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: OP2018-030
Expiration Date: APR 26, 2023
Installation ID: 229-0041
Project Number: 2015-10-019

Installation Name and Address
Black Oak Power Producers, LLC
5054 Hwy HH
Hartville, MO 64783
Wright County

Parent Company's Name and Address
Black Oak Power Producers, LLC
2200 Post Oak Blvd, Suite 1100
Houston TX, 77056

Installation Description:
This facility is a power generation facility consisting of two (2) 2,741 horsepower Caterpillar engines each with a nominal production rating of 1,966 kW. The engines are located at the Black Oak Landfill which is owned and operated by Waste Corporation of Missouri. The engines are fueled exclusively by landfill gas generated at the Black Oak landfill to produce electricity which is being sold to the local electric utility. Black Oak Power Producers and Black Oak Landfill are considered one facility for permitting purposes although each is being issued separate operating permit. This installation is major for Carbon Monoxide (CO) and VOC emissions.

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

Director or Designee
Department of Natural Resources
APR 26 2018
Effective Date
# Table of Contents

I. **INSTALLATION EQUIPMENT LISTING** ........................................................................................................... 3  
   EMISSION UNITS WITH LIMITATIONS ........................................................................................................... 3  
   EMISSION UNITS WITHOUT SPECIFIC LIMITATIONS ..................................................................................... 3  

II. **PLANT WIDE EMISSION LIMITATIONS** .................................................................................................. 4  

III. **EMISSION UNIT SPECIFIC EMISSION LIMITATIONS** ......................................................................... 5  
   
   Permit Condition 1 ........................................................................................................................................ 5  
   10 CSR 10-6.061 ........................................................................................................................................ 5  
   Construction Permits Required .......................................................................................................................... 5  
   Construction Permit 062015-011, Issued June 22, 2015 .............................................................................. 5  
   Permit Condition 2 ........................................................................................................................................ 6  
   10 CSR 10-6.060 New Source Performance Standards ................................................................................ 6  
   40 CFR Part 60 Subpart JJJJ Standards of Performance for Spark Ignition Stationary Reciprocating Internal Combustion Engines ...................................................................................... 6  
   Permit Condition 3 ........................................................................................................................................ 10  
   10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds .................................................................. 10  

IV. **CORE PERMIT REQUIREMENTS** ............................................................................................................. 11  

V. **GENERAL PERMIT REQUIREMENTS** ..................................................................................................... 16  

VI. **ATTACHMENTS** .................................................................................................................................... 21  

STATEMENT OF BASIS ................................................................................................................................. 1
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>EU01</td>
<td>Engine 1</td>
</tr>
<tr>
<td>EU02</td>
<td>Engine 2</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.

<table>
<thead>
<tr>
<th>Emission Unit #</th>
<th>Description of Emission Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill Gas Treatment System</td>
<td></td>
</tr>
</tbody>
</table>
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. This section applies to regulations that apply on an entire-installation wide basis. The following general conditions apply to all units contained in this permit, unless stated otherwise.

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.

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.
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>Permit Condition 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 CSR 10-6.061</td>
</tr>
<tr>
<td>Construction Permits Required</td>
</tr>
<tr>
<td>Construction Permit 062015-011, Issued June 22, 2015</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU01 Engine 1</td>
<td>2,741 HP Engine Generator fueled by landfill gas; 18.43 MMBtu/hr; Constructed 10/24/2014; Manufacturer/Model #: Caterpillar/G3520 C+</td>
</tr>
<tr>
<td>EU02 Engine 2</td>
<td>2,741 HP Engine Generator fueled by landfill gas; 18.43 MMBtu/hr; Constructed 10/24/2014; Manufacturer/Model #: Caterpillar/G3520 C+</td>
</tr>
</tbody>
</table>

**Emission Limitations/Performance Testing Requirements:**

1. Special Condition 2.A: The permittee shall perform tests on the Engines (EU01 and EU02) to ensure that the NOx, VOC and CO emissions do not exceed the following levels:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Limit (g/bhp-hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.75</td>
</tr>
<tr>
<td>VOC</td>
<td>1.0</td>
</tr>
<tr>
<td>CO</td>
<td>4.0</td>
</tr>
</tbody>
</table>

2. Special Condition 2.A.1)a): Each set of tests shall be conducted for each engine with the emission units operating at permitted capacity and shall include three (3) 1-hour runs. Permitted capacity is defined as 90-100 percent of the maximum operation rate given below:

<table>
<thead>
<tr>
<th>Engine Power (bhp)</th>
<th>Generator Power (eKW)</th>
<th>LFG Firing Rate (scfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,741</td>
<td>1966</td>
<td>607</td>
</tr>
</tbody>
</table>

3. Special Condition 2.A.1)b): If it is impractical to test at the permitted capacity, the tests can be performed at less than the maximum permitted capacity, but subsequent engine operation shall be limited to 110 percent of the tested rate until new tests are performed. Once the engine is so limited, operation at higher capacities is allowed for no more than 15 total days for the purpose of additional compliance testing to regain authority to operate at the permitted capacity.


5. Special Condition 2.B.: After the initial tests are completed, subsequent tests shall be performed for each engine after every 8,760 hours of operation or every three years from the date of the previous test, whichever comes first.
6. Special Condition 2.C: A completed proposed test plan form shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The proposed test plan may serve the purpose of notification and shall be approved by the director prior to conducting the required performance tests.

7. Special Condition 2.D: Two copies of a written report of the performance test results shall be submitted to stacktesting@dnr.mo.gov within sixty days after completion of the tests. 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.

8. Special Condition 2.E: The test report is to fully account for all operational and emission parameters addressed in the permit conditions as well as in any other applicable state or federal rules or regulations.

9. Special Condition 2.F: If the performance tests indicate that the emissions of NOx, VOC or CO are greater than the emission limits, the permittee shall evaluate what effects the differences would have on the construction permit applicability. The permittee shall submit the results of any such evaluation to the Air Pollution Control Program within 30 days of submitting the test report.

### Permit Condition 2

10 CSR 10-6.060 New Source Performance Standards
40 CFR Part 60 Subpart JJJJ Standards of Performance for Spark Ignition Stationary Reciprocating Internal Combustion Engines

<table>
<thead>
<tr>
<th>2016 EIQ #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU01</td>
<td>Engine 1: 2,741 HP Engine Generator fueled by landfill gas; 18.43 MMBtu/hr; Constructed 10/24/2014; Manufacturer/Model #: Caterpillar/G3520 C+</td>
</tr>
<tr>
<td>EU02</td>
<td>Engine 2: 2,741 HP Engine Generator fueled by landfill gas; 18.43 MMBtu/hr; Constructed 10/24/2014; Manufacturer/Model #: Caterpillar/G3520 C+</td>
</tr>
</tbody>
</table>

**Note:** Compliance with the emission limitations in Permit Condition 1 ensure compliance with the emission limits in Subpart JJJJ. This permit condition is being included to provide requirements for performance testing methods (which are referred to in Construction Permit 062015-011), monitoring and recordkeeping requirements.

**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. [§60.4235(e)]

Table 1 to Subpart JJJJJ of Part 60:

<table>
<thead>
<tr>
<th>Engine type and fuel</th>
<th>Maximum engine power</th>
<th>Manufacture date</th>
<th>Emission standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill/Digester Gas (lean burn)</td>
<td>500-1350</td>
<td>7/1/2010</td>
<td>NOₓ 4.0 CO 5.0 VOC&lt;sub&gt;d&lt;/sub&gt; 10 NOₓ 610 CO 80</td>
</tr>
</tbody>
</table>

<sup>a</sup> 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. Compliance with Permit Condition 1 will ensure compliance with the emission limits of subpart JJJJJ.

<sup>d</sup> 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. [§60.4234]

**Initial and Continuous Compliance:**
1. The permittee must demonstrate compliance with the emission standards by one of the following methods: [§60.4233(b)(1) through (2)(ii)]
   a) Purchasing an engine certified according to the procedures specified in 40 CFR Part 60 Subpart JJJJJ, for the same model year and demonstrating compliance; or
   b) 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 JJJJJ. [§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)]

\[
ER = \frac{C_{d} \times 1.912 \times 10^{-3} \times Q \times T}{\text{HP-hr}} \\
\text{(Eq. 1)}
\]

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.
- \(\text{HP-hr}\) = Brake work of the engine, horsepower-hour (HP-hr).

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

\[
ER = \frac{C_{d} \times 1.164 \times 10^{-3} \times Q \times T}{\text{HP-hr}} \\
\text{(Eq. 2)}
\]

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.
- \(\text{HP-hr}\) = Brake work of the engine, in HP-hr.

7. For purposes of Subpart JJJJ, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, the permittee shall convert the concentration of VOC in the engine exhaust using Equation 3: [§60.4244(f)]

\[
ER = \frac{C_{d} \times 1.833 \times 10^{-3} \times Q \times T}{\text{HP-hr}} \\
\text{(Eq. 3)}
\]

Where:
- \(ER\) = Emission rate of VOC in g/HP-hr.
- \(C_{d}\) = VOC concentration measured as propane in ppmv.
- \(1.833 \times 10^{-3}\) = 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.
- \(\text{HP-hr}\) = 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 the permittee 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)]

\[
RF_i = \frac{C_{RF_i}}{C_{A_i}} \quad (Eq. 4)
\]

Where:
- \(RF_i\) = Response factor of compound \(i\) when measured with EPA Method 25A.
- \(CMi\) = Measured concentration of compound \(i\) in ppmv as carbon.
- \(CAi\) = True concentration of compound \(i\) in ppmv as carbon.

\[
C_{cor} = RF_i \times C_{meas} \quad (Eq. 5)
\]

Where:
- \(C_{corr}\) = Concentration of compound \(i\) corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.
- \(C_{meas}\) = Concentration of compound \(i\) measured by EPA Method 320, ppmv as carbon.

\[
C_{peq} = 0.6098 \times C_{meas} \quad (Eq. 6)
\]

Where:
- \(C_{peq}\) = 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 3

10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds

<table>
<thead>
<tr>
<th>2016 EIQ #</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>EU01</td>
<td>Engine 1: 2,741 HP Engine Generator fueled by landfill gas; 18.43 MMBtu/hr; Constructed 10/24/2014; Manufacturer/Model #: Caterpillar/G3520 C+</td>
</tr>
<tr>
<td>EU02</td>
<td>Engine 2: 2,741 HP Engine Generator fueled by landfill gas; 18.43 MMBtu/hr; Constructed 10/24/ 2014; Manufacturer/Model #: Caterpillar/G3520 C+</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.

**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.


The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.

**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 a 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.

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 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements

This is a State Only permit requirement.

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees.

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

10 CSR 10-6.065(6)(E)3.C Extension of Expired Permits

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 or AirComplianceReporting@dnr.mo.gov.
   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 also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted 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.I Reasonably Anticipated Operating Scenarios

None.

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; and
   d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.

3. All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
   a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
   b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.

4. The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to 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 or AirComplianceReporting@dnr.mo.gov. 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 under 10 CSR 10-6.065(6)(B)3 of this rule. 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 William Brinker, Manager of LLC. On February 5, 2018 notice was received that Dana Petrin, Director Asset Management is now the Responsible Official. 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
STATEMENT OF BASIS

INSTALLATION DESCRIPTION
This facility is a power generation facility consisting of two (2) 2,741 horsepower Caterpillar engines each with a nominal production rating of 1,966 kW. The engines are located at the Black Oak Landfill which is owned and operated by Waste Corporation of Missouri. The engines are fueled exclusively by landfill gas generated at the Black Oak landfill to produce electricity which is being sold to the local electric utility. Black Oak Power Producers and Black Oak Landfill are considered one facility for permitting purposes although each is being issued separate operating permit. This installation is major for Carbon Monoxide (CO), and VOC emissions. This facility is not on the list of Named Sources; therefore fugitive emissions are not counted in the PTE for operating permit applicability purposes.

Table 1: Emissions Profile, tons per year

| Pollutants                        | 2014 | 2015 | 2016 | Potential Emissions
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter ≤ Ten Microns (PM&lt;sub&gt;10&lt;/sub&gt;)</td>
<td>1.30</td>
<td>5.36</td>
<td>6.72</td>
<td>13.33</td>
</tr>
<tr>
<td>Particulate Matter ≤ 2.5 Microns (PM&lt;sub&gt;2.5&lt;/sub&gt;)</td>
<td>1.30</td>
<td>5.36</td>
<td>6.72</td>
<td>13.33</td>
</tr>
<tr>
<td>Sulfur Oxides (SO&lt;sub&gt;x&lt;/sub&gt;)</td>
<td>1.38</td>
<td>5.69</td>
<td>5.56</td>
<td>20.76</td>
</tr>
<tr>
<td>Nitrogen Oxides (NO&lt;sub&gt;x&lt;/sub&gt;)</td>
<td>7.14</td>
<td>12.33</td>
<td>11.81</td>
<td>51.26</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>9.52</td>
<td>16.18</td>
<td>8.59</td>
<td>113.8</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>28.61</td>
<td>101.30</td>
<td>121.82</td>
<td>428.55</td>
</tr>
<tr>
<td>Hazardous Air Pollutants (HAPs)</td>
<td>---</td>
<td>---</td>
<td>0.91</td>
<td>12.66</td>
</tr>
</tbody>
</table>

Potential to Emit was taken from Construction Permit 062015-011, Issued June 22, 2015.

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 March 3, 2015; revised June 1, 2015;
2) 2016 Emissions Inventory Questionnaire, received February 20, 2017;
4) webFIRE; and
5) All documents listed in Construction Permit History

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 were issued to this installation:

Construction Permit 062014-009, Issued June 25, 2014
This construction permit was issued to authorize the installation of the two reciprocating internal combustion engines (EU01 and EU02) fueled exclusively by landfill gas. All special conditions of this permit are superseded by Construction Permit 062015-001.

Construction Permit 062015-001, Issued June 22, 2015
This permit was issued to increase the CO limit from the Construction Permit 062014-009 from 3.0 g/bhp-hr to 4.0 g/bhr-hr. This request was made after initial stack tests showed that it would be difficult to maintain compliance with the 3.0 g/bhp-hr limit. The initial stack tests performed on engine 1, which occurred on March 17, 2015, indicated a CO emissions of 2.92 g/bhp-hr. Although this demonstrated compliance the facility wished to have more room for compliance in future testing.

The most recent testing was performed on Engine 1 (EU01) on June 9, 2016 by DeNovo Global Technologies, Inc. Full load compliance consisted of 3 (1) hour sampling events for NOx, CO, NMVOC and O2 which were used to calculate the average for the emission values. Based on the test results, EU01 passed the annual performance test audit:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Measured</th>
<th>Permit</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Engine Load (bhp)</td>
<td>97.29</td>
<td>&gt;90%</td>
<td>Pass</td>
</tr>
<tr>
<td>Total Engine Run Hours at Time of Test</td>
<td>11,817</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Operating Hours Since Last Test</td>
<td>8,580</td>
<td>&lt;8,760</td>
<td>Pass</td>
</tr>
</tbody>
</table>
Black Oak Power Producers, LLC
Installation ID: 229-0041

Engine HP | 2,667 | 2,741 | Pass
---|---|---|---
NOx (g/hp-hr) | 0.40 | 0.75 | Pass
CO (g/hp-hr) | 3.50 | 4.0 | Pass
NMVOC | 0.25 | 1.0 | Pass

The most recent testing was performed on Engine 2 (EU02) on August 24, 2017 by DeNovo Global Technologies, Inc. Full load compliance consisted of 3 (1) hour sampling events for NOx, CO, NMVOC and O2 which were used to calculate the average for the emission values. Based on the test results, EU02 passed the annual performance test audit:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Measured</th>
<th>Permit</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>% Engine Load (bhp)</td>
<td>92.17</td>
<td>&gt;90%</td>
<td>Pass</td>
</tr>
<tr>
<td>Total Engine Run Hours at Time of Test</td>
<td>20,642</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Operating Hours Since Last Test</td>
<td>8,480</td>
<td>&lt;8,760</td>
<td>Pass</td>
</tr>
<tr>
<td>Engine HP</td>
<td>2,526</td>
<td>2,741</td>
<td>Pass</td>
</tr>
<tr>
<td>NOx (g/hp-hr)</td>
<td>0.50</td>
<td>0.75</td>
<td>Pass</td>
</tr>
<tr>
<td>CO (g/hp-hr)</td>
<td>3.91</td>
<td>4.0</td>
<td>Pass</td>
</tr>
<tr>
<td>NMVOC</td>
<td>0.50</td>
<td>1.0</td>
<td>Pass</td>
</tr>
</tbody>
</table>

**New Source Performance Standards (NSPS) Applicability**

40 CFR Part 60 Subpart JJJJ, *Stationary Spark Ignition Internal Combustion Engines*
This regulation applies to the two Engines (EU01 and EU02). Compliance with the conditions Construction Permit 062015-011 which are included in Permit Condition 1 ensures compliance with the emission limits in Subpart JJJJ.

40 CFR Part 60 Subpart WWW, *Standards of Performance for Municipal Solid Waste Landfills*
Black Oak Power Producers has installed a landfill gas treatment systems that meets the requirements of 40 CFR 60.752(b)(2)(iii)(c), to treat the collected landfill gas prior to combustion in the engine generators. The treatment system meets the current EOA definition of “treatment” and will produce no air pollutant emissions, therefore is not required to be included in the operating permit as a regulated pollutant.

40 CFR Part 60 Subpart XXX, *Standards of Performance for Municipal Solid Waste Landfills that Commenced Construction Reconstruction, or Modification after July 17, 2014*
The installation commenced construction prior to July 17, 2014, therefore this subpart does not apply.

**Maximum Achievable Control Technology (MACT) Applicability**

The Engines (EU01 and EU02) are subject to this regulation due to the fact that they are located at the Oak Grove Landfill, which is considered an area source for hazardous air pollutants. The engines demonstrate compliance with this regulation by meeting emissions standards contained in 40 CFR Part 60 Subpart JJJJ.
National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability
40 CFR Part 61, Subpart M, National Emission Standards for Asbestos
This regulation has sections that apply to active waste disposal sites that receive asbestos containing materials. Although this regulation does not apply to the Black Oak Power Producers, it does apply to the landfill therefore this regulation appears in the Operating Permit in the Core Permit Requirements section.

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. The engines are not considered control devices for the landfill under 40 CFR Part 60 Subpart WWW.

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 (EU01 and EU02) 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
Emission Units EU01 and EU02 are landfill gas fired engine generators that have sulfur dioxide emissions. These engines do not meet any of the applicability exemptions under 10 CSR 10-6.261(1)(A)through(C) therefore they are subject to this regulation. General Provisions Section (3) establishes SO2 emissions based on fuel sulfur content. Subsection (3)(C) includes the fuel sulfur content limits for all units not covered under subsections (3)(A) and (3)(B) and only includes limits on sulfur content for distillate and residual fuel. There are no fuel sulfur limits for the combustion of landfill gas in the regulation, nor are there any monitoring, recordkeeping or reporting requirements for landfill gas fired engines. For this reason, 10 CSR 10-6.261 is not included in the permit as a permit condition; however it does apply to both emission units EU01 and EU02.
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 Intermediate Operating Permit for Black Oak Power Producers, LLC was placed on public notice February 8, 2018 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. Public comments were received from Mr. Mark Smith, EPA Region 7. The comments are addressed in the order in which they appear within the letter(s).

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Comment #1: In the Other Regulatory Determinations section of the Statement of Basis, MoDNR has included a brief discussion regarding 10 CSR 10-6.261, Control of Sulfur Dioxide Emissions. MoDNR states: “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.” 10 CSR 10-6.261(1) says: “This rule applies to any (emphasis added) source that emits sulfur dioxide.” Therefore, it appears that these landfill gas engines might be subject to the requirements of 10 CSR 10-6.261, if the products of combustion contain any sulfur dioxide. The emissions profile contained in Table 1, of the Statement of Basis, provides sulfur oxides potential to emit of 20.75 tons per year and therefore, the permit record included with this draft operating permit appears to indicate that the engines do emit sulfur oxides and may, in fact, be subject to 10 CSR 10-6.261. EPA recommends MoDNR might reconsider their applicability discussion regarding 10 CSR 10-6.261.

Response to Comment: The Statement of Basis for the permit has been changed regarding the discussion of 10 CSR 10-6.261 applicability. It now states: “This regulation applies to sources of sulfur dioxide emissions. However, there are no provisions in the regulation for combustion of landfill gas, therefore it is not included as a permit condition for the engines.”

Update: Following the public comment period the statement of basis discussion regarding 10 CSR 10-6.261 has been updated again and now states the following: “Emission Units EU01 and EU02 are landfill gas fired engine generators that have sulfur dioxide emissions. These engines do not meet any of the applicability exemptions under 10 CSR 10-6.261(1)(A)through(C) therefore they are subject to this regulation. General Provisions Section (3) establishes SO2 emissions based on fuel sulfur content. Subsection (3)(C) includes the fuel sulfur content limits for all units not covered under subsections (3)(A) and (3)(B) and only includes limits on sulfur content for distillate and residual fuel. There are no fuel sulfur limits for the combustion of landfill gas in the regulation, nor are there any monitoring, recordkeeping or reporting requirements for landfill gas fired engines. For this reason, 10 CSR 10-6.261 is not included in the permit as a permit condition; however it does apply to both emission units EU01 and EU02.”
APR 26 2018

Mr. William Brinker
Black Oak Power Producers, LLC
10600 Nations Ford Road
Charlotte, MO 28273

Re: Black Oak Power Producers, LLC, 229-0041
Permit Number: OP2018-030

Dear Mr. Brinker:

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: 2015-10-019