PART 70
PERMIT TO OPERATE

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

Operating Permit Number: OP2018-071
Expiration Date: AUG 07 2023
Installation ID: 011-0031
Project Number: 2011-06-051

Installation Name and Address
City of Lamar
1901 Grand Street
0.75 miles NW of Hwy 71 and DD Intersection
Lamar, MO 64759
Barton County

Parent Company’s Name and Address
City of Lamar
1104 Broadway
Lamar MO, 64759

Installation Description:
The City of Lamar has four engines that are co-located on the Prairie View Regional Waste Facility (PVRWF) that combust landfill gas that has been diverted from the landfills (the Lamar Landfill which is closed and the Prairie View Landfill which is active). The City of Lamar and PVRWF are considered separate installations for permitting purposes. The engines owned and operated by City of Lamar are used to drive generators to provide power to the City of Lamar, MO. Two engines have maximum heat input of 14.19 MMBtu/hr each and two have a maximum heat input of 11.25 MMBtu/hr each. Four diesel generators that were previously permitted were sold and removed in March 2012. The facility was recently issued construction permit 092017-007 which authorized the construction of two additional LFG engines.

Prepared by
Jill Wade, P.E.
Operating Permit Unit

Director or Designee
Department of Natural Resources

AUG 07 2018
Effective Date
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I. Installation Equipment Listing

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

<table>
<thead>
<tr>
<th>Emission Unit #</th>
<th>Description of Emission Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP05</td>
<td>14.19 MMBtu/hr Landfill Gas Engine Generator</td>
</tr>
<tr>
<td>EP06</td>
<td>14.19 MMBtu/hr Landfill Gas Engine Generator</td>
</tr>
<tr>
<td>EP07</td>
<td>11.25 MMBtu/hr Landfill Gas Engine Generator</td>
</tr>
<tr>
<td>EP08</td>
<td>11.25 MMBtu/hr Landfill Gas Engine Generator</td>
</tr>
<tr>
<td>EP09</td>
<td>15.343 MMBtu/hr Landfill Gas Engine Generator</td>
</tr>
<tr>
<td>EP10</td>
<td>15.343 MMBtu/hr Landfill Gas Engine Generator</td>
</tr>
</tbody>
</table>

EMISSION UNITS WITHOUT SPECIFIC LIMITATIONS
The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance.

Description of Emission Source
Two 3,000 gallon above ground oil storage tanks
II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (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. The plant wide conditions apply to all emission units at this installation. All emission units are listed in Section I under Emission Units with Limitations and Emission Units without Limitations.

**Monitoring:**
The permittee shall calibrate, maintain and operate all pollution control devices and pollution monitoring related instruments according to the manufacturer’s recommendations, or maintenance and operational history of similar units. All calibrations, maintenance, and operations shall occur according to good engineering practices. All manufacturing specifications and operational/maintenance histories shall be kept on site.

**Recordkeeping:**
1. The permittee shall record all required record keeping in an appropriate format.
2. Records may be kept electronically using database or workbook systems, as long as all required information is readily available for compliance determinations.
3. The permittee shall keep a copy of this operating permit and review, copies of all issued construction permits and reviews, and copies of all Safety Data Sheets (SDS) on site.
4. All records must be kept for a minimum of 5 years and be made available to department personnel upon request.

**Performance Testing:**
When performance testing is required by a condition of this permit, one electronic copy of a written report of the performance test results shall be submitted to stacktesting@dnr.mo.gov within the timeframe required by the regulation that requires the testing. If no time frame is specified, the report shall be submitted within sixty days. 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.

**Reporting:**
1. The permittee shall report any exceedance of any of the terms imposed by this permit, or any malfunction which could cause an exceedance of any of the terms imposed by this permit, no later than ten days after the exceedance or event causing the exceedance (unless otherwise specified in the specific condition).
2. The permittee shall report any deviations from the monitoring, recordkeeping, and reporting requirements of this permit condition in the semi-annual monitoring report and annual compliance certification.
3. All reports and certifications shall be submitted to the Air Pollution Control Program’s Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov.
PERMIT CONDITION PW1
10 CSR 10-6.070 Construction Permits Required
Construction Permit 092017-007A, Issued November 2, 2017

Emission Limitations:
Special Condition 2.A: The permittee shall emit less than 250.0 tons of CO in any consecutive 12-month period from the entire installation which includes the four (4) existing LFG engines (EP05, EP06, EP07 and EP08) and the two (2) new Caterpillar LFG engines (EP09 and EP10).

Optional Control Device Requirements (including monitoring and recordkeeping):
1. Special Condition 4.A: The permittee may choose (at their discretion) to control emissions from EP09 and EP10 using a catalyst. The permittee may develop via stack testing and use controlled emission factors for periods when the catalyst is installed and operational.
2. Special Condition 4.C: The catalyst shall be operated and maintained in accordance with the manufacturer’s specifications and the operating ranges for pressure drop and temperatures across the catalyst as established per Special Condition 4.E.
3. Special Condition 4.D: The catalyst shall be equipped with gauges or meters, which indicate the pressure drop and temperatures across the catalyst. These gauges or meters shall be located such that the Department of Natural Resources’ employees may easily observe them. The pressure drop and temperatures shall be measured and recorded at least once every 24 hours when in operation.
4. Special Condition 4.E: The permittee shall submit a report to the Air Pollution Control Program’s Compliance/Enforcement Section establishing ranges for the operating parameters of the catalyst, if used, and show how the ranges were developed (e.g. directly from compliance testing, calculations from test data, actual operations and manufacturer’s specifications). At minimum, the operating ranges to be established include pressure drop, inlet and outlet temperatures and anticipated catalyst replacement frequency. The report shall be submitted within 30 days of the submittal of the test report in Permit Condition 3, Performance Testing and Reporting.
5. Special Condition 4.F: The permittee shall maintain a copy of the catalyst manufacturer’s performance warranty on site.
6. Special Condition 4.G: The permittee shall maintain an operating and maintenance log for the catalyst which shall include the following:
   a) Incidents of malfunction, with impact on emissions, duration of event, probably cause, and corrective actions; and
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
   c) Dates of all above schedules, incidents, activities, and actions.

Alternative Fuel Requirements:
Special Condition 5.A: 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 start-up of operation of EP09 or EP10.

Monitoring/Recordkeeping:
1. Special Condition 2.F.1) through 13): The permittee shall develop and use forms to demonstrate compliance with the CO plantwide emission limitation. The forms shall contain at a minimum the following information:
   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 engine (EP05, EP06, EP07, EP08, EP09 and EP10);
g) Type of fuel combusted during the month per engine;
h) Emission factors for CO from the most recent stack test and fuel type;
   i. Emissions that result from the operation of EP09 and EP10 without a control device shall be calculated using the most recent uncontrolled emission factors determined through testing.
   ii. If a catalyst is used, the permittee shall calculate emissions for EP09 and EP10 using the most recent controlled emission factors developed from stack tests in which the catalyst – of a specific make and model – is used. If a different catalyst is used – of a different make and/or model – then the permittee shall calculate emissions using the controlled emission factors developed from testing the different catalyst. If CO emissions were not tested for controlled emission factors the permittee shall instead use uncontrolled emission factors.
   iii. The permittee shall calculate total CO emissions using the most recent CO emission factors for all engines from performance testing.

\[
\text{Pollutant emissions (tons)} = \frac{\text{Total Power Output for the Month (electrical KWH)}}{1.34102 \left( \frac{\text{bhp - hr}}{\text{KWH}} \right)} \times Emission \text{ unit specific emission factor} \left( \frac{\text{grams Pollutant}}{\text{bhp - hr}} \right) \times \left( \frac{1 \text{ lb Pollutant}}{453.5924 \text{ grams Pollutant}} \right) \times \frac{1 \text{ ton}}{2000 \text{ lbs}}
\]
j) 12-month rolling total CO emission from the six (6) landfill gas engines (EP05, EP06, EP07, EP08, EP09 and EP10) including CO emissions from startup, shutdown and malfunction as reported to the Air Pollution Control Program's Compliance/Enforcement Section.
k) Indication of compliance with the emission limitation.
III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (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.

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
<th>Manufacturer/Model #</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP05</td>
<td>14.19 MMBtu/hr, landfill gas engine; constructed 2010; alternative fuel: Natural Gas</td>
<td>Caterpillar/G3520C, SN AGZJ00353</td>
</tr>
<tr>
<td>EP06</td>
<td>14.19 MMBtu/hr, landfill gas engine; constructed 2010; Alternative Fuel: Natural Gas</td>
<td>Caterpillar/G3520C, SN VGZJ00352</td>
</tr>
</tbody>
</table>

**Emission Limitations:**
Special Condition 2A: The City of Lamar shall not emit more than 40.0 tons of nitrogen oxides (NOx), 139.3 tons of carbon monoxide (CO), and 38.0 tons of volatile organic compounds (as propane) in any consecutive 12-month period from the two (2) Caterpillar G3520C engines (Emission Units EP05 and EP06).

**Monitoring/Recordkeeping:**
Special Condition 2B: Attachment B, C, and D or equivalent forms, shall be used to demonstrate compliance with the emission limits.

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
<th>Manufacturer/Model #</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP07</td>
<td>11.25 MMBtu/hr, landfill gas engine; constructed 2012; Alternative Fuel: Natural Gas</td>
<td>Gauscor HGM 560</td>
</tr>
<tr>
<td>EP08</td>
<td>11.25 MMBtu/hr, landfill gas engine; constructed 2012; Alternative Fuel: Natural Gas</td>
<td>Gauscor HGM 560</td>
</tr>
</tbody>
</table>
Monitoring/Recordkeeping:
Special Condition 1B: Attachment E and F, or equivalent forms approved by the Air Pollution Control Program, shall be used to demonstrate compliance with the emission limitations.

PERMIT CONDITION 3
10 CSR 10-6.060 Construction Permits Required
Construction Permit No. 092017-007A, Issued November 2, 2017

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
<th>Manufacturer/Model #</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP09</td>
<td>15.343 MMBtu/hr landfill gas engine; Alternative Fuel: Natural Gas</td>
<td>Caterpillar G3520C</td>
</tr>
<tr>
<td>EP10</td>
<td>15.343 MMBtu/hr landfill gas engine; Alternative Fuel: Natural Gas</td>
<td>Caterpillar G3520C</td>
</tr>
</tbody>
</table>

Emissions Limitations:
1. Special Condition 2.B: The permittee shall emit less than 100.0 tons of CO in any consecutive 12-month period from EP09 and EP10.
2. Special Condition 2.C: The permittee shall emit less than 40.0 tons of NOx in any consecutive 12-month period from EP09 and EP10.

Performance Testing and Reporting:
1. Special Condition 3.A: The permittee shall conduct performance testing of EP09 and EP10 for NOx, CO, VOC and Formaldehyde. All test methods shall be authorized by the Air Pollution Control Program’s Compliance/Enforcement Section prior to testing.
2. Special Condition 3.B: Testing shall be performed at permitted capacity of 90 to 100 percent of the MHDR defined as 1622 EKW from each engine. The test shall note fuel consumption rate (SCFM), fuel higher heating value (Btu/SCF); and if a control device is used, the inlet and outlet temperature, pressure drop, control device name and type. 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.
3. Special Condition 3.C: 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 and shall be conducted in accordance with the Stack Test Procedures outlined in Special condition 3.B. If a control device is used, the initial stack test shall include testing before and after the control device so that uncontrolled and controlled emission factors can be developed.
4. Special Condition 3.D: Following the initial stack test, the permittee shall test EP09 and EP10 engines as required by 40 CFR Part 60 Subpart JJJ (i.e. every 8760 hours or every 3 years of operation, whichever comes sooner). While this testing is required for NOx, CO, VOC and
Formaldehyde as a part of this permit, the permittee may test for either controlled or uncontrolled emissions. If EP09 and EP10 begin to operate without a catalyst while previously operating with a catalyst, the permittee shall test for uncontrolled emission factors within 45 days of operating without a catalyst unless the uncontrolled emission factors obtained in the initial performance test are within 8760 operating hours. Every instance that a different catalyst is used – either of differing make and/or model from the previous catalyst or if no catalyst was used previously – the permittee shall conduct a stack test before and after the catalyst to determine uncontrolled and controlled emission factors using the new catalyst within 45 days of catalyst operation. All tests shall be conducted in accordance with the Stack Test Procedures outlined in Special Condition 3.B.

5. Special Condition 3.E: The permittee shall conduct stack testing in accordance with Special Conditions 2 in Permit Conditions PW1 and 3 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.

6. Special Condition 3.F: 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.

**Monitoring/Recordkeeping:**

1. Special Condition 2.F.1) through 13): The permittee shall develop and use forms to demonstrate compliance with the CO, NOx, VOC and Formaldehyde emissions limitations. The forms shall contain at a minimum the following information:
   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 engine;
   g) Type of fuel combusted during the month per engine;
   h) Emission factors for NOx, CO, VOC and Formaldehyde from the most recent stack test and fuel type;
      i. Emissions that result from the operation of EP09 and EP10 without a control device shall be calculated using the most recent uncontrolled emission factors determined through testing.
      ii. If a catalyst is used, the permittee shall calculate emissions for EP09 and EP10 using the most recent controlled emission factors developed from stack tests in which the catalyst – of a specific make and mode – is used. If a different catalyst is used – of a different make and/or model – then the permittee shall calculate emissions using the controlled emission factors developed from testing the different catalyst. If emissions were not tested for controlled emission factors the permittee shall instead use uncontrolled emission factors.
      iii. Monthly emissions of CO for EP09 and EP10 are calculated using the following equation (Pollutants include NOx, VOC, CO and Formaldehyde):
Pollutant emissions (tons) = Total Power Output for the Month (electrical KWH) \times 1.34102 \left( \frac{bhp - hr}{KWH} \right) 
\times Emission unit specific emission factor \left( \frac{grams Pollutant}{bhp - hr} \right) 
\times \left( \frac{1 lb Pollutant}{453.5924 \ grams Pollutant} \right) \times \frac{1 ton}{2000 \ lbs}

iv. 12-month rolling total NOx, CO, VOC and Formaldehyde emissions from EP09 and EP10 and the sum of all NOx, CO, VOC and Formaldehyde emissions from startup, shutdown and malfunction as reported to the Air Pollution Control Program’s Compliance/Enforcement Section.

v. Indication of compliance with each emission limitation.

PERMIT CONDITION 4
10 CSR 10-6.070 New Source Performance Regulations
40 CFR Part 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
<th>Manufacturer/Model #</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP05</td>
<td>14.19 MMBtu/hr, landfill gas engine; constructed 2010; Alternative Fuel: Natural Gas</td>
<td>Caterpillar/G3520C, SN AGZJ00353</td>
</tr>
<tr>
<td>EP06</td>
<td>14.19 MMBtu/hr, landfill gas engine; constructed 2010; Alternative Fuel: Natural Gas</td>
<td>Caterpillar/G3520C, SN VGZJ00352</td>
</tr>
<tr>
<td>EP07</td>
<td>11.25 MMBtu/hr, landfill gas engine; constructed 2012; Alternative Fuel: Natural Gas</td>
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<tr>
<td>EP09</td>
<td>15.343 MMBtu/hr landfill gas engine; Alternative Fuel: Natural Gas</td>
<td>Caterpillar G3520C</td>
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<td>EP10</td>
<td>15.343 MMBtu/hr landfill gas engine; Alternative Fuel: Natural Gas</td>
<td>Caterpillar G3520C</td>
</tr>
</tbody>
</table>

Applicability:
The provisions of 40 CFR Part 63 Subpart JJJJ are applicable to owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) that commence construction after June 12, 2006 where the stationary SI ICE are manufactured on or after July 1, 2007 for engines with maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP). For the purposes of Subpart JJJJ the date that construction commences is the date the engine is ordered by the owner or operator [§60.4230(a)]
**Emission Limitations:**
For stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP), the permittee must comply with the emission standards in Table 1 to Subpart JJJJ for each stationary SI ICE. For engines manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR Part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1, then the permittee may meet the CO certification (not field testing) standard for which the engine was certified. \([\S60.4233(e)]\)

<table>
<thead>
<tr>
<th>Engine type and fuel</th>
<th>Maximum engine power</th>
<th>Manufacture date</th>
<th>Emission standardsa</th>
<th>ppmvd at 15% O2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill/Digester Gas (except lean burn 500≤HP&lt;1,350)</td>
<td>HP≥500</td>
<td>7/1/2007</td>
<td>3.0 5.0 1.0</td>
<td>220 610 80</td>
</tr>
<tr>
<td>Non-Emergency SI Lean Burn Natural Gas and LPG</td>
<td>HP≥500</td>
<td>7/1/2007</td>
<td>2.0 4.0 1.0</td>
<td>160 540 86</td>
</tr>
<tr>
<td>Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP&lt;1,350)</td>
<td>7/1/2010</td>
<td>1.0 2.0 0.7</td>
<td>82 270 60</td>
<td></td>
</tr>
</tbody>
</table>

\(a\) Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O2.

\(d\) For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

**Operational Limitations:**
The permittee must operate and maintain each stationary SI ICE to achieve the emission standards over the entire life of the engine. \([\S60.4234]\)

**Initial and Continuous Compliance:**
The permittee must demonstrate compliance with the emission standards by one of the following methods: \([\S60.4243(b)(1) \text{ through (2)(ii)}]\)
1. Purchasing an engine certified according to the procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year and demonstrating compliance; or
2. Purchasing a non-certified engine and demonstrate compliance with the emission standards by keeping a maintenance plan and records of conducted maintenance and to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for
minimizing emissions. In addition initial performance testing and subsequent performance testing every 8,760 hours or 3 years, whichever comes first, must be performed to demonstrate compliance.

**Performance Testing and Test Reporting:**

1. The permittee must comply with the applicable performance testing requirements in §60.4244.
2. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to Subpart JJJ. [§60.4244(a)]
3. The permittee must not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If the stationary SI ICE is non-operational, the permittee does not need to start up the engine solely to conduct a performance test; however the permittee must conduct the performance test immediately upon startup of the engine. [§60.4244(b)]
4. The permittee must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour. [§60.4244(c)]
5. To determine compliance with the NOx mass per unit output emission limitation, convert the concentration of NOx in the engine exhaust using Equation 1: [§60.4244(d)]

\[
ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HA-hr} \quad (Eq \ 1)
\]

Where:
- \( ER \) = Emission rate of NOx in g/HP-hr.
- \( C_d \) = Measured NOx concentration in parts per million by volume (ppmv).
- \( 1.912 \times 10^{-3} \) = Conversion constant for ppm NOx to grams per standard cubic meter at 20 degrees Celsius.
- \( Q \) = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.
- \( T \) = Time of test run, in hours.
- \( HA-hr \) = Brake work of the engine, horsepower-hour (HP-hr).

6. To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using equation 2: [§60.4244(e)]

\[
ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP-hr} \quad (Eq \ 2)
\]

Where:
- \( ER \) = Emission rate of CO in g/HP-hr.
- \( C_d \) = Measured CO concentration in ppmv.
- \( 1.164 \times 10^{-3} \) = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.
- \( Q \) = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.
- \( T \) = Time of test run, in hours.
- \( HP-hr \) = Brake work of the engine, in HP-hr.

7. For purposes of Subpart JJJ, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3: [§60.4244(f)]
Where:
ER = Emission rate of VOC in g/HP-hr.
Cd = VOC concentration measured as propane in ppmv.
1.833 × 10⁻³ = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.
Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.
T = Time of test run, in hours.
HP-hr = Brake work of the engine, in HP-hr.

8. If the permittee chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5. The corrected VOC concentration can then be placed on a propane basis using Equation 6. [§60.4244(g)]

\[
RF_i = \frac{C_{CAi}}{C_{CAi}^{\text{meas}}} \quad \text{(Eq. 4)}
\]

Where:
RF = Response factor of compound i when measured with EPA Method 25A.
CM = Measured concentration of compound i in ppmv as carbon.
CA = True concentration of compound i in ppmv as carbon.

\[
C_{corr} = RF_i \times C_{imass} \quad \text{(Eq. 5)}
\]

Where:
Ccorr = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.
Cimass = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

\[
C_{\text{prod}} = 0.6098 \times C_{\text{prod}} \quad \text{(Eq. 6)}
\]

Where:
Cprod = Concentration of compound i in mg of propane equivalent per DSCM.

9. The permittee must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference—see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7 [§60.4245(d)]

10. The permittee of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the following information: [§60.4245(c)]
a) Name and address of the owner or operator;
b) The address of the affected source;
c) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
d) Emission control equipment; and
e) Fuel used.

Recordkeeping:
1. The permittee must keep records of the following information: [§60.4245(a)(1) through (4)]
   All notification submitted to comply with this subpart and all documentation supporting any notification;
   a) Maintenance conducted on the engine;
   b) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the applicable emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable;
   c) If the stationary engine is not a certified engine or is a certified engine operating in a non-certified manner, documentation that the engine meets the emission standards.

PERMIT CONDITION 5
10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
<th>Manufacturer/Model #</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP05</td>
<td>14.19 MMBtu/hr, landfill gas engine; constructed 2010; Alternative Fuel: Natural Gas</td>
<td>Caterpillar/G3520C, SN AGZJ00353</td>
</tr>
<tr>
<td>EP06</td>
<td>14.19 MMBtu/hr, landfill gas engine; constructed 2010; Alternative Fuel: Natural Gas</td>
<td>Caterpillar/G3520C, SN VGZJ00352</td>
</tr>
<tr>
<td>EP07</td>
<td>11.25 MMBtu/hr, landfill gas engine; constructed 2012; Alternative Fuel: Natural Gas</td>
<td>Gauscor HGM 560</td>
</tr>
<tr>
<td>EP08</td>
<td>11.25 MMBtu/hr, landfill gas engine; constructed 2012; Alternative Fuel: Natural Gas</td>
<td>Gauscor HGM 560</td>
</tr>
<tr>
<td>EP09</td>
<td>15.343 MMBtu/hr landfill gas engine; Alternative Fuel: Natural Gas</td>
<td>Caterpillar G3520C</td>
</tr>
<tr>
<td>EP10</td>
<td>15.343 MMBtu/hr landfill gas engine; Alternative Fuel: Natural Gas</td>
<td>Caterpillar G3520C</td>
</tr>
</tbody>
</table>

Emission Limitations:
The permittee shall not cause or permit the emission of gases into the atmosphere containing more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide or more than thirty-five milligrams per cubic meter (35 mg/cubic meter) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three (3)-hour time period.

1 On November 30, 2015 10 CSR 10-6.260 was rescinded from the MO Code of State Regulations and replaced with 10 CSR 10-6.261. At this time this regulation remains in the Missouri State Implementation Plan (SIP) therefore it must be included in the operating permit as a federally-enforceable condition.
Monitoring/Recordkeeping:
None. See Statement of Basis.
IV. Core Permit Requirements

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

10 CSR 10-6.045 Open Burning Requirements

1. General Provisions. The open burning of tires, petroleum-based products, asbestos containing materials, and trade waste is prohibited, except as allowed below. Nothing in this rule may be construed as to allow open burning which causes or constitutes a public health hazard, nuisance, a hazard to vehicular or air traffic, nor which violates any other rule or statute.

2. 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 owner or operator fails to comply with the conditions or any provisions of the permit.

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) 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 to the director in writing at least ten days prior to any maintenance, start-up or shutdown activity 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, notice shall be given as soon as practicable prior to the activity.

3. Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 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 section 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 sections 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 eighteen months. The permittee shall retain the most current operating permit issued to this installation on-site. The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request.

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

1. The permittee shall submit a Full Emissions Report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on Emission Inventory Questionnaire (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. 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.

3. The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.

### 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 10-6.165 Restriction of Emission of Odors

This requirement is a State Only permit requirement.

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour. This odor evaluation shall be taken at a location outside of the installation’s property boundary.
10 CSR 10-6.170
Restriction of Particulate Matter 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 particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter 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 particulate matter emissions to remain visible in the ambient air beyond the property line of origin.
3. Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
   a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
   b) Paving or frequent cleaning of roads, driveways and parking lots;
   c) Application of dust-free surfaces;
   d) Application of water; and
   e) Planting and maintenance of vegetative ground cover.

**Monitoring:**
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.
The permittee shall maintain the following monitoring schedule:
1. The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
2. Should no violation of this regulation be observed during this period then-
   a) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
   b) If a violation is noted, monitoring reverts to weekly.
   c) Should no violation of this regulation be observed during this period then-
      i) The permittee may observe once per month.
      ii) If a violation is noted, monitoring reverts to weekly.
3. If the permittee reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.

**Recordkeeping:**
The permittee shall document all readings on Attachment A, or its equivalent, noting the following:
1. Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
2. Whether equipment malfunctions contributed to an exceedance.
3. 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 10-6.280 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 at an installation:
   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.

40 CFR Part 82 Protection of Stratospheric Ozone (Title VI)

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 40 CFR §82.106.
b) The placement of the required warning statement must comply with the requirements of 40 CFR §82.108.

c) The form of the label bearing the required warning statement must comply with the requirements of 40 CFR §82.110.

d) No person may modify, remove, or interfere with the required warning statement except as described in 40 CFR §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 Subpart B of 40 CFR Part 82:

a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices described in 40 CFR §82.156.

b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment described in 40 CFR §82.158.

c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR §82.161.

d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with the record keeping requirements of 40 CFR §82.166. ("MVAC-like" appliance as defined at 40 CFR §82.152).

e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR §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 40 CFR §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 motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements contained in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. Federal Only - 40 CFR Part 82.
V. General Permit Requirements

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

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

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed. If a timely and complete application for a permit renewal is submitted, but the Air Pollution Control Program fails to take final action to issue or deny the renewal permit before the end of the term of this permit, this permit shall not expire until the renewal permit is issued or denied.

**10 CSR 10-6.065(6)(C)1.C General Record Keeping and Reporting Requirements**

1. Record Keeping
   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, Compliance and Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
   b) The permittee shall submit a report of all required monitoring by:
      i) October 1st for monitoring which covers the January through June time period, and
      ii) April 1st for monitoring which covers the July through December time period.
   c) Each report shall identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
   d) Submit supplemental reports as required or as needed. 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 paragraph (6)(C)7.A of 10 CSR 10-6.065 (Emergency Provisions) 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 semiannual report shall be reported on the schedule specified in this permit.

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

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

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

If the installation is required to develop and register a risk management plan pursuant to Section 112(R) of the Act, the permittee will verify that it has complied with the requirement to register the plan.

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

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

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

1. The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.

2. The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

3. The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4. This permit does not convey any property rights of any sort, nor grant any exclusive privilege.

5. The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

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

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.
10 CSR 10-6.065(6)(C)1.1 Reasonably Anticipated Operating Scenarios

The City of Lamar has opted to install a pipeline “T” attachment for allowing the landfill gas engines to accept compressed/uncompressed natural gas as an alternative to landfill gas. Switching fuels will require additional testing under by 40 CFR Part 60 Subpart JJJJ and Construction Permit 092017-007A.

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

1. Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.

2. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation’s right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
   a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
   b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
   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 EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, as well as the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and Part 64 exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:
   a) The identification of each term or condition of the permit that is the basis of the certification;
   b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
   c) Whether compliance was continuous or intermittent;
   d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
   e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.
10 CSR 10-6.065(6)(C)6 Permit Shield

1. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
   a) The applicable requirements are included and specifically identified in this permit, or
   b) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.

2. Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
   a) The provisions of section 303 of the Act or section 643.090, RSMo concerning emergency orders,
   b) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
   c) The applicable requirements of the acid rain program,
   d) The authority of the Environmental Protection Agency and the Air Pollution Control Program of the Missouri Department of Natural Resources to obtain information, or
   e) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

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

1. An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7 shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
   a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
   b) That the installation was being operated properly,
   c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
   d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.

2. Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

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

An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an
emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

1. Section 502(b)(10) changes. Changes that, under section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), record keeping, reporting or compliance requirements of the permit.

   a) Before making a change under this provision, the permittee shall provide advance written notice to the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the APCP shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the APCP as above at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the EPA and the APCP as soon as possible after learning of the need to make the change.

   b) The permit shield shall not apply to these changes.

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

1. Except as noted below, the permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the permit, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:

   a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is subject to any requirements under Title IV of the Act or is a Title I modification;

   b) The permittee must provide contemporaneous written notice of the change to the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219. This notice shall not be required for changes that are insignificant activities listed in or prohibited by this permit. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.

   c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and

   d) The permit shield shall not apply to these changes.

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

The application utilized in the preparation of this permit was signed by Lynn Calton, City Administrator. 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 owner or operator of this air contaminant source 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
source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

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

This permit shall be reopened for cause if:

1. The Missouri Department of Natural Resources (MoDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,

2. MoDNR 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,

3. 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,

4. The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit; or

5. MoDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

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

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

### VI. Attachments

Attachments follow.
## Attachment A

**Fugitive Emission Observations**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Visible Emissions</th>
<th>Abnormal Emissions</th>
<th>Initial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Beyond Boundary</td>
<td>Cause</td>
<td>Corrective Action</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td>No Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Initial</td>
</tr>
</tbody>
</table>
Attachment B
Annual NOₓ Emissions Compliance Worksheet

This sheet covers the period of _________ to _________
(month, year) (month, year)

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1: Monthly Total Production from All Engines (KWH)</th>
<th>Column 2: EP05 NOₓ Emission Factor (g/bhp-hr)</th>
<th>Column 3: Monthly Portion of Total Production from EP05 (%)</th>
<th>Column 4: EP06 NOₓ Emission Factor (g/bhp-hr)</th>
<th>Column 5: Portion of Total Production from EP06 (%)</th>
<th>Column 6: NOₓ emissions from EP05 (tons)</th>
<th>Column 7: NOₓ emissions from EP06 (tons)</th>
<th>Column 8: Total 12-Month NOₓ Emissions (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note 1: Monthly Total Production from All Engines is the combined KWH generated from all engines.
Note 2: Emission factors are obtained from the most recent performance testing required by Subpart JJJJ and/or performance testing required by Construction Permit 092017-007A for new fuel types (i.e. compressed natural gas) for each engine. Testing is generally performed during the month and not at the beginning or the end. Therefore, two emission factors could be used in the month when testing occurs: one for production before testing and another for the production after testing. Or, if the facility chooses, may use the highest of these two emission factors for the month when testing occurs. Most recent stack testing performed February 8, 2017: NOₓ EF for EP05 = 0.45 g/bhp-hr; for EP06 = 0.34 g/bhp-hr.
Note 3: Portion of total production for each engine is based on generation for each engine.
Note 4: Monthly NOₓ Emissions from each engine calculated using [Column 1 (total KWH)] x [Column 2 (g/bhp-hr)] x [Column 3 (%)] x (1.34102 bhp-hr/KWH) x (1 lb/453.6 g x 1 ton/2000 lbs)
Note 5: Monthly NOₓ emissions from EP05 and EP06 (tons) calculated by summing Column 4 and Column 7.
Note 6: Total 12-Month NOₓ emissions calculated by adding this month’s NOₓ emissions to the total NOₓ emissions of the previous eleven (11) months. A total less than 40.0 tons indicates compliance.

Emissions totals must include emissions from startup, shutdown and malfunctions.
## Attachment C

### Annual CO Emissions Compliance Worksheet

This sheet covers the period of __________ to __________ (month, year) to (month, year).

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
<th>Column 8</th>
<th>Column 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>1 Monthly Total Production from All Engines (KWH)</td>
<td>2 EP05 CO Emission Factor (g/bhp-hr)</td>
<td>3 Monthly Portion of Total Production from EP05 (%)</td>
<td>4 EP06 CO Emission Factor (g/bhp-hr)</td>
<td>5 Portion of Total Production from EP06 (%)</td>
<td>6 CO Emissions from EP05 (tons)</td>
<td>7 CO Emissions from EP06 (tons)</td>
<td>8 Total 12-Month CO Emissions (tons)</td>
</tr>
</tbody>
</table>

**Note 1:** Monthly Total Production from All Engines is the combined KWH generated from all engines.

**Note 2:** Emission factors are obtained from the most recent performance testing required by Subpart JJJJ and/or performance testing required by Construction Permit 092017-007A for new fuel types (i.e. compressed natural gas) for each engine. Testing is generally performed during the month and not at the beginning or the end. Therefore, two emission factors could be used in the month when testing occurs: one for production before testing and another for the production after testing. Or, if the facility chooses, may use the highest of these two emission factors for the month when testing occurs. Most recent stack testing performed February 8, 2017: CO EF for EP05 = 2.51g/bhp-hr; for EP06 = 2.59 g/bhp-hr.

**Note 3:** Portion of total production for each engine is based on generation for each engine.

**Note 4:** Monthly CO Emissions from each engine calculated using [Column 1 (total KWH)] x [Column 2 (g/bhp-hr)] x [Column 3 (%)] x (1.34102 bhp-hr/KWH) x (1 lb/453.6 g x 1 ton/2000 lbs).

**Note 5:** Monthly CO Emissions from EP05 and EP06 (tons) calculated by summing Column 4 and Column 7.

**Note 6:** Total 12-Month CO emissions calculated by adding this month’s CO emissions to the total CO emissions of the previous eleven (11) months. A total less than 139.3 tons indicates compliance.

**Emissions totals must include emissions from startup, shutdown and malfunctions.**
## Attachment D

### Annual VOC Emissions Compliance Worksheet

This sheet covers the period of ____________ to ____________ (month, year) to (month, year)

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
<th>Column 8</th>
<th>Column 9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Monthly Total Production from All Engines (KWH)</td>
<td>2 EP05 VOC Emission Factor (g/bhp-hr)</td>
<td>3 Monthly Portion of Total Production from EP05 (%)</td>
<td>4 Monthly VOC Emissions from EP05 (tons)</td>
<td>5 EP06 VOC Emission Factor (g/bhp-hr)</td>
<td>6 Portion of Total Production from EP06 (%)</td>
<td>7 VOC Emissions from EP06 (tons)</td>
<td>8 Monthly VOC Emissions from EP05 and EP06 (tons)</td>
<td>9 Total 12-Month VOC Emissions (tons)</td>
</tr>
</tbody>
</table>

**Note 1:** Monthly Total Production from All Engines is the combined KWH generated from all engines.

**Note 2:** Emission factors are obtained from the most recent performance testing required by Subpart JJJJ and/or performance testing required by Construction Permit 092017-007 A for new fuel types (i.e. compressed natural gas) for each engine. Testing is generally performed during the month and not at the beginning or the end. Therefore, two emission factors could be used in the month when testing occurs: one for production before testing and another for the production after testing. Or, if the facility chooses, may use the highest of these two emission factors for the month when testing occurs. Most recent stack testing performed February 8, 2017: VOC EF for EP05 = 0.13 g/bhp-hr, for EP06 = 0.02 g/bhp-hr.

**Note 3:** Portion of total production for each engine is based on generation for each engine.

**Note 4:** Monthly VOC Emissions from each engine calculated using \( \text{Column 1 (total KWH)} \times \text{Column 2 (g/bhp-hr)} \times \text{Column 3 (%)} \times (1.34102 \text{ bhp-hr/KWH}) \times (1 \text{ lb/453.6 g \times 1 ton/2000 lbs}) \)

**Note 5:** Monthly VOC Emissions from EP05 and EP06 (tons) calculated by summing Column 4 and Column 7.

**Note 6:** Total 12-Month VOC emissions calculated by adding this month’s VOC emissions to the total VOC emissions of the previous eleven (11) months. A total less than 38.0 tons indicates compliance.

Emissions totals must include emissions from startup, shutdown and malfunctions.
## Attachment E

### Annual Project NO\textsubscript{X} Emissions Compliance Worksheet

This sheet covers the month of __________ (month, year).

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
<th>Column 8</th>
<th>Column 9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>1</strong> Monthly Total Production from All Engines (KWH)</td>
<td><strong>2</strong> EP07 NO\textsubscript{X} Emission Factor (g/bhp-hr)</td>
<td><strong>3</strong> Monthly Portion of Total Production from EP07 (%)</td>
<td><strong>4</strong> Monthly NO\textsubscript{X} Emissions from EP07 (tons)</td>
<td><strong>5</strong> EP08 NO\textsubscript{X} Emission Factor (g/bhp-hr)</td>
<td><strong>6</strong> Portion of Total Production from EP08 (%)</td>
<td><strong>7</strong> NO\textsubscript{X} emissions from EP08 (tons)</td>
<td><strong>8</strong> Monthly NO\textsubscript{X} Emissions from EP07 and EP08 (tons)</td>
<td><strong>9</strong> Total 12-Month NO\textsubscript{X} Emissions (tons)</td>
</tr>
</tbody>
</table>

Note 1: Monthly Total Production from All Engines is the combined KWH generated from all engines.

Note 2: Emission factors are obtained from the most recent performance testing required by Subpart JJJ and/or performance testing required by Construction Permit 092017-007A for new fuel types (i.e. compressed natural gas) for each engine. Testing is generally performed during the month and not at the beginning or the end. Therefore, two emission factors could be used in the month when testing occurs: one for production before testing and another for the production after testing. Or, if the facility chooses, may use the highest of these two emission factors for the month when testing occurs. Most recent stack testing performed August 13, 2015 for EP07 and September 7, 2016 for EP08. NO\textsubscript{X} EF for EP07 = 1.19 g/bhp-hr, for EP08 = 0.94 g/bhp-hr.

Note 3: Portion of total production for each engine is based on generation for each engine.

Note 4: Monthly NO\textsubscript{X} Emissions from each engine calculated using \[ \text{Column 1 (total KWH)} \times \text{Column 2 (g/bhp-hr)} \times \text{Column 3 (%)} \times (1.34102 \text{ bhp-hr/KWH}) \times (1 \text{ lb/453.6 g} \times 1 \text{ ton/2000 lbs}) \]

Note 5: Monthly NO\textsubscript{X} emissions from EP07 and EP08 (tons) calculated by summing Column 4 and Column 7.

Note 6: Total 12-Month NO\textsubscript{X} emissions calculated by adding this month’s NO\textsubscript{X} emissions to the total NO\textsubscript{X} emissions of the previous eleven (11) months. A total less than 40 tons indicates compliance.

Emissions totals must include emissions from startup, shutdown and malfunctions.
## Attachment F

### Annual CO Emissions Compliance Worksheet

This sheet covers the period of ____________ to ____________.

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
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<tr>
<td></td>
<td>Total</td>
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<td>emissions</td>
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<tr>
<td></td>
<td>(KWH)</td>
<td>(g/bhp-hr)</td>
<td>(tons)</td>
<td>(KWH)</td>
<td>(g/bhp-hr)</td>
<td>(KWH)</td>
<td>(g/bhp-hr)</td>
<td>(KWH)</td>
<td>(g/bhp-hr)</td>
</tr>
</tbody>
</table>

Note 1: Monthly Total Production from All Engines is the combined KWH generated from all engines.

Note 2: Emission factors are obtained from the most recent performance testing required by Subpart JJJJ and/or performance testing required by Construction Permit 092017-007A for new fuel types (i.e. compressed natural gas) for each engine. Testing is generally performed during the month and not at the beginning or the end. Therefore, two emission factors can be used in the month when testing occurs: one for production before testing and another for the production after testing. Or, if the facility chooses, may use the highest of these two emission factors for the month when testing occurs. Most recent stack testing performed August 13, 2015 for EP07 and September 7, 2016 for EP08. CO EF for EP07 = 2.12 g/bhp-hr; for EP08 = 2.94 g/bhp-hr.

Note 3: Portion of total production for each engine is based on generation for each engine.

Note 4: Monthly CO Emissions from each engine calculated using [Column 1 (total KWH)] x [Column 2 (g/bhp-hr)] x [Column 3 (%)] x (1.34102 bhp-hr/KWH) x (1 lb/453.6 g x 1 ton/2000 lbs)


Note 6: Total 12-Month CO emissions calculated by adding this month’s CO emissions to the total CO emissions of the previous eleven (11) months. A total less than 100.0 tons indicates compliance.

Emissions totals must include emissions from startup, shutdown and malfunctions.
STATEMENT OF BASIS

INSTALLATION DESCRIPTION
The City of Lamar has four engines that are co-located on the Prairie View Regional Waste Facility (PVRWF) that combust landfill gas that has been diverted from the landfills (the Lamar Landfill which is closed and the Prairie View Landfill which is active). The City of Lamar and PVRWF are considered separate installations for permitting purposes. The engines owned and operated by City of Lamar are used to drive generators to provide power to the City of Lamar, MO. Two engines have maximum heat input of 14.19 MMBtu/hr each and two have a maximum heat input of 11.25 MMBtu/hr each. Four diesel generators that were previously permitted were sold and removed in March 2012. The facility was recently issued construction permit 092017-007 which authorized the construction of two additional LFG engines. This facility is not a named installation therefore fugitive emissions are not counted in the potential to emit.

Updated Potential to Emit for the Installation

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Potential to Emit (tons/yr)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>&lt;250.0</td>
</tr>
<tr>
<td>HAP</td>
<td>4.71</td>
</tr>
<tr>
<td>NOₓ</td>
<td>120.0</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>13.9</td>
</tr>
<tr>
<td>PM₂₅</td>
<td>13.9</td>
</tr>
<tr>
<td>SOₓ</td>
<td>5.99</td>
</tr>
<tr>
<td>VOC</td>
<td>113.0</td>
</tr>
</tbody>
</table>

¹Plantwide potential emissions were taken from the most recently issued construction permit – CP092017-007A and includes the two new Caterpillar engines as well as the existing Caterpillar engines and the existing Gauscor engines.

Reported Air Pollutant Emissions, tons per year

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ Ten Microns (PM₁₀)</td>
<td>7.26</td>
<td>7.06</td>
<td>7.43</td>
<td>8.19</td>
<td>5.60</td>
</tr>
<tr>
<td>Particulate Matter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 2.5 Microns (PM₂₅)</td>
<td>7.26</td>
<td>7.06</td>
<td>7.43</td>
<td>8.19</td>
<td>5.60</td>
</tr>
<tr>
<td>Sulfur Oxides</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(SOₓ)</td>
<td>2.58</td>
<td>2.49</td>
<td>2.65</td>
<td>2.92</td>
<td>1.90</td>
</tr>
<tr>
<td>Nitrogen Oxides</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(NOₓ)</td>
<td>32.06</td>
<td>27.10</td>
<td>30.01</td>
<td>32.19</td>
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<td>Volatile Organic Compounds</td>
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<tr>
<td>(VOC)</td>
<td>4.41</td>
<td>1.38</td>
<td>0.60</td>
<td>7.83</td>
<td>10.48</td>
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<tr>
<td>Carbon Monoxide</td>
<td></td>
<td></td>
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<tr>
<td>(CO)</td>
<td>113.40</td>
<td>109.04</td>
<td>106.11</td>
<td>112.27</td>
<td>117.93</td>
</tr>
</tbody>
</table>
Permit Reference Documents
These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.
1) Part 70 Operating Permit Application, received June 20, 2011;
2) 2016 Emissions Inventory Questionnaire, received March 23, 2017;
4) WebFIRE; and
5) All documents listed under Construction Permit History.

Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits
In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

None.

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

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

10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*
According to paragraph (1)(A) of this rule, it does not apply to Internal combustion engines operated outside the Kansas City of St. Louis metropolitan areas, therefore it was not included in the operating permit.

10 CSR 10-6.360, *Control of NOx Emissions From Electric Generating Units and Non-Electric Generating Boilers*, and
10 CSR 10-6.390, *Control of NOx Emissions From Large Stationary Internal Combustion Engines*, do not apply to the generators, because they are not located in the affected counties listed in paragraphs (A)(1) of these rules.

10 CSR 10-6.362, *Clean Air Interstate Rule Annual NOx Trading Program*,
10 CSR 10-6.364, *Clean Air Interstate Rule Seasonal NOx Trading Program*,
10 CSR 10-6.366, *Clean Air Interstate Rule SOx Trading Program*, and
10 CSR 10-6.368, *Control of Mercury Emissions From Electric Generating Units* do not apply to the generators because they do not serve a generator with a nameplate capacity greater than 25 megawatts.
Construction Permit History

The following construction permits have been issued to this facility:

Construction Permit 062000-013
This construction permit authorized the installation of four diesel generators. The special conditions in this construction permit were not included in the operating permit because the four diesel generators were sold and removed in March 2012.

Construction Permit 102008-004, 102008-004A and 102008-004B
Construction permit 102008-004 authorized the installation of two Caterpillar landfill gas-fired engines. The special conditions of permits 102008-004 and 102008-004A were not included in the operating permit because they are supersedes by Construction Permit 102008-004B except for the CO limit of 139.3 tpy allowed by 102008-004A. Construction Permit 102008-004B mistakenly listed the emission limit as 138.3 which is revised to 139.3 tpy in Permit Condition 1 and Attachment C.

Construction Permit 092012-009
This construction permit authorized the installation of two landfill gas-fired generators. Special Condition 2 of this permit was not included in the operating permit because the performance testing has been completed. Testing for EP05 and EP06 to demonstrate compliance with Subpart JJJJ was most recently completed on February 8, 2017. Test results are currently under review by the APCP Compliance/Enforcement Section.

Construction Permit 092017-007
This construction permit was issued September 20, 2017 and authorized the installation of two Caterpillar landfill gas-fired generators and the removal of EP07.

Construction Permit 092017-007A
Construction Permit 092017-007 was amended to remove the requirement to remove EP07 Guascor Engine prior to the startup of the new Caterpillar Engines (EP09 and EP10). The special conditions of this amendment supersede the special conditions found in the previously issued construction permit 092017-007.

New Source Performance Standards (NSPS) Applicability

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
The bulk No. 2 fuel oil storage tank has a capacity of 12,400 gallons or 47 m³. This Subpart is not applicable to this tank since the storage capacity is less than 75m³.

This Subpart applies to emission units EP05 through EP10.

Maximum Achievable Control Technology (MACT) Applicability

This Subpart applies to emission units EP05 through EP10, however according to §63.6590(c)(1), all new or reconstructed stationary RICE located at an area source must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR Part 60 Subpart JJJJ. If the RICE are located at a major source of HAPs, subpart ZZZZ requires the source meet the requirements of 40 CFR 60 Subpart JJJJ, plus daily recordkeeping of the amount of landfill gas used and an annual report to demonstrate at least 10% 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 Subpart JJJJ are included in the operating permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability
In the permit application and according to APCP records, there was no indication that any Missouri Air Conservation Law, Asbestos Abatement, 643.225 through 643.250; 10 CSR 10-6.080, Emission Standards for Hazardous Air Pollutants, Subpart M, National Standards for Asbestos; and 10 CSR 10-6.250, Asbestos Abatement Projects - Certification, Accreditation, and Business Exemption Requirements apply to this installation. The installation is subject to these regulations if they undertake any projects that deal with or involve any asbestos containing materials. None of the installation's operating projects underway at the time of this review deal with or involve asbestos containing material. Therefore, the above regulations were not cited in the operating permit. If the installation should undertake any construction or demolition projects in the future that deal with or involve any asbestos containing materials, the installation must follow all of the applicable requirements of the above rules related to that specific project.

Compliance Assurance Monitoring (CAM) Applicability
40 CFR Part 64, Compliance Assurance Monitoring (CAM)
The CAM rule applies to each pollutant specific emission unit that:
• Is subject to an emission limitation or standard, and
• Uses a control device to achieve compliance, and
• Has pre-control emissions that exceed or are equivalent to the major source threshold.

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

Greenhouse Gas Emissions
Note that this source may be subject to the Greenhouse Gas Reporting Rule. However, the preamble of the GHG Reporting Rule clarifies that Part 98 requirements do not have to be incorporated in Part 70 permits operating permits at this time. In addition, Missouri regulations do not require the installation to report CO₂ emissions in their Missouri Emissions Inventory Questionnaire; therefore, the installation’s CO₂ emissions were not included within this permit. If required to report, the applicant is required to report the data directly to EPA. The public may obtain CO₂ emissions data by visiting http://epa.gov/ghgreporting/ghgdata/reportingdatasets.html.

Other Regulatory Determinations
10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds
This regulation applies to the engines and appears as a permit condition. According to both the draft and final versions of AP42, Section 2.4, Municipal Solid Waste Landfills, the sulfur content of landfill gas
can be estimated at approximately 47 ppmv. This concentration is much less than the limit imposed by this regulation, therefore no monitoring or recordkeeping is required in this permit.

10 CSR 10-6.261, *Control of Sulfur Dioxide Emissions*
This regulation applies to all sources of sulfur dioxide. There are no provisions in the regulation for combustion of landfill gas, therefore the engines are not subject to this regulation.

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

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

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the APCP’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 APCP a schedule for achieving compliance for that regulation(s).
Response to Public Comments

The draft Part 70 Operating Permit for City of Lamar (011-0031) was placed on public notice as of December 8, 2017 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. Comments were received from Leslye Werner, EPA Region 7 on January 3, 2018. Comments are addressed below.

************************************************************************************

Comment #1: The Installation Description, on the cover page for the draft operating permit says:
"The City if Lamar has four engines that combust landfill gas that has been diverted from the Prairie View Regional Waste Facility (PVRWF). The City of Lamar and PVRWF are considered separate installations for permitting purposes. The engines owned and operated by City of Lamar are used to drive generators to provide power to the City of Lamar, MO. Two engines have maximum heat input of 14.19 MMBtu/hr each and two have a maximum heat input of 11.25 MMBtu/hr each. Four diesel generators that were previously permitted were sold and removed in March 2012. The facility was recently issued construction permit 092017-007 which authorized the construction of two additional LFG engines."

For clarification, PVRWF includes two landfills: the Lamar Landfill, which is closed; and the Prairie View Landfill, which is still active. Additionally, it should be noted that the City of Lamar's Gas to Energy Facility is co-located on the PVRWF landfill installation.

Response to Comment: The installation description has been updated to include the following language:

“The City of Lamar has four engines that are co-located on the Prairie View Regional Waste Facility (PVRWF) that combust landfill gas that has been diverted from the landfills (the Lamar Landfill which is closed and the Prairie View Landfill which is active). The City of Lamar and PVRWF are considered separate installations for permitting purposes…”

Comment #2: The Installation Description, on the cover page for the draft operating permit says:
"Prairie View Regional Waste Facility, LLC operates two landfills located at the junction of State Route DD and U.S. Highway 71 in Barton County, Missouri. These two landfills are separated by approximately 700 feet, and are considered one installation. Each landfill has a gas collection system which routes gas to 2,000 SCFM flares or to the City of Lamar's Landfill Gas to Energy Facility. The Landfill Gas to Energy Facility is considered a separate installation for permitting purposes. The installation is subject to the control requirements of 40 CFR part 60 Subpart WWW and 40 CFR part 63 Subpart AAAA; and has potential emissions greater than the major source thresholds for carbon monoxide.

For clarification, the two landfills are the Lamar Landfill, which is closed, and the Prairie View Landfill, which is still active. Additionally, it should be noted that the City of Lamar's Gas to Energy Facility is co-located on this landfill installation.
In February 2013, MDNR public noticed for comment a draft Part 70 Operating Permit for the City of Lamar for their Landfill Gas to Energy Facility. On February 28, 2013, EPA commented to MDNR that:

"Prairie View Regional Waste Facility and City of Lamar are respectively a landfill and companion electric generation facility that have been or are being issued separate Part 70 operating permits and treated as separate sources. However, since their locations are contiguous or adjacent and they share the same two-digit (major group) standard industrial classification (SIC) code and the City of Lamar is the control for the landfill gas disposal, EPA considers the Prairie View Regional Waste Facility and this City of Lamar facility to be a single source for Title V (Part 70) permitting. For facilities to be a single source of regulated pollutants under Title V programs of the Clean Air Act, the following three (3) criteria must be satisfied. First, the facilities are located on one or more contiguous or adjacent properties; the facilities are under the control of the same person (or persons under common control); and the facilities share the same two-digit (major group) Standard Industrial Classification (SIC) code (or one facility is considered a support facility to the other). Therefore, Prairie View Regional Waste Facility and City of Lamar should be treated as a single source for the purpose of permitting under the Title V program of the Clean Air Act. This Part 70 permit should be issued to both Prairie View Regional Waste Facility and City of Lamar as a single source; and the existing Part 70 permit for City of Lamar should be reopened and reissued to both facilities as a single source. This may be accomplished using one or two Part 70 permits."

The issue of co-location and common control for municipal solid waste landfills and the use of the captured landfill gas as a fuel for power generation has been evaluated by the Environmental Protection Agency for years; specifically, whether or not co-located landfill and power generation facilities are considered one source under Title V (Part 70) and the New Source Review permitting programs. EPA has published a number of applicability determinations that conclude that co-located landfill and power generation facilities share common control and are therefore single sources, including:

February 28, 1998 letter from Makeba A. Morris, Chief of Technical Assessment Section of EPA Region III to Terry Godar, PE, Manager, Virginia Department of Environmental Quality;


"Common Control Determination for Ocean County Landfill and Manchester Renewable Power Corp./LES", May 11, 2009, Ronald Borsellino, Acting Director, Division of Environmental Planning and Protection, EPA Region 2 to Scott Salisbury, President, Manchester Renewable Power Corporation and Lawrence C. Hesse, President, Ocean County Landfill Corporation;


Further, in an Order Responding to a 2012 Petition to Object to Seneca Energy II, LLC Title V Operating Permit, see https://www.epa.gov/sites/production/files/2015-09/documents/seneca_response2012.pdf, the Petitioner claimed generally that the EPA should object to the Seneca Energy Facility Title V Permit because the permit does not consider the landfill and the Seneca Energy Facility a single source. The Administrator granted the Petitioner's request for an objection to the permit on this claim, and directed the Department of Environmental Conservation to provide an adequate record sufficient to support a source determination regarding the Seneca Energy Facility and the Ontario County Landfill. In another instance, EPA carefully evaluated the relationship between the landfill and energy recovery facility and concluded common control did not exist.


The determinations above are not exhaustive, but provide a reasoned explanation of the rigorous methodology used to determine when common control exists. EPA reaffirms that common control determinations are made on a case-by-case basis and that title V permitting authorities have reasonable discretion when making common control determinations in accordance with applicable legal requirements. Accordingly, "the EPA generally will not substitute its judgment for that of the relevant part 70 permitting authority. That said, state permitting authorities must provide an adequate record explaining any rationale it uses to reach such decisions.

Based on our review of past permitting actions in the City of Lamar and the Prairie View Regional Waste Facility, we found little or no analysis explaining MDNR's decision that these two entities are separate sources. Various statements found in the City of Lamar's Permit Projects 2007-11-034, 2011-04-006, 2012-02-043 and 2016-10-22 indicate MDNR's general agreement with the city's assessment they are a separate source, but these statements fall far short of the detailed case-by-case analysis generally required to resolve the complex interactions between landfills and colocated energy recovery facilities, in particular when many prior determinations have found a common control element. Further, MDNR's conclusions have been largely based on the presence
of natural gas infrastructure, or lack thereof, for the landfill gas engines, which appears to be of little or no relevance in establishing common control. For example, in its latest permitting action in 2017, MDNR concludes that because the City of Lamar installed a tee for natural gas, even though it doesn't burn natural gas, that makes it independent from the landfill and therefore a separate source. Likely more relevant is the contractual relationship between the City of Lamar and Prairie View Regional Waste Facility and how those requirements govern the interaction between the installations.

Therefore, if MDNR reaffirms that Prairie View Regional Waste Facility, LLC and City of Lamar Landfill Gas to Energy Facility are two sources, EPA encourages MDNR to fully evaluate the business contract between the City of Lamar and the Prairie View Regional Waste Facility and explain its rationale for finding that the co-located operations constitute two sources.

**Response to Comment:** The City of Lamar and the Prairie View Regional Waste Facility have been determined to be separate installations. A "T" has been installed in the pipeline between these two facilities to allow the City of Lamar to use compressed natural gas by truck, or natural gas; and therefore operate independently of the Prairie View Regional Waste Facility.

**Comment #3:** Permit Condition PW1 requires the permittee to install a "T" connection to the existing fuel supply piping, which will allow all engines to accept natural gas as an alternate fuel to landfill gas prior to the startup of operation of EP09 and EP10. However, all six (6) emission units are identified as "landfill gas engines" and the emission limitations placed against all six (6) emission units, in Permit Condition 4, are based only on the combustion of "landfill/digester gas." Also, Attachment B (Annual NOx Emissions Compliance Worksheet), Attachment C (Annual CO Emissions Compliance Worksheet), Attachment D (Annual VOC Emissions Compliance Worksheet), Attachment E (Annual Project NOx Emissions Compliance Worksheet) and Attachment F (Annual CO Emissions Compliance Worksheet); all require the permittee to use emission factors obtained from the most recent performance testing required by 40 CPR part 60, Subpart JJJJ, for each engine, as described in Permit Condition 4. However, the requirements from Subpart JJJJ all appear to be derived from the combustion of landfill gas. Additionally, 10 CSR 10-6.065(6)(C)l.l. Reasonably Anticipated Operating Scenarios, in Section V of this draft operating permit, indicates "none."

Therefore, EPA recommends that MoDNR and the City of Lamar consider including a description of the anticipated operating scenario involving the combustion of natural gas. EPA, also strongly suggests MoDNR consider a requirement for the permittee to determine and appropriately use emission factors developed from the burning of natural gas for use in Attachment B, Attachment C, Attachment D, Attachment E and Attachment F. Additionally, EPA suggests MoDNR indicate that the six stationary spark ignition internal combustion engines might more accurately be described as dual fuel-fired (natural gas and landfill gas).

**Response to Comment:** The emission unit descriptions for the engines have been updated to include natural gas as an alternate fuel. Permit condition 004 has been updated to include the emission limitations from Subpart JJJJ, Table 1 for engines burning natural gas as well as the limits for landfill gas. Permit Condition 3, Performance Testing and Reporting 5. includes the Special Condition 3.E from Construction Permit 092017-007A which requires the permittee to conduct stack testing within 45 days of using a new fuel type (i.e. compressed natural gas). The emission factors derived from this testing
would then be used for the recordkeeping on Attachments B, C, D, E and F. A statement has been added to footnote 2 of the attachments explaining this. Furthermore the alternative operating scenario of burning natural gas has been described as a reasonably anticipated operating scenario in the Core Permit Requirements section of the permit.

Comment #4: Finally, the Installation Equipment Listing, in Section I of the draft operating permit, identifies "Bulk No 2 Fuel Oil Tanks" and "12000 gallon No 2 diesel oil storage (located at 1901 Grand Street)" as emission units without specific limitations. However, none of the six (6) stationary spark ignition internal combustion engines associated with the facility appear to be equipped to burn No 2 diesel fuel. EPA suggests MoDNR consider whether or not the No 2 Fuel Oil/No 2 diesel oil storage tanks are pertinent to this operating permit.

Response to Comment: The 12,000 gallon No.2 diesel oil storage tank is empty and is not part of or at the landfill site. It has been removed from the Installation Equipment Listing since it is not part of the landfill engine generation installation. Two 3,0000 above ground oil storage tanks are at the generation site but were not listed in the renewal application so not addressed in the draft permit. These two tanks were added to the Installation Equipment Listing since they qualify as insignificant sources without any specific limitations.
AUG 07 2018

Mr. Lynn Calton
City of Lamar
1104 Broadway
Lamar, MO 64759

Re: City of Lamar, 011-0031
   Permit Number: OP2018-071

Dear Mr. Calton:

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

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 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 or need additional information regarding this permit, please contact the Air Pollution Control Program (APCP) at (573) 751-4817, or you may write to the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

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

MJS:jwj

Enclosures

c: PAMS File: 2011-06-051

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