draft Part 70 being significantly modified, it would seem to be an ideal time to correct all of the unapproved reporting option provided in the Reporting under Section II-Plant Wide Emission Limitations. EPA would like to suggest MoDNR strongly consider modifying the reporting option allowing the permittee to submit reports to AirComplianceReporting@dnr.mo.gov.

Response to Comment 1: The reporting requirements included in permit conditions associated with this significant modification have been updated to allow submittal of reports to [Air ComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov).