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: OP2018-087
Expiration Date: OCT 02 2023
Installation ID: 095-0186
Project Number: 2015-09-013

Installation Name and Address
Atherton WWTP Incinerator
21208 East Old Atherton Road
Independence, MO 64058
Jackson County

Installation Description:
The Little Blue Valley Sewer District owns and operates the Atherton Wastewater Treatment Plant located in Independence, MO. The Atherton Wastewater Treatment Plant treats wastewater collected in the Little Blue Valley drainage basin and is designed for an average dry weather flow of 52 million gallons per day. The installation is not a major source of any regulated air pollutant; however, the installation is required to obtain a Title V operating permit for their fluidized bed sewage sludge incinerator per §60.4920. The other emission sources located at the installation are not subject to Title V permitting and have not been included in this operating permit.

Parent Company's Name and Address
Little Blue Valley Sewer District
21101 East 78 Highway
Independence MO, 64057

Director or Designee
Department of Natural Resources

OCT 02 2018
Effective Date
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I. Installation Equipment Listing

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

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Description</th>
<th>Applicable Requirement(s)</th>
</tr>
</thead>
</table>
| E16             | Fluidized Bed Sewage Sludge Incinerator  
                  Constructed: April 17, 2012  
                  Manufacturer: Infilco Degremont, Inc.  
                  IDI Order No: 1112784  
                  MHDR: 2.75 dry tons per hour  
                  Controls: Selective non-catalytic reduction (SNCR); quench, combination impingement and multi-fixed venturi scrubber with sodium hydroxide injection and venturi section recirculation, a wet electrostatic precipitator (WESP), a mist eliminator, and a fixed bed granular activated carbon (GAC) adsorber system. | Construction Permits 082011-003 & 082011-003A, NSPS O, NSPS LLLL, NESHAP C, and NESHAP E |

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

None of the other emission sources located at the installation are subject to Title V permitting. The other emission sources operate under a state-only Basic operating permit (Project 2014-12-017).
II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the CFR and 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 sources at this installation. All emission sources are listed in Section I under Emission Sources with Limitations and Emission Sources without Specific Limitations.

None.
III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the CFR and 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>E16 – Fluidized Bed Sewage Sludge Incinerator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Date:</td>
</tr>
<tr>
<td>April 17, 2012</td>
</tr>
<tr>
<td>Manufacturer:</td>
</tr>
<tr>
<td>Infilco Degremont, Inc.</td>
</tr>
<tr>
<td>ID1 Order No.:</td>
</tr>
<tr>
<td>1112784</td>
</tr>
<tr>
<td>MHDR:</td>
</tr>
<tr>
<td>2.75 dry tons per hour of sewage sludge with supplemental natural gas and/or fuel oil</td>
</tr>
<tr>
<td>CEMS:</td>
</tr>
<tr>
<td>CO, NOx, O₂</td>
</tr>
<tr>
<td>Emissions Controls:</td>
</tr>
<tr>
<td>Selective non-catalytic reduction (SNCR) using direct urea injection to the incinerator freeboard section via lances.</td>
</tr>
<tr>
<td>Quench, combination impingement and multi-fixed venturi scrubber with sodium hydroxide injection and venturi section recirculation.</td>
</tr>
<tr>
<td>Wet electrostatic precipitator (WESP).</td>
</tr>
<tr>
<td>Mist eliminator.</td>
</tr>
<tr>
<td>Fixed bed granular activated carbon (GAC) adsorber system.</td>
</tr>
</tbody>
</table>

PERMIT CONDITION 001
10 CSR 10-6.060 Construction Permits Required
Construction Permit 082011-003A, Issued January 27, 2015

Performance Testing Requirements:
1. E16 Fluidized Bed Sewage Sludge Incinerator shall be tested at a minimum of 85% of the maximum permitted capacity of 66 dry tons per day (per §60.4900(a)(11)) or a minimum of 56.1 dry tons per day. [Special Condition 1.A]
   a) If testing is conducted at a sewage sludge processing rate below 56.1 dry tons per day, the permittee shall not operate E16 Fluidized Bed Sewage Sludge Incinerator at greater than 15% above the sewage sludge processing rate observed during the test event until new compliant testing has been conducted.

Fuel Restrictions:
1. The permittee shall combust exclusively pipeline grade natural gas or distillate fuel oil (including, but not limited to No. 2 Fuel Oil, No. 2 Diesel, Diesel, No. 2 Distillate) with a sulfur content of less than or equal to 0.05 percent by weight in E16 Fluidized Bed Sewage Sludge Incinerator. [Special Condition 2.A]
2. The permittee shall demonstrate compliance with the distillate fuel oil sulfur content limitation by obtaining records of the fuel’s sulfur content from the vendor for each shipment of fuel received or by testing each shipment of fuel for the sulfur content in accordance with the method described in 10 CSR 10-6.040 Reference Methods. [Special Condition 2.B]
3. The permittee shall keep maintain records of the sulfur content of the distillate fuel oil onsite and make them available to Department of Natural Resources' employees upon request. [Special Condition 2.B]
4. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov no later than ten days after combusting distillate fuel oil, which exceeds the sulfur content limitation.

5. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]
**PERMIT CONDITION 002**

10 CSR 10-6.060 Construction Permits Required
Construction Permit 082011-003, Issued August 9, 2011

**Wet Scrubber Requirements:**
1. The permittee shall control emissions from E16 Fluidized Bed Sewage Sludge Incinerator with a combination impingement and venturi wet scrubber with sodium hydroxide injection. [Special Condition 2.A]
2. The permittee shall maintain the pressure drop across the wet scrubber, the scrubber liquid flow rate, and the scrubber liquid pH at greater than the indicator ranges specified in Attachment E whenever sewage sludge is being incinerated. [Special Condition 2.C]
3. The permittee shall continuously monitor and record the operating parameters as required by NSPS LLLL. [Special Condition 2.D]
4. The permittee shall maintain an operating and maintenance log for the scrubber using Attachment C or an equivalent form which shall include the following: [Special Condition 2.E]
   a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

**Operational Limitations:**
1. The permittee shall maintain the combustion chamber above the minimum combustion chamber temperature specified in Attachment E whenever sewage sludge is being incinerated. [Special Condition 3.B]
2. The permittee shall continuously monitor and record the combustion chamber temperature as required by NSPS LLLL. [Special Condition 3.C]
3. The permittee shall maintain an operating and maintenance log for E16 Fluidized Bed Sewage Sludge Incinerator using Attachment C or an equivalent form which shall include the following: [Special Condition 3.D]
   a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

**Emissions Monitoring:**
The permittee shall monitor emissions of CO from the incinerator exhaust stack (EP16) using a CEMS as required by NSPS LLLL. [Special Condition 4]

**Recordkeeping:**
The permittee shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources’ personnel upon request. [Special Condition 6]

**Reporting:**
The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]
Standard for PM:
1. The permittee shall not discharge or cause the discharge into the atmosphere from E16 Fluidized Bed Sewage Sludge Incinerator of: [§60.152(a)]
   a) PM at a rate in excess of 0.65 g/kg dry sludge input (1.30 lb/ton dry sludge input). [§60.152(a)(1)]
   b) Any gases which exhibit 20 percent opacity or greater. [§60.152(a)(2)]

Monitoring:
1. The permittee shall: [§60.153(a)]
   a) Install, calibrate, maintain, and operate a flow-measuring device, which can be used to determine either the mass or volume of sludge charged to the incinerator. The flow-measuring device shall be certified by the manufacturer to have an accuracy of ±5 percent over its operating range. [§60.153(a)(1)]
   b) Provide access to the sludge charged so that a well-mixed representative grab sample of the sludge can be obtained. [§60.153(a)(2)]
2. The permittee shall comply with the requirements of §60.153(a) and: [§60.153(b)]
   a) Install, calibrate, maintain and operate a monitoring device that continuously measures and records the pressure drop of the gas flow through the wet scrubbing device. Where a combination of wet scrubbers is used in series, the pressure drop of the gas flow through the combined system shall be continuously monitored. The device used to monitor scrubber pressure drop shall be certified by the manufacturer to be accurate within ±250 Pa (±1 inch water gauge) and shall be calibrated on an annual basis in accordance with the manufacturer's instructions. [§60.153(b)(1)]
   b) Install, calibrate, maintain and operate a monitoring device that continuously measures and records the O₂ content of the incinerator exhaust gas. The O₂ monitor shall be located upstream of any rabble shaft cooling air inlet into the incinerator exhaust gas stream, fan, ambient air recirculation damper, or any other source of dilution air. The O₂ monitoring device shall be certified by the manufacturer to have a relative accuracy of ±5 percent over its operating range and shall be calibrated according to method(s) prescribed by the manufacturer at least once each 24-hour operating period. [§60.153(b)(2)]
   c) Install, calibrate, maintain and operate temperature-measuring devices in the bed and outlet of the fluidized bed incinerator. Each temperature-measuring device shall be certified by the manufacturer to have an accuracy of ±5 percent over its operating range. [§60.153(b)(3)]
   d) Install, calibrate, maintain and operate a device for measuring the fuel flow to the incinerator. The flow-measuring device shall be certified by the manufacturer to have an accuracy of ±5 percent over its operating range. [§60.153(b)(4)]
3. The permittee shall retain the following information and make it available for inspection by the Director for a minimum of five years: [§60.153(c) and §70.6(a)(3)(ii)]
   a) A record of the measured pressure drop of the gas flow through the wet scrubbing device, as required by §60.153(b)(1). [§60.153(c)(1)]
b) A record of the measured $O_2$ content of the incinerator exhaust gas, as required by §60.153(b)(2).

§60.153(c)(2)]

4. The permittee shall maintain records of the results of each performance test conducted to demonstrate compliance with NSPS O.

5. Method 9 opacity observations shall be documented using Attachment D or an equivalent form.

6. The permittee shall maintain all records required by this permit for not less than five years and shall make them available to Missouri Department of Natural Resources’ personnel upon request.

§70.6(a)(3)(ii)]

Test Methods and Procedures:
The permittee shall comply with the test methods and procedures in §60.154 when conducting performance tests to demonstrate compliance with NSPS O. PM and opacity performance tests shall be conducted at the same time as all PM performance tests required by NSPS LLLL.

Reporting:
1. The permittee shall submit to the Director semi-annually a report in writing which contains the following: §60.155(a)
   a) A record of average scrubber pressure drop measurements for each period of 15 minutes duration or more during which the pressure drop of the scrubber was less than, by a percentage specified below, the average scrubber pressure drop measured during the most recent performance test. The percent reduction in scrubber pressure drop for which a report is required shall be determined as follows: §60.155(a)(1)
      i) A scrubber pressure drop reduction of more than 30 percent from the average scrubber pressure drop recorded during the most recent performance test shall be reported.
      §60.155(a)(1)(i)]
   b) A record of average $O_2$ content in the incinerator exhaust gas for each period of 1-hour duration or more that the $O_2$ content of the incinerator exhaust gas exceeds the average $O_2$ content measured during the most recent performance test by more than 3 percent. §60.155(a)(2)]

2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

§70.6(a)(3)(iii)]
**Operator Training and Qualification:**

1. A SSI unit cannot be operated unless a fully trained and qualified SSI unit operator is accessible, either at the facility or can be at the facility within one hour. The trained and qualified SSI unit operator may operate the SSI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified SSI unit operators are temporarily not accessible, the permittee shall follow the procedures in §60.4835. [§60.4810(a)]

2. Operator training and qualification must be obtained through a state-approved program or by completing the requirements included in §60.4810(c). [§60.4810(b)]

3. Training shall be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in §60.4810(c)(1) through (c)(3). [§60.4810(c)]
   a) Training on the ten subjects listed in §60.4810(c)(1)(i) through (c)(1)(x). [§60.4810(c)(1)]
      i) Environmental concerns, including types of emissions. [§60.4810(c)(1)(i)]
      ii) Basic combustion principles, including products of combustion. [§60.4810(c)(1)(ii)]
      iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, sewage sludge feeding, and shutdown procedures. [§60.4810(c)(1)(iii)]
      iv) Combustion controls and monitoring. [§60.4810(c)(1)(iv)]
      v) Operation of air pollution control equipment and factors affecting performance (if applicable). [§60.4810(c)(1)(v)]
      vi) Inspection and maintenance of the incinerator and air pollution control devices. [§60.4810(c)(1)(vi)]
      vii) Actions to prevent malfunctions or to prevent conditions that may lead to malfunctions. [§60.4810(c)(1)(vii)]
      viii) Bottom and fly ash characteristics and handling procedures. [§60.4810(c)(1)(viii)]
      ix) Applicable Federal, State, and local regulations, including Occupational Safety and Health Administration workplace standards. [§60.4810(c)(1)(ix)]
      x) Pollution prevention. [§60.4810(c)(1)(x)]
   b) An examination designed and administered by the state-approved program. [§60.4810(c)(2)]
   c) Written material covering the training course topics that may serve as reference material following completion of the course. [§60.4810(c)(3)]

4. The operator training course shall be completed by the later of the two dates specified in §60.4815(a) and (b). [§60.4815]
   a) Six months after the SSI unit startup. [§60.4815(a)]
   b) The date before an employee assumes responsibility for operating the SSI unit or assumes responsibility for supervising the operation of the SSI unit. [§60.4815(b)]

5. Operators shall obtain operator qualification by completing a training course that satisfies the criteria under §60.4810(b). [§60.4820(a)]

6. Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under §60.4810(c)(2). [§60.4820(b)]

7. To maintain qualification, an operator shall complete an annual review or refresher course covering, at a minimum, the five topics described in §60.4825(a) through (e). [§60.4825]

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2 Source: 76 FR 15404, Mar. 21, 2011
a) Update of regulations. [§60.4825(a)]  
b) Incinerator operation, including startup and shutdown procedures, sewage sludge feeding, and ash handling. [§60.4825(b)]  
c) Inspection and maintenance. [§60.4825(c)]  
d) Prevention of malfunctions or conditions that may lead to malfunction. [§60.4825(d)]  
e) Discussion of operating problems encountered by attendees. [§60.4825(e)]

8. Operators shall renew a lapsed operator qualification before beginning operation of a SSI unit by one of the two methods specified in §60.4830(a) and (b). [§60.4830]  
a) For a lapse of less than three years, the operator shall complete a standard annual refresher course described in §60.4825. [§60.4830(a)]  
b) For a lapse of three years or more, the operator shall repeat the initial qualification requirements in §60.4820(a). [§60.4830(b)]

9. If a qualified operator is not at the facility and cannot be at the facility within one hour, the permittee shall meet the criteria specified in either §60.4835(a) or (b), depending on the length of time that a qualified operator is not accessible. [§60.4835]  
a) When a qualified operator is not accessible for more than eight hours, the SSI unit may be operated for less than two weeks by other plant personnel who are familiar with the operation of the SSI unit and who have completed a review of the information specified in §60.4840 within the past 12 months. However, the permittee shall record the period when a qualified operator was not accessible and include this deviation in the annual report as specified under §60.4915(d). [§60.4835(a)]  
b) When a qualified operator is not accessible for two weeks or more, the permittee shall take the two actions that are described in §60.4835(b)(1) and (b)(2). [§60.4835(b)]  
i) Notify the Director of this deviation in writing within 10 days. In the notice, state what caused this deviation, what the permittee is doing to ensure that a qualified operator is accessible, and when the permittee anticipates a qualified operator will be accessible. [§60.4835(b)(1)]  
ii) Submit a status report to the Administrator and the Director every four weeks outlining what the permittee is doing to ensure that a qualified operator is accessible, stating when the permittee anticipates that a qualified operator will be accessible, and requesting approval from the Administrator to continue operation of the SSI unit. The permittee shall submit the first status report four weeks after the permittee notifies the Director of the deviation under §60.4835(b)(1). [§60.4835(b)(2)]  
(1) If the Administrator notifies the permittee that the request to continue operation of the SSI unit is disapproved, the SSI unit may continue operation for 30 days, and then shall cease operation. [§60.4835(b)(2)(i)]  
(2) Operation of the unit may resume if a qualified operator is accessible as required under §60.4810(a). The permittee shall notify the Administrator and the Director within five days of having resumed operations and of having a qualified operator accessible. [§60.4835(b)(2)(ii)]

10. The permittee shall maintain at the facility the documentation of the operator training procedures specified under §60.4910(c)(1) and make the documentation readily accessible to all SSI unit operators. [§60.4840(a)]

11. The permittee shall establish a program for reviewing the information listed in §60.4910(c)(1) with each qualified incinerator operator and other plant personnel who may operate the unit according to the provisions of §60.4835(a), according to the following schedule: [§60.4840(b)]
Emission Limits, Emission Standards, and Operating Limits:

1. The permittee shall meet the emission limits and standards specified in Table 1 to NSPS LLLL. The emission limits and standards apply at all times the unit is operating, and during periods of malfunction. The emission limits and standards apply to emissions from a bypass stack or vent while sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time). [§60.4845]

2. The permittee shall meet the operating limits and requirements specified in §60.4850(a), (b), and (h). The operating parameters for which the permittee will establish operating limits for a wet scrubber are listed in Table 3 to NSPS LLLL with site-specific operating parameters delineated in Attachment E. The permittee shall comply with the operating requirements in §60.4850(f) and the requirements in §60.4850(g) for meeting any new operating limits, re-established in §60.4890. The operating limits apply at all times that sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time). [§60.4850]

a) The permittee shall meet a site-specific operating limit for minimum operating temperature of the combustion chamber (or afterburner combustion chamber) that the permittee establishes in §60.4890(a)(2)(i). [§60.4850(a)]

b) The permittee shall meet the site-specific operating limits that the permittee establishes in §60.4870 for each operating parameter associated with each air pollution control device. [§60.4850(b)]

c) The permittee shall monitor the feed rate and moisture content of the sewage sludge fed to the sewage sludge incinerator, as specified in §60.4850(f)(1) and (f)(2). [§60.4850(f)]

i) Continuously monitor the sewage sludge feed rate and calculate a daily average for all hours of operation during each 24-hour period. Keep a record of the daily average feed rate, as specified in §60.4910(f)(3)(ii). [§60.4850(f)(1)]

ii) Take at least one grab sample per day of the sewage sludge fed to the sewage sludge incinerator. If the permittee takes more than one grab sample in a day, calculate the daily average for the grab samples. Keep a record of the daily average moisture content, as specified in §60.4910(f)(3)(ii). [§60.4850(f)(2)]

d) For the operating limits and requirements specified in §60.4850(a), (b), and (h), the permittee shall meet any new operating limits and requirements, re-established according to §60.4890(d). [§60.4850(g)]

e) The permittee shall meet the site-specific operating limits for the fixed bed GAC adsorber system establish as required in §60.4855. [§60.4850(h)]

3. As the permittee is using air pollution control devices other than a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection to comply with the emission limits in
§60.4845, the permittee shall meet the requirements in §60.4855(a) and (b)\(^3\) for the GAC adsorber system: [§60.4855]

a) Meet the applicable operating limits and requirements in §60.4850, and establish applicable operating limits according to §60.4870. [§60.4855(a)]

4. The emission limits and standards apply at all times and during periods of malfunction. The operating limits apply at all times that sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time). [§60.4860]

Table 1 to NSPS LLLL – Emission Limits and Standards for New Fluidized Bed Sewage Sludge Incineration Units

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Limit(^4)</th>
<th>Using these averaging methods and minimum sampling volumes and durations</th>
<th>And determining compliance using this method</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>9.6 mg/dscm</td>
<td>3-run average (collect a minimum volume of 1 dscm per run)</td>
<td>Performance test (Method 5 at NSPS Appendix A-3; Method 26A or Method 29 at NSPS Appendix A-8).</td>
</tr>
<tr>
<td>HCl</td>
<td>0.24 ppmvd</td>
<td>3-run average (Collect a minimum volume of 1 dscm per run)</td>
<td>Performance test (Method 26A at NSPS Appendix A-8).</td>
</tr>
<tr>
<td>CO</td>
<td>27 ppmvd</td>
<td>24-hour block average (using 1-hour averages of data). For determining compliance with the CO concentration limit using CO CEMS, the correction to 7 percent (O_2) does not apply during periods of startup or shutdown. Use the measured CO concentration without correcting for (O_2) concentration in averaging with other CO concentrations (corrected to 7 percent (O_2)) to determine the 24-hour average value</td>
<td>CEMS (Performance Specification 4B of NSPS, using a low-range span of 100 ppm and a high-range span of 1000 ppm, and a RA of 0.5 ppm instead of 5 ppm specified in section 13.2. For the cylinder gas audit of Procedure 1, ±15% or 0.5 whichever is greater).</td>
</tr>
<tr>
<td>D/F (total mass basis); or D/F (TEQ basis)(^5)</td>
<td>0.013 ng/dscm (total mass basis); or 0.0044 ng/dscfm (TEQ basis)</td>
<td>3-run average (collect a minimum volume of 3 dscm per run)</td>
<td>Performance test (Method 23 at NSPS Appendix A-7).</td>
</tr>
<tr>
<td>Hg</td>
<td>0.0010 mg/dscfm</td>
<td>3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008),(^6) collect a minimum volume of 3 dscm per run. For Method 30B, collect a minimum sample as</td>
<td>Performance test (Method 29 at NSPS Appendix A-8; Method 30B at NSPS Appendix A-8; or ASTM D6784-02 (Reapproved 2008).(^6)</td>
</tr>
</tbody>
</table>

\(^3\) §60.4850(b) required the installation to petition the Administrator for approval of specific operating parameters, operating limits, and averaging periods for the GAC adsorber system. See Attachment F for a copy of EPA’s approval letter.

\(^4\) All emission limits are measured at 7 percent \(O_2\), dry basis at standard conditions.

\(^5\) The permittee has the option to comply with either the D/F emission limit on a total mass basis or the D/F emission limit on a TEQ basis.

\(^6\) Incorporated by reference, see §60.17.
<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Limit</th>
<th>Using these averaging methods and minimum sampling volumes and durations</th>
<th>And determining compliance using this method</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{x}</td>
<td>30 ppmvd</td>
<td>24-hour block average (using 1-hour averages of data). For determining compliance with the NO\textsubscript{x} concentration limit using NO\textsubscript{x} CEMS, the correction to 7 percent O\textsubscript{2} does not apply during periods of startup or shutdown. Use the measured NO\textsubscript{x} concentration without correcting for O\textsubscript{2} concentration in averaging with other NO\textsubscript{x} concentrations (corrected to 7 percent O\textsubscript{2}) to determine the 24-hour average value</td>
<td>CEMS (Performance Specification 2 of NSPS)</td>
</tr>
<tr>
<td>SO\textsubscript{2}</td>
<td>5.3 ppmvd</td>
<td>3-run average (For Method 6, collect a minimum volume of 100 liters per run. For Method 6C, sample for a minimum duration of one hour per run)</td>
<td>Performance test (Method 6 or 6C at NSPS Appendix A-4; or ANSI/ASME PTC 19.10-1981)</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.0011 mg/dscm</td>
<td>3-run average (collect a minimum volume of 1 dscm per run)</td>
<td>Performance test (Method 29 at NSPS Appendix A-8). Use GFAAS or ICP/MS for the analytical finish.</td>
</tr>
<tr>
<td>Lead</td>
<td>0.00062 mg/dscm</td>
<td>3-run average (collect a minimum volume of 3 dscm per run)</td>
<td>Performance test (Method 29 at NSPS Appendix A-8. Use GFAAS or ICP/MS for the analytical finish.</td>
</tr>
</tbody>
</table>

**Initial Compliance Requirements**

1. To demonstrate initial compliance with the emission limits and standards in Table 1 to NSPS LLLL, use the procedures specified in §60.4865(a) for Hg. In lieu of using the procedures specified in §60.4865(a), the permittee also has the option to demonstrate initial compliance using the procedures specified in §60.4865(b) for Hg. The permittee shall meet the requirements of §60.4865(a) or (b), as applicable, and §60.4865(c) and (d), according to the performance testing, monitoring, and calibration requirements in §60.4900(a) and (b). The permittee shall demonstrate that the SSI unit meets the emission limits and standards specified in Table 1 to NSPS LLLL for Hg by conducting performance testing no later than January 26, 2020 or 180 days after the start-up of the SNCR and fixed bed GAC adsorber systems, whichever comes first. [§60.4865 and Administrative Order on Consent No. APCP-2015-077]

a) Demonstrate initial compliance using the performance test required in §60.8. The permittee shall demonstrate that the SSI unit meets the emission limits and standards specified in Table 1 to NSPS LLLL for Hg using the performance test. The initial performance test shall be conducted

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7 The permittee demonstrated initial compliance with the emission limits for PM, CO, D/F (TEQ basis), SO\textsubscript{2}, Cadmium, and Lead and established operating limits for their scrubbing system in September 2014. During the initial compliance demonstration, the permittee was unable to achieve compliance with the HCl, Hg, or NO\textsubscript{x} emission limits; therefore, the installation is installing a SNCR system and a fixed bed GAC adsorber system to comply with NSPS LLLL and Administrative Order on Consent No. APCP-2015-077. The installation conducted additional HCl testing in June 2015 and again failed to demonstrate compliance with the NSPS LLLL HCl limits. The installation demonstrated initial compliance with the NO\textsubscript{x} and HCl limits in October 2016. The installation is required to demonstrate initial compliance for Hg and the fixed bed GAC adsorber system according to these initial compliance requirements.
using the test methods, averaging methods, and minimum sampling volumes or durations
specified in Table 1 to NSPS LLLL and according to the testing, monitoring, and calibration
requirements specified in §60.4900(a). [§60.4865(a)]

b) Demonstrate initial compliance using a CEMS or continuous automated sampling system.
Collect data as specified in §60.4900(b)(6) and use the following procedures: [§60.4865(b)]

i) To demonstrate initial compliance with the emission limits specified in Table 1 to NSPS
LLL for Hg, the permittee may substitute the use of a continuous monitoring system in lieu
of conducting the initial performance test required in §60.4865(a), as follows:
[§60.4865(b)(2)]
(1) The permittee may substitute the use of a CEMS for any pollutant specified in
§60.4865(b)(2) in lieu of conducting the initial performance test for that pollutant in
§60.4865(a). [§60.4865(b)(2)(i)]
(2) The permittee may substitute the use of a continuous automated sampling system for Hg
in lieu of conducting the initial Hg performance test in §60.4865(a). [§60.4865(b)(2)(ii)]

ii) If the permittee uses a CEMS to demonstrate compliance with an applicable emission limit
in Table 1 to NSPS LLLL, as described in §60.4865(b)(2), the permittee shall use the CEMS
and follow the requirements specified in §60.4900(b). The permittee shall measure
emissions according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent
O₂. The permittee shall demonstrate initial compliance using a 24-hour block average of
these 1-hour arithmetic average emission concentrations, calculated using Equation 19-19 in
section 12.4.1 of Method 19 of NSPS Appendix A-7. [§60.4865(b)(3)]

iii) If the permittee uses a continuous automated sampling system to demonstrate compliance
with an applicable emission limit in Table 1 to NSPS LLLL, as described in §60.4865(b)(2),
the permittee shall: [§60.4865(b)(4)]
(1) Use the continuous automated sampling system specified in §60.58b(p) and (q), and
measure and calculate average emissions corrected to 7 percent O₂ according to
§60.58b(p) and the installation’s monitoring plan. [§60.4865(b)(4)(i)]
(a) Use the procedures specified in §60.58b(p) to calculate 24-hour block averages to
determine compliance with the Hg emission limit in Table 1 to NSPS LLLL.
[§60.4865(b)(4)(i)(A)]
(2) Comply with the provisions in §60.58b(q) to develop a monitoring plan. For Hg
continuous automated sampling systems, the permittee shall use Performance
Specification 12B of Appendix B of 40 CFR Part 75 and Procedure 5 of NSPS Appendix
F. [§60.4865(b)(4)(ii)]
iv) Except as provided in §60.4865(c), the permittee shall complete the initial performance
evaluations required under the installation’s monitoring plan for any CEMS and continuous
automated sampling systems according to the provisions of §60.4880. The performance
evaluation shall be conducted using the procedures and acceptance criteria specified in
§60.4880(a)(3). [§60.4865(b)(5)]

c) Submit an initial compliance report, as specified in §60.4915(c). [§60.4865(d)]
d) If the permittee demonstrates initial compliance using the performance test specified in
§60.4865(a), then the provisions of this paragraph apply. If a force majeure is about to occur,
occurs, or has occurred for which the permittee intends to assert a claim of force majeure, the
permittee shall notify the Director in writing as specified in §60.4915(g). The permittee shall
conduct the initial performance test as soon as practicable after the force majeure occurs. The
Director will determine whether or not to grant the extension to the initial performance test
deadline, and will notify the permittee in writing of approval or disapproval of the request for an
extension as soon as practicable. Until an extension of the performance test deadline has been approved by the Director, the permittee remains strictly subject to the requirements of NSPS LLLL. [§60.4865(e)]

2. The permittee shall establish the site-specific operating limits specified in §60.4870(b) through (h) or established in §60.4855, as applicable, during the initial performance tests required in §60.4865. The permittee shall meet the requirements in §60.4890(d) to confirm these operating limits or re-establish new operating limits using operating data recorded during any performance tests or performance evaluations required in §60.4885. The permittee shall follow the data measurement and recording frequencies and data averaging times specified in Table 3 to NSPS LLLL or as established in §60.4855 and delineated in Attachment E, and the permittee shall follow the testing, monitoring, and calibration requirements specified in §§60.4900 and 60.4905 or established in §60.4855. [§60.4870(a)]

3. Minimum scrubber liquid flow rate (measured at the inlet to each wet scrubber), equal to the lowest 4-hour average liquid flow rate measured during the most recent performance test demonstrating compliance with all applicable emission limits. [§60.4870(c)]

4. Minimum scrubber liquid pH for each wet scrubber, equal to the lowest 1-hour average scrubber liquid pH measured during the most recent performance test demonstrating compliance with the SO₂ and HCl emission limits. [§60.4870(d)]

5. Minimum combustion chamber operating temperature (or minimum afterburner temperature), equal to the lowest 4-hour average combustion chamber operating temperature (or afterburner temperature) measured during the most recent performance test demonstrating compliance with all applicable emission limits. [§60.4870(e)]

6. Minimum power input to the electrostatic precipitator collection plates, equal to the lowest 4-hour average power measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits. Power input must be calculated as the product of the secondary voltage and secondary amperage to the electrostatic precipitator collection plates. Both the secondary voltage and secondary amperage must be recorded during the performance test. [§60.4870(f)]

7. Minimum water flow rate at the inlet of the electrostatic precipitator, equal to the lowest 4-hour average water flow rate at the inlet of the electrostatic precipitator measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits. [§60.4785(c)(3) and EPA’s March 21, 2018 letter (see Attachment G)]

8. The permittee shall conduct an air pollution control device inspection according to §60.4900(c) within 60 days of installing an air pollution control device or within 180 days of startup of the SSI unit using the air pollution control device, whichever comes first. [§60.4875(a)]

9. Within 10 operating days following the air pollution control device inspection under §60.4875(a), all necessary repairs shall be completed unless the permittee obtains written approval from the Director establishing a date whereby all necessary repairs of the SSI unit shall be completed. [§60.4875(b)]

10. The permittee shall develop and submit to the Director for approval a site-specific monitoring plan for each continuous monitoring system required under NSPS LLLL, according to the requirements in §60.4880(a) through (d). This requirement also applies if the permittee petitions the Administrator for alternative monitoring parameters under §60.13(i) and §60.4880(e). If the permittee uses a continuous automated sampling system to comply with the Hg emission limit, the permittee shall develop a monitoring plan as specified in §60.58b(q), and the permittee is not required to meet the requirements in §60.4880(a) and (b). The permittee shall submit and update the monitoring plans as specified in §60.4880(f) through (h). [§60.4880]
a) For each continuous monitoring system, the monitoring plan shall address the elements and requirements specified in §60.4880(a)(1) through (a)(8). The permittee shall operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan. [§60.4880(a)]

i) Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device). [§60.4880(a)(1)]

ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems. [§60.4880(a)(2)]

iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations). [§60.4880(a)(3)]

(1) For CEMSs, the performance evaluation and acceptance criteria shall include, but is not limited to, the following: [§60.4880(a)(3)(i)]

(a) The applicable requirements for CEMSs specified in §60.13. [§60.4880(a)(3)(i)(A)]

(b) The applicable performance specifications (e.g., relative accuracy tests) in NSPS Appendix B. [§60.4880(a)(3)(i)(B)]

(c) The applicable procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) in NSPS Appendix F. [§60.4880(a)(3)(i)(C)]

(d) A discussion of how the occurrence and duration of out-of-control periods will affect the suitability of CEMS data, where out-of-control has the meaning given in §60.4880(a)(7)(i). [§60.4880(a)(3)(i)(D)]

(2) For continuous parameter monitoring systems, the performance evaluation and acceptance criteria shall include, but is not limited to the following: [§60.4880(a)(3)(ii)]

(a) If the permittee has an operating limit that requires the use of a flow monitoring system, the permittee shall meet the requirements in §60.4880(a)(3)(ii)(A)(1) through (4). [§60.4880(a)(3)(ii)(A)]

(i) Install the flow sensor and other necessary equipment in a position that provides a representative flow. [§60.4880(a)(3)(ii)(A)(1)]

(ii) Use a flow sensor with a measurement sensitivity of no greater than 2 percent of the expected process flow rate. [§60.4880(a)(3)(ii)(A)(2)]

(iii) Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances. [§60.4880(a)(3)(ii)(A)(3)]

(iv) Conduct a flow monitoring system performance evaluation in accordance with the monitoring plan at the time of each performance test but no less frequently than annually. [§60.4880(a)(3)(ii)(A)(4)]

(b) If the permittee has an operating limit that requires the use of a pressure monitoring system, the permittee shall meet the requirements in §60.4880(a)(3)(ii)(B)(1) through (6). [§60.4880(a)(3)(ii)(B)]

(i) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop). [§60.4880(a)(3)(ii)(B)(1)]

(ii) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion. [§60.4880(a)(3)(ii)(B)(2)]
(iii) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.  \([\text{§60.4880(a)(3)(ii)(B)(3)}]\)

(iv) Perform checks at least once each process-operating day to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).  \([\text{§60.4880(a)(3)(ii)(B)(4)}]\)

(v) Conduct a performance evaluation of the pressure monitoring system in accordance with the monitoring plan at the time of each performance test but no less frequently than annually.  \([\text{§60.4880(a)(3)(ii)(B)(5)}]\)

(vi) If at any time the measured pressure exceeds the manufacturer’s specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with the monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in the monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.  \([\text{§60.4880(a)(3)(ii)(B)(6)}]\)

(c) If the permittee has an operating limit that requires a pH monitoring system, the permittee shall meet the requirements in §60.4880(a)(3)(ii)(C)(1) through (4).  \([\text{§60.4880(a)(3)(ii)(C)}]\)

(i) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.  \([\text{§60.4880(a)(3)(ii)(C)(1)}]\)

(ii) Ensure the sample is properly mixed and representative of the fluid to be measured.  \([\text{§60.4880(a)(3)(ii)(C)(2)}]\)

(iii) Conduct a performance evaluation of the pH monitoring system in accordance with the monitoring plan at least once each process-operating day.  \([\text{§60.4880(a)(3)(ii)(C)(3)}]\)

(iv) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with the monitoring plan at the time of each performance test but no less frequently than quarterly.  \([\text{§60.4880(a)(3)(ii)(C)(4)}]\)

(d) If the permittee has an operating limit that requires the use of a temperature measurement device, the permittee shall meet the requirements in §60.4880(a)(3)(ii)(D)(1) through (4).  \([\text{§60.4880(a)(3)(ii)(D)}]\)

(i) Install the temperature sensor and other necessary equipment in a position that provides a representative temperature.  \([\text{§60.4880(a)(3)(ii)(D)(1)}]\)

(ii) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 1.0 percent of the temperature value, whichever is larger, for a noncryogenic temperature range.  \([\text{§60.4880(a)(3)(ii)(D)(2)}]\)

(iii) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 2.5 percent of the temperature value, whichever is larger, for a cryogenic temperature range.  \([\text{§60.4880(a)(3)(ii)(D)(3)}]\)

(iv) Conduct a temperature measurement device performance evaluation at the time of each performance test but no less frequently than annually.  \([\text{§60.4880(a)(3)(ii)(D)(4)}]\)

(e) If the permittee has an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, the permittee shall meet the requirements in §60.4880(a)(3)(ii)(E)(1) and (2).  \([\text{§60.4880(a)(3)(ii)(E)}]\)
(i) Install sensors to measure (secondary) voltage and current to the electrostatic precipitator collection plates. [§60.4880(a)(3)(ii)(E)(1)]

(ii) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually. [§60.4880(a)(3)(ii)(E)(2)]

iv) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.11(d). [§60.4880(a)(4)]

v) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13. [§60.4880(a)(5)]

vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §60.7(b), (c), (c)(1), (c)(4), (d), (e), (f) and (g). [§60.4880(a)(6)]

vii) Provisions for periods when the continuous monitoring system is out of control, as follows: [§60.4880(a)(7)]

1) A continuous monitoring system is out of control if the conditions of §60.4880(a)(7)(i)(A) or (a)(7)(i)(B) are met. [§60.4880(a)(7)(i)]

(a) The zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard. [§60.4880(a)(7)(i)(A)]

(b) The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit. [§60.4880(a)(7)(i)(B)]

2) When the continuous monitoring system is out of control as specified in §60.4880(a)(7)(i), the permittee shall take the necessary corrective action and shall repeat all necessary tests that indicate that the system is out of control. The permittee shall take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour the permittee conducts a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under 40 CFR Part 60. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. [§60.4880(a)(7)(ii)]

viii) Schedule for conducting initial and periodic performance evaluations. [§60.4880(a)(8)]

b) The permittee shall conduct an initial performance evaluation of each continuous monitoring system, as applicable, in accordance with the monitoring plan and §60.13(c). The permittee shall conduct the initial performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system. [§60.4880(c)]

c) The permittee may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the standards of NSPS LLLL, subject to the provisions of §60.4880(e)(1) through (e)(6). [§60.4880(e)]

i) The Administrator will not approve averaging periods other than those specified in §60.4880, unless the permittee documents, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved over the duration of three performance test runs. [§60.4880(e)(1)]

ii) If the application to use an alternate monitoring requirement is approved, the permittee shall continue to use the original monitoring requirement until approval is received to use another monitoring requirement. [§60.4880(e)(2)]
iii) The permittee shall submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application shall contain the information specified in §60.4880(e)(3)(i) through (e)(3)(iii): §60.4880(e)(3)

(1) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach. §60.4880(e)(3)(i)

(2) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculated. §60.4880(e)(3)(ii)

(3) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard. §60.4880(e)(3)(iii)

iv) The Administrator will notify the permittee of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide the following: §60.4880(e)(4)

(1) Notice of the information and findings upon which the intended disapproval is based. §60.4880(e)(4)(i)

(2) Notice of opportunity for the permittee to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the permittee to provide additional supporting information. §60.4880(e)(4)(ii)

v) The permittee is responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator's failure to approve or disapprove the application relieves the permittee of the responsibility to comply with any provision of NSPS LLLL. §60.4880(e)(5)

vi) The Administrator may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of NSPS LLLL. §60.4880(e)(6)

d) The permittee shall submit the monitoring plans required in §60.4880(a) and (b) at least 60 days before the initial performance evaluation of the continuous monitoring system(s). §60.4880(f)

e) The permittee shall update and resubmit the monitoring plan if there are any changes or potential changes in the monitoring procedures or if there is a process change, as defined in §60.4930. §60.4880(h)
Continuous Compliance Requirements:

1. To demonstrate continuous compliance with the emission limits and standards specified in Table 1 to NSPS LLLL, use the procedures specified in §60.4885(a) for PM, HCl, D/F (TEQ basis), Hg, SO2, cadmium, and lead, and follow the procedures specified in §60.4885(b) for CO and NOx. The permittee shall meet the requirements of §60.4885(a) and (b), as applicable, and §60.4885(c) through (e), according to the performance testing, monitoring, and calibration requirements in §60.4900(a) and (b). The permittee may also petition the Administrator for alternative monitoring parameters as specified in §60.4885(f). [§60.4885]

a) Demonstrate continuous compliance using a performance test. Except as provided in §60.4885(a)(3) and (e), following the date that the initial performance test for each pollutant in Table 1 to NSPS LLLL except CO and NOx is completed, the permittee shall conduct a performance test for each such pollutant on an annual basis (between 11 and 13 calendar months following the previous performance test). The performance test shall be conducted using the test methods, averaging methods, and minimum sampling volumes or durations specified in Table 1 to NSPS LLLL and according to the testing, monitoring, and calibration requirements specified in §60.4900(a). [§60.4885(a)]

i) The permittee may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward. The Director may request a repeat performance test at any time. [§60.4885(a)(1)]

ii) The permittee shall repeat the performance test within 60 days of a process change, as defined in §60.4930. [§60.4885(a)(2)]

iii) Except as specified in §60.4885(a)(1) and (2), the permittee shall conduct performance tests less often for a given pollutant, as specified in §60.4885(a)(3)(i) through (iii). [§60.4885(a)(3)]

(1) The permittee may conduct performance tests less often if the performance tests for the pollutant for at least two consecutive years show that the emissions are at or below 75 percent of the emission limit specified in Table 1 to NSPS LLLL, and there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, the permittee does not have to conduct a performance test for that pollutant for the next two years. The permittee shall conduct a performance test during the third year and no more than 37 months after the previous performance test. [§60.4885(a)(3)(i)]

(2) If the SSI unit continues to meet the emission limit for the pollutant, the permittee may choose to conduct performance tests for the pollutant every third year if the emissions are at or below 75 percent of the emission limit, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions, but each such performance test shall be conducted no more than 37 months after the previous performance test. [§60.4885(a)(3)(ii)]

8 The permittee demonstrated initial compliance with the emission limits for PM, CO, D/F (TEQ basis), SO2, Cadmium, and Lead and established initial operating limits for their scrubbing system in September 2014 and is required to demonstrate continuous compliance with these emission limits. The permittee demonstrated initial compliance with the emission limits for NOx and HCl in October 2016 and is required to demonstrate continuous compliance with these emission limits. During the initial compliance demonstration in September 2014, the permittee was unable to achieve compliance with the HCl, Hg, or NOx emission limits; therefore, the installation is installing a SNCR system and a fixed bed GAC adsorber system. The installation is required to demonstrate initial compliance for Hg and the fixed bed GAC adsorber system according to the initial compliance requirements and then with the continuous compliance requirements thereafter.
(3) If a performance test shows emissions exceeded 75 percent of the emission limit for a pollutant, the permittee shall conduct annual performance tests for that pollutant until all performance tests over two consecutive years show compliance. [§60.4885(a)(3)(iii)]

b) Demonstrate continuous compliance using a CEMS or continuous automated sampling system. Collect data as specified in §60.4900(b)(6) and use the following procedures: [§60.4885(b)]

i) To demonstrate continuous compliance with the CO emission limit, the permittee shall use the CO CEMS specified in §60.4900(b). For determining compliance with the CO concentration limit using CO CEMS, the correction to 7 percent O₂ does not apply during periods of startup or shutdown. Use the measured CO concentration without correcting for O₂ concentration in averaging with other CO concentrations (corrected to 7 percent O₂) to determine the 24-hour average value. [§60.4885(b)(1)]

ii) To demonstrate continuous compliance with the emission limits for NOₓ using a CEMS, the permittee shall use the CEMS and follow the requirements specified in §60.4900(b). The permittee shall measure emissions according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent O₂. For determining compliance with the NOₓ concentration limit using NOₓ CEMS, the correction to 7 percent O₂ does not apply during periods of startup or shutdown. Use the measured NOₓ concentration without correcting for O₂ concentration in averaging with other NOₓ concentrations (corrected to 7 percent O₂) to determine the 24-hour average value. The permittee shall demonstrate initial compliance using a 24-hour block average of these 1-hour arithmetic average emission concentrations, calculated using Equation 19-19 in section 12.4.1 of Method 19 of NSPS Appendix A-7. [§60.4885(b)(2) and (b)(3)]

iii) Except as provided in §60.4885(e), the permittee shall complete periodic performance evaluations required under the monitoring plan for any CEMS and continuous automated sampling systems, according to the schedule specified in the monitoring plan. If the permittee was previously determining compliance by conducting an annual performance test (or according to the less frequent testing for a pollutant as provided in §60.4885(a)(3)), the permittee shall complete the initial performance evaluation required in the monitoring plan in §60.4880 for the continuous monitoring system prior to using the CEMS to demonstrate compliance or continuous automated sampling system. The performance evaluation shall be conducted using the procedures and acceptance criteria specified in §60.4880(a)(3). [§60.4885(b)(5)]

c) The permittee shall submit the annual compliance report specified in §60.4915(d). The permittee shall submit the deviation report specified in §60.4915(e) for each instance that the permittee did not meet each emission limit in Table 1 to NSPS LL.LL. [§60.4885(d)]

d) If the permittee demonstrates continuous compliance using a performance test, as specified in §60.4885(a), then the provisions of this paragraph apply. If a force majeure is about to occur, occurs, or has occurred for which the permittee intends to assert a claim of force majeure, the permittee shall notify the Director in writing as specified in §60.4915(g). The permittee shall conduct the performance test as soon as practicable after the force majeure occurs. The Director will determine whether to grant the extension to the performance test deadline, and will notify the permittee in writing of approval or disapproval of the request for an extension as soon as practicable. Until an extension of the performance test deadline has been approved by the Director, the permittee remains strictly subject to the requirements of NSPS LL.LL. [§60.4885(e)]
Little Blue Valley Sewer District
Part 70 Operating Permit
Installation ID: 095-0186
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2. The permittee shall continuously monitor the operating parameters as specified in §60.4890(a) and meet the requirements of §60.4890(b) and (c), according to the monitoring and calibration requirements in §60.4905. The permittee shall confirm and re-establish the operating limits as specified in §60.4890(d). [§60.4890]

a) The permittee shall continuously monitor the operating parameters specified in §60.4890(a)(1) and (a)(2) using the continuous monitoring equipment and according to the procedures specified in §60.4905 or established in §60.4855. To determine compliance, the permittee shall use the data averaging period specified in Table 3 to NSPS LLLL and delineated in Attachment E unless a different averaging period is established under §60.4855. [§60.4890(a)]

b) Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in §60.4890(a) constitutes a deviation from the operating limits established under NSPS LLLL, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. The permittee shall submit the deviation report specified in §60.4915(e) for each instance that the permittee did not meet one of the operating limits established under NSPS LLLL. [§60.4890(b)]

c) The permittee shall submit the annual compliance report specified in §60.4915(d) to demonstrate continuous compliance. [§60.4890(c)]

d) The permittee shall confirm the operating limits according to §60.4890(d)(1) or re-establish operating limits according to §60.4890(d)(2). The operating limits shall be established to assure ongoing compliance with the emission limits. [§60.4890(d)]

i) The operating limits shall be based on operating data recorded during any performance test required in §60.4885(a) or any performance evaluation required in §60.4885(b)(5). [§60.4890(d)(1)]

ii) The permittee may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward. [§60.4890(d)(2)]

3. The permittee shall conduct an annual inspection of each air pollution control device used to comply with the emission limits, according to §60.4900(c), no later than 12 months following the previous annual air pollution control device inspection. [§60.4895(a)]

4. Within 10 operating days following an air pollution control device inspection, all necessary repairs must be completed unless the permittee obtains written approval from the Director establishing a date whereby all necessary repairs of the affected SSI unit shall be completed. [§60.4895(b)]

**Performance Testing, Monitoring, and Calibration Requirements:**

1. The permittee shall meet, as applicable, the performance testing requirements specified in §60.4900(a) when conducting performance testing to demonstrate compliance with NSPS LLLL, the monitoring requirements specified in §60.4900(b), the air pollution control device inspections requirements specified in §60.4900(c), and the bypass stack provisions specified in §60.4900(d). [§60.4900]

a) Continuous monitor requirements. The permittee shall meet the following requirements, as applicable, when using a continuous monitoring system to demonstrate compliance with the
emission limits in Table 1 to NSPS LLLL. If the permittee elects to use a CEMS instead of conducting annual performance testing, the permittee shall meet the requirements of §60.4900(b)(1) through (b)(6). [§60.4900(b)]

i) The permittee shall notify the Director one month before starting use of the continuous monitoring system. [§60.4900(b)(1)]

ii) The permittee shall notify the Director one month before stopping use of the continuous monitoring system, in which case the permittee shall also conduct a performance test prior to ceasing operation of the system. [§60.4900(b)(2)]

iii) The permittee shall install, operate, calibrate, and maintain an instrument for continuously measuring and recording the emissions to the atmosphere in accordance with the following:

(1) Section 60.13 of 40 CFR Part 60, Subpart A. [§60.4900(b)(3)(i)]

(2) The following performance specifications of NSPS Appendix B, as applicable:

(a) For CO, Performance Specification 4B of NSPS Appendix B with the modifications shown in Table 1 to NSPS LLLL. [§60.4900(b)(3)(ii)(C)]

(b) For NOx, Performance Specification 2 of NSPS Appendix B. [§60.4900(b)(3)(ii)(F)]

(3) For CEMSs, the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of NSPS Appendix F specified in §60.4900(b)(3)(iii)(A) through (b)(3)(iii)(G). For each pollutant, the span value of the CEMS is two times the applicable emission limit, expressed as a concentration. [§60.4900(b)(3)(iii)]

(a) For CO, Procedure 1 in NSPS Appendix F. [§60.4900(b)(3)(iii)(C)]

(b) For NOx, Procedure 1 in NSPS Appendix F. [§60.4900(b)(3)(iii)(F)]

(4) If the monitoring system has a malfunction or out-of-control period, the permittee shall complete repairs and resume operation of the monitoring system as expeditiously as possible. [§60.4900(b)(3)(iv)]

iv) During each relative accuracy test run of the CEMS using the performance specifications in §60.4900(b)(3)(ii), emission data for each regulated pollutant and O2 shall be collected concurrently (or within a 30- to 60-minute period) by both the CEMSs and the test methods specified in §60.4900(b)(4)(i) through (b)(4)(viii). Relative accuracy testing shall be at representative operating conditions while the SSI unit is charging sewage sludge. [§60.4900(b)(4)]

(1) For CO, Method 10, 10A, or 10B at NSPS Appendix A-4, shall be used. [§60.4900(b)(4)(iii)]

(2) For NOx, Method 7 or 7E at NSPS Appendix A-4, shall be used. [§60.4900(b)(4)(vi)]

(3) For O2, Method 3A or 3B at NSPS Appendix A-2, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, shall be used. [§60.4900(b)(4)(viii)]

v) The permittee shall operate the continuous monitoring system and collect data with the continuous monitoring system as follows: [§60.4900(b)(6)]

(1) The permittee shall collect data using the continuous monitoring system at all times the affected SSI unit is operating and at the intervals specified in §60.4900(b)(6)(ii), except for periods of monitoring system malfunctions that occur during periods specified in §60.4880(a)(7)(i), repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). Any such periods that you do
(2) The permittee shall collect CEMS data in accordance with §60.13(e)(2). [§60.4900(b)(6)(ii)]

(3) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions shall not be included in calculations used to report emissions or operating levels. Any such periods shall be reported in a deviation report. [§60.4900(b)(6)(iii)]

(4) Any data collected during periods when the monitoring system is out of control as specified in §60.4880(a)(7)(i), repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out-of-control periods shall not be included in calculations used to report emissions or operating levels. Any such periods that do not coincide with a monitoring system malfunction constitute a deviation from the monitoring requirements and shall be reported in a deviation report. [§60.4900(b)(6)(iv)]

(5) The permittee shall use all the data collected during all periods except those periods specified in §60.4900(b)(6)(iii) and (b)(6)(iv) in assessing the operation of the control device and associated control system. [§60.4900(b)(6)(v)]

b) Air pollution control device inspections. The permittee shall conduct air pollution control device inspections that include, at a minimum, the following: [§60.4900(c)]

i) Inspect air pollution control device(s) for proper operation. [§60.4900(c)(1)]

ii) Generally observe that the equipment is maintained in good operating condition. [§60.4900(c)(2)]

iii) Develop a site-specific monitoring plan according to the requirements in §60.4880. This requirement also applies if the permittee petitions the EPA Administrator for alternative monitoring parameters under §60.13(i). [§60.4900(c)(3)]

c) Bypass stack. Use of the bypass stack at any time that sewage sludge is being charged to the SSI unit is an emissions standards deviation for all pollutants listed in Table 1 to NSPS LLLL. The use of the bypass stack during a performance test invalidates the performance test. [§60.4900(d)]

2. The permittee shall install, operate, calibrate, and maintain the continuous parameter monitoring systems according to the requirements in §60.4905(a)(1) and (2). [§60.4905(a)]

a) Meet the following general requirements for flow, pressure, pH, and operating temperature measurement devices: [§60.4905(a)(1)]

i) The permittee shall collect data using the continuous monitoring system at all times the affected SSI unit is operating and at the intervals specified in §60.4905(a)(1)(ii), except for periods of monitoring system malfunctions that occur during periods specified in §60.4880(a)(7)(i), repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). Any such periods that the permittee does not collect data using the continuous monitoring system constitute a deviation from the monitoring requirements and shall be reported in a deviation report. [§60.4905(a)(1)(i)]

ii) The permittee shall collect continuous parameter monitoring system data in accordance with §60.13(e)(2). [§60.4905(a)(1)(ii)]

iii) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control
activities conducted during monitoring system malfunctions shall not be included in calculations used to report emissions or operating levels. Any such periods shall be reported in the annual deviation report. [§60.4905(a)(1)(iii)]

iv) Any data collected during periods when the monitoring system is out of control as specified in §60.4880(a)(7)(i), repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out-of-control periods shall not be included in calculations used to report emissions or operating levels. Any such periods that do not coincide with a monitoring system malfunction, as defined in §60.4930, constitute a deviation from the monitoring requirements and shall be reported in a deviation report. [§60.4905(a)(1)(iv)]

v) The permittee shall use all the data collected during all periods except those periods specified in §60.4905(a)(1)(iii) and (a)(1)(iv) in assessing the operation of the control device and associated control system. [§60.4905(a)(1)(v)]

vi) Record the results of each inspection, calibration, and validation check. [§60.4905(a)(1)(vi)]

b) Operate and maintain your continuous monitoring system according to the monitoring plan required under §60.4880. [§60.4905(a)(2)]

3. The permittee shall operate and maintain the continuous parameter monitoring systems specified in §60.4905(a) in continuous operation according to the monitoring plan required under §60.4880. [§60.4905(c)]

4. The permittee shall install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the fixed bed GAC adsorber system bypass including date, time, and duration. [§60.4905(d)]

Recordkeeping and Reporting:
1. The permittee shall maintain the items (as applicable) specified in §60.4910(a) through (n) for a period of at least five years. All records shall be available on site in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Director. [§60.4910]

   a) Date. Calendar date of each record. [§60.4910(a)]

   b) Siting. All documentation produced as a result of the siting requirements of §§60.4800 and 60.4805. [§60.4910(b)]

   c) Operator Training. Documentation of the operator training procedures and records specified in §60.4910(c)(1) through (c)(4). The permittee shall make available and readily accessible at the facility at all times for all SSI unit operators the documentation specified in §60.4910(c)(1). [§60.4910(c)]

   i) Documentation of the following operator training procedures and information:

   [§60.4910(c)(1)]

   (1) Summary of the applicable standards under NSPS LLLL. [§60.4910(c)(1)(i)]

   (2) Procedures for receiving, handling, and feeding sewage sludge. [§60.4910(c)(1)(ii)]

   (3) Incinerator startup, shutdown, and malfunction preventative and corrective procedures. [§60.4910(c)(1)(iii)]

   (4) Procedures for maintaining proper combustion air supply levels. [§60.4910(c)(1)(iv)]

   (5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under NSPS LLLL. [§60.4910(c)(1)(v)]

   (6) Monitoring procedures for demonstrating compliance with the incinerator operating limits. [§60.4910(c)(1)(vi)]

   (7) Reporting and recordkeeping procedures. [§60.4910(c)(1)(vii)]
(8) Procedures for handling ash. [§60.4910(c)(1)(viii)]

(9) A list of the materials burned during the performance test, if in addition to sewage sludge. [§60.4910(c)(1)(ix)]

(10) For each qualified operator and other plant personnel who may operate the unit according to the provisions of §60.4835(a), the phone and/or pager number at which they can be reached during operating hours. [§60.4910(c)(1)(x)]

ii) Records showing the names of SSI unit operators and other plant personnel who may operate the unit according to the provisions of §60.4835(a), as follows: [§60.4910(c)(2)]

(1) Records showing the names of SSI unit operators and other plant personnel who have completed review of the information in §60.4910(c)(1) as required by §60.4840(b), including the date of the initial review and all subsequent annual reviews. [§60.4910(c)(2)(i)]

(2) Records showing the names of the SSI operators who have completed the operator training requirements under §60.4810, met the criteria for qualification under §60.4820, and maintained or renewed their qualification under §60.4825 or §60.4830. Records shall include documentation of training, including the dates of their initial qualification and all subsequent renewals of such qualifications. [§60.4910(c)(2)(ii)]

iii) Records showing the periods when no qualified operators were accessible for more than eight hours, but less than two weeks, as required in §60.4835(a). [§60.4910(c)(3)]

iv) Records showing the periods when no qualified operators were accessible for two weeks or more along with copies of reports submitted as required in §60.4835(b). [§60.4910(c)(4)]

d) Air pollution control device inspections. Records of the results of initial and annual air pollution control device inspections conducted as specified in §§60.4875 and 60.4900(c), including any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the Director. [§60.4910(d)]

e) Performance test reports. [§60.4910(e)]

i) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and standards and/or to establish operating limits, as applicable. [§60.4910(e)(1)]

ii) Retain a copy of the complete performance test report, including calculations. [§60.4910(e)(2)]

iii) Keep a record of the hourly dry sludge feed rate measured during performance test runs, as specified in §60.4900(a)(2)(i). [§60.4910(e)(3)]

iv) Keep any necessary records to demonstrate that the performance test was conducted under conditions representative of normal operations, including a record of the moisture content measured as required in §60.4900(a)(2)(ii) for each grab sample taken of the sewage sludge burned during the performance test. [§60.4910(e)(4)]

f) Continuous monitoring data. Records of the following data, as applicable: [§60.4910(f)]

i) For CEMSs, all 1-hour average concentrations of CO and NOx emissions. [§60.4910(f)(1)]

ii) For continuous parameter monitoring systems: [§60.4910(f)(3)]

(1) All 1-hour average values recorded for the following operating parameters, as applicable: [§60.4910(f)(3)(i)]

(a) Combustion chamber operating temperature (or afterburner temperature). [§60.4910(f)(3)(ii)(A)]

(b) Pressure drop across each wet scrubber system, liquid flow rate to each wet scrubber used to comply with the emission limit in Table 1 to NSPS LLLL for PM, cadmium, or lead, and scrubber liquid flow rate and scrubber liquid pH for each wet scrubber
used to comply with an emission limit in Table 1 to NSPS LLLL for SO₂ or HCl. [§60.4910(f)(3)(i)(B)]

(c) If an electrostatic precipitator is used to comply with the rule, secondary voltage and secondary amperage of the electrostatic precipitator collection plates, and water flow rate at the inlet of the wet electrostatic precipitator. [§60.4910(f)(3)(i)(C), §60.4785(c)(4) and EPA’s March 21, 2018 letter (see Attachment G)]

(2) All daily average values recorded for the feed rate and moisture content of the sewage sludge fed to the sewage sludge incinerator, monitored and calculated as specified in §60.4850(f). [§60.4910(f)(3)(iii)]

(3) For other control devices, the permittee shall maintain data collected for all operating parameters used to determine compliance with the operating limits, at the frequencies specified in the monitoring plan. [§60.4910(f)(3)(iv)]

g) Other records for continuous monitoring systems. The permittee shall keep the following records, as applicable: [§60.4910(g)]

i) Keep records of any notifications to the Administrator in §60.4915(h)(l) of starting or stopping use of a continuous monitoring system for determining compliance with any emissions limit. [§60.4910(g)(1)]

h) Deviation Reports. Records of any deviation reports submitted under §60.4915(e) and (f). [§60.4910(h)]

i) Equipment specifications and operation and maintenance requirements. Equipment specifications and related operation and maintenance requirements received from vendors for the incinerator, emission controls, and monitoring equipment. [§60.4910(i)]

j) Inspections, calibrations, and validation checks of monitoring devices. Records of inspections, calibrations, and validations checks of any monitoring devices as required under §§60.4900 and 60.4905. [§60.4910(j)]

k) Monitoring plan and performance evaluations for continuous monitoring systems. Records of the monitoring plans required under §60.4880, and records of performance evaluations required under §60.4885(b)(5). [§60.4910(k)]

l) Less frequent testing. If, consistent with 60.4885(a)(3), the permittee elects to conduct performance tests less frequently than annually, the permittee shall keep annual records that document that the emissions in the two previous consecutive years were at or below 75 percent of the applicable emission limit in Table 1 to NSPS LLLL, and document that there were no changes in source operations or air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past two years. [§60.4910(l)]

m) Use of fixed bed GAC adsorber system bypass. Records indicating use of the bypass, including dates, times, and durations as required under §60.4905(d). [§60.4910(m)]

n) If a malfunction occurs, the permittee shall keep a record of the information submitted in the annual report in §60.4915(d)(16). [§60.4910(n)]

2. The permittee shall submit the reports specified in §60.4915(a) through (j). See Table 5 to NSPS LLLL for a summary of these reports. [§60.4915]

a) Initial compliance report. The permittee shall submit the following information no later than 60 days following the initial performance test. [§60.4915(c)]

i) Company name, physical address, and mailing address. [§60.4915(c)(1)]

ii) Statement by a responsible official, with that official’s name, title, and signature, certifying the accuracy of the content of the report. [§60.4915(c)(2)]

iii) Date of report. [§60.4915(c)(3)]
iv) The complete test report for the initial performance test results obtained by using the test methods specified in Table 1 to NSPS LLLL. [§60.4915(c)(4)]

v) If an initial performance evaluation of a continuous monitoring system was conducted, the results of that initial performance evaluation. [§60.4915(c)(5)]

vi) The values for the site-specific operating limits established pursuant to §§60.4850 and 60.4855 and the calculations and methods, as applicable, used to establish each operating limit. [§60.4915(c)(6)]

vii) The results of the initial air pollution control device inspection required in §60.4875, including a description of repairs. [§60.4915(c)(8)]

b) Annual compliance report. The permittee shall submit an annual compliance report that includes the items listed in §60.4915(d)(1) through (d)(16) for the reporting period specified in §60.4915(d)(3). The permittee shall submit the first annual compliance report no later than 12 months following the submission of the initial compliance report in §60.4915(c). The permittee shall submit subsequent annual compliance reports no more than 12 months following the previous annual compliance report. [§60.4915(d)]

i) Company name, physical address, and mailing address. [§60.4915(d)(1)]

ii) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report. [§60.4915(d)(2)]

iii) Date of report and beginning and ending dates of the reporting period. [§60.4915(d)(3)]

iv) If a performance test was conducted during the reporting period, the results of that performance test. [§60.4915(d)(4)]

1) If operating limits were established during the performance test, include the value for each operating limit and, as applicable, the method used to establish each operating limit, including calculations. [§60.4915(d)(4)(i)]

2) If activated carbon is used during the performance test, include the type of activated carbon used. [§60.4915(d)(4)(ii)]

v) For each pollutant and operating parameter recorded using a continuous monitoring system, the highest average value and lowest average value recorded during the reporting period, as follows: [§60.4915(d)(5)]

1) For continuous emission monitoring systems and continuous automated sampling systems, report the highest and lowest 24-hour average emission value. [§60.4915(d)(5)(i)]

2) For continuous parameter monitoring systems, report the following values: [§60.4915(d)(5)(ii)]

a) For all operating parameters except scrubber liquid pH, the highest and lowest 12-hour average values. [§60.4915(d)(5)(ii)(A)]

b) For scrubber liquid pH, the highest and lowest 3-hour average values. [§60.4915(d)(5)(ii)(B)]

vi) If there are no deviations during the reporting period from any emission limit, emission standard, or operating limit that applies, statement that there were no deviations from the emission limits, emission standard, or operating limits. [§60.4915(d)(6)]

vii) If a performance evaluation of a continuous monitoring system was conducted, the results of that performance evaluation. If new operating limits were established during the performance evaluation, include the calculations for establishing those operating limits. [§60.4915(d)(8)]

viii) If the permittee elects to conduct performance tests less frequently as allowed in §60.4885(a)(3) and did not conduct a performance test during the reporting period, the
permittee shall include the dates of the last two performance tests, a comparison of the emission level the permittee achieved in the last two performance tests to the 75 percent emission limit threshold specified in §60.4885(a)(3), and a statement as to whether there have been any process changes and whether the process change resulted in an increase in emissions. [§60.4915(d)(9)]

ix) Documentation of periods when all qualified SSI unit operators were unavailable for more than eight hours, but less than two weeks. [§60.4915(d)(10)]

x) Results of annual air pollution control device inspections recorded under §60.4910(d) for the reporting period, including a description of repairs. [§60.4915(d)(11)]

xi) If there were no periods during the reporting period when the continuous monitoring systems had a malfunction, a statement that there were no periods during which the continuous monitoring systems had a malfunction. [§60.4915(d)(12)]

xii) If there were no periods during the reporting period when a continuous monitoring system was out of control, a statement that there were no periods during which the continuous monitoring system was out of control. [§60.4915(d)(13)]

xiii) If there were no operator training deviations, a statement that there were no such deviations during the reporting period. [§60.4915(d)(14)]

xiv) If the permittee did not make revisions to the site-specific monitoring plan during the reporting period, a statement that the permittee did not revise the site-specific monitoring plan during the reporting period. If the permittee revised the site-specific monitoring plan during the reporting period, a copy of the revised plan. [§60.4915(d)(15)]

xv) If the permittee had a malfunction during the reporting period, the compliance report shall include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused any applicable emission limitation to be exceeded. The report shall also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with §60.11(d), including actions taken to correct a malfunction. [§60.4915(d)(16)]

c) Deviation reports. [§60.4915(e)]

i) The permittee shall submit a deviation report if: [§60.4915(e)(1)]

1. Any recorded operating parameter level, based on the averaging time specified in Table 3 to NSPS LLLLL and delineated in Attachment E, is above the maximum operating limit or below the minimum operating limit established under NSPS LLLLL. [§60.4915(e)(1)(i)]

2. Any recorded 24-hour block average emissions level is above the emission limit, if a continuous monitoring system is used to comply with an emission limit. [§60.4915(e)(1)(ii)]

3. A performance test was conducted that deviated from any emission limit in Table 1 to NSPS LLLLL. [§60.4915(e)(1)(v)]

4. A continuous monitoring system was out of control. [§60.4915(e)(1)(vi)]

5. The permittee had a malfunction (e.g., continuous monitoring system malfunction) that caused or may have caused any applicable emission limit to be exceeded. [§60.4915(e)(1)(vii)]

ii) The deviation report shall be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data collected during the second half of the calendar year (July 1 to December 31). [§60.4915(e)(2)]
iii) For each deviation where the permittee is using a continuous monitoring system to comply with an associated emission limit or operating limit, report the items described in §60.4915(e)(3)(i) through (e)(3)(viii). [§60.4915(e)(3)]

1. Company name, physical address, and mailing address. [§60.4915(e)(3)(i)]
2. Statement by a responsible official, with that official’s name, title, and signature, certifying the accuracy of the content of the report. [§60.4915(e)(3)(ii)]
3. The calendar dates and times the unit deviated from the emission limits, emission standards, or operating limits requirements. [§60.4915(e)(3)(iii)]
4. The averaged and recorded data for those dates. [§60.4915(e)(3)(iv)]
5. Duration and cause of each deviation from the following: [§60.4915(e)(3)(v)]
   a. Emission limits, emission standards, operating limits, and corrective actions. [§60.4915(e)(3)(v)(A)]
   b. Bypass events and corrective actions. [§60.4915(e)(3)(v)(B)]
6. Dates, times, and causes for monitor downtime incidents. [§60.4915(e)(3)(vi)]
7. A copy of the operating parameter monitoring data during each deviation and any test report that documents the emission levels. [§60.4915(e)(3)(vii)]
8. If there were periods during which the continuous monitoring system malfunctioned or was out of control, the permittee shall include the following information for each deviation from an emission limit or operating limit: [§60.4915(e)(3)(viii)]
   a. The date and time that each malfunction started and stopped. [§60.4915(e)(3)(viii)(A)]
   b. The date, time, and duration that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks. [§60.4915(e)(3)(viii)(B)]
   c. The date, time, and duration that each continuous monitoring system was out of control, including start and end dates and hours and descriptions of corrective actions taken. [§60.4915(e)(3)(viii)(C)]
   d. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction, during a period when the system as out of control, or during another period. [§60.4915(e)(3)(viii)(D)]
   e. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period. [§60.4915(e)(3)(viii)(E)]
   f. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes. [§60.4915(e)(3)(viii)(F)]
   g. A summary of the total duration of continuous monitoring system downtime during the reporting period, and the total duration of continuous monitoring system downtime as a percent of the total operating time of the SSI unit at which the continuous monitoring system downtime occurred during that reporting period. [§60.4915(e)(3)(viii)(G)]
   h. An identification of each parameter and pollutant that was monitored at the SSI unit. [§60.4915(e)(3)(viii)(H)]
   i. A brief description of the SSI unit. [§60.4915(e)(3)(viii)(I)]
   j. A brief description of the continuous monitoring system. [§60.4915(e)(3)(viii)(J)]
   k. The date of the latest continuous monitoring system certification or audit. [§60.4915(e)(3)(viii)(K)]
(I) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period. [§60.4915(e)(3)(viii)(L)]

iv) For each deviation where the permittee is not using a continuous monitoring system to comply with the associated emission limit or operating limit, report the following items: [§60.4915(e)(4)]

1) Company name, physical address, and mailing address. [§60.4915(e)(4)(i)]

2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report. [§60.4915(e)(4)(ii)]

3) The total operating time of each affected SSI during the reporting period. [§60.4915(e)(4)(iii)]

4) The calendar dates and times the unit deviated from the emission limits, emission standards, or operating limits requirements. [§60.4915(e)(4)(iv)]

5) The averaged and recorded data for those dates. [§60.4915(e)(4)(v)]

6) Duration and cause of each deviation from the following: [§60.4915(e)(4)(vi)]
   a) Emission limits, emission standard, and operating limits, and corrective actions. [§60.4915(e)(4)(vi)(A)]
   b) Bypass events and corrective actions. [§60.4915(e)(4)(vi)(B)]

7) A copy of any performance test report that showed a deviation from the emission limits or standard. [§60.4915(e)(4)(vii)]

8) A brief description of any malfunction reported in §60.4915(e)(1)(vii), including a description of actions taken during the malfunction to minimize emissions in accordance with §60.11(d) and to correct the malfunction. [§60.4915(e)(4)(viii)]

d) Qualified operator deviation. [§60.4915(f)]

i) If all qualified operators are not accessible for two weeks or more, the permittee shall take the two actions in §60.4915(f)(1)(i) and (f)(1)(ii). [§60.4915(f)(1)]

1) Submit a notification of the deviation within 10 days that includes the three items in §60.4915(f)(1)(i)(A) through (f)(1)(i)(C). [§60.4915(f)(1)(i)]
   a) A statement of what caused the deviation. [§60.4915(f)(1)(i)(A)]
   b) A description of actions taken to ensure that a qualified operator is accessible. [§60.4915(f)(1)(i)(B)]
   c) The date when the permittee anticipates a qualified operator will be available. [§60.4915(f)(1)(i)(C)]

2) Submit a status report to the Administrator and the Director every four weeks that includes the three items in §60.4915(f)(1)(ii)(A) through (f)(1)(ii)(C). [§60.4915(f)(1)(ii)]
   a) A description of actions taken to ensure that a qualified operator is accessible. [§60.4915(f)(1)(ii)(A)]
   b) The date when the permittee anticipates a qualified operator will be accessible. [§60.4915(f)(1)(ii)(B)]
   c) Request for approval from the Administrator to continue operation of the SSI unit. [§60.4915(f)(1)(ii)(C)]

ii) If the unit was shut down by the Administrator, under the provisions of §60.4835(b)(2)(i), due to a failure to provide an accessible qualified operator, the permittee shall notify the Administrator and the Director within five days of meeting §60.4835(b)(2)(ii) that the permittee is resuming operation. [§60.4915(f)(2)]

e) Notification of a force majeure. If a force majeure is about to occur, occurs, or has occurred for which the permittee intends to assert a claim of force majeure: [§60.4915(g)]
i) The permittee shall notify the Director, in writing as soon as practicable following the date
the permittee first knew, or through due diligence should have known that the event may
cause or caused a delay in conducting a performance test beyond the regulatory deadline, but
the notification shall occur before the performance test deadline unless the initial force
majeure or a subsequent force majeure event delays the notice, and in such cases, the
notification shall occur as soon as practicable. [§60.4915(g)(1)]

ii) The permittee shall provide to the Director a written description of the force majeure event
and a rationale for attributing the delay in conducting the performance test beyond the
regulatory deadline to the force majeure; describe the measures taken or to be taken to
minimize the delay; and identify a date by which the permittee proposes to conduct the
performance test. [§60.4915(g)(2)]

f) Other notifications and reports required. The permittee shall submit other notifications as
provided by §60.7 and as follows: [§60.4915(h)]

i) The permittee shall notify the Director one month before starting or stopping use of a
continuous monitoring system for determining compliance with any emission limit.
[§60.4915(h)(1)]

ii) The permittee shall notify the Director at least 30 days prior to any performance test
conducted to comply with the provisions of NSPS LLLL, to afford the Director the
opportunity to have an observer present. [§60.4915(h)(2)]

iii) As specified in §60.4900(a)(8), the permittee shall notify the Director at least seven days
prior to the date of a rescheduled performance test for which notification was previously
made in §60.4915(h)(2). [§60.4915(h)(3)]

g) Report submission form. [§60.4915(i)]

i) Submit initial, annual, and deviation reports electronically or in paper format, postmarked on
or before the submittal due dates. [§60.4915(i)(1)]

ii) Within 60 days after the date of completing each performance test, as defined in §63.2,
conducted to demonstrate compliance with NSPS LLLL, the permittee shall submit relative
accuracy test audit (i.e., reference method) data and performance test (i.e., compliance test)
data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using
the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/) or
other compatible electronic spreadsheet. Only data collected using test methods compatible
with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE
database. [§60.4915(i)(2)]

h) Changing report dates. If the Administrator agrees, the permittee may change the semi-annual or
annual reporting dates. See §60.19(c) for procedures to seek approval to change the reporting
date. [§60.4915(j)]
**PERMIT CONDITION 005**

10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants

40 CFR Part 61, Subpart C – National Emission Standard for Beryllium

**Emission Standard:**
1. Emissions to the atmosphere from stationary sources subject to the provisions of NESHAP Part C shall not exceed 10 grams (0.022 lb) of beryllium over a 24-hour period, except as provided in §61.32(b).
   
   \[§61.32(a)\]

2. The burning of beryllium and/or beryllium-containing waste, except propellants, is prohibited except in incinerators, emissions from which must comply with the standard. \[§61.32(c)\]

**Stack Sampling:**
1. Unless a waiver of emission testing is obtained under §61.13, the permittee shall test emissions from the source according to Method 104 of NESHAP Appendix B or according to Method 29 of NSPS Appendix A. Method 103 of NESHAP Appendix B is approved by the Administrator as an alternative method for sources subject to §61.32(a). The emission test shall be performed:
   
   \[§61.33(a)\]

   a) By no later than September 16, 2019. \[§70.6(a)(3)(i)(B)\]

2. The Director shall be notified at least 30 days prior to an emission test so that he may at his option observe the test. \[§61.33(b)\]

3. Samples shall be taken over such a period or periods as are necessary to accurately determine the maximum emissions, which will occur in any 24-hour period. Where emissions depend upon the relative frequency of operation of different types of processes, operating hours, operating capacities, or other factors, the calculation of maximum 24-hour-period emissions will be based on that combination of factors which is likely to occur during the subject period and which result in the maximum emissions. No changes in the operation shall be made, which would potentially increase emissions above that determined by the most recent source test, until a new emission level has been estimated by calculation and the results reported to the Director. \[§61.33(c)\]

4. All samples shall be analyzed and beryllium emissions shall be determined within 30 days after the source test. All determinations shall be reported to the Director by a registered letter dispatched before the close of the next business day following such determination. \[§61.33(d)\]

5. Records of emission test results and other data needed to determine total emissions shall be retained at the source and made available, for inspection by the Director, for a minimum of five years. \[§61.33(e) and §70.6(a)(3)(ii)\]

**Reporting:**
The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. \[§70.6(a)(3)(iii)\]

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PERMIT CONDITION 006
10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants

Emission Standard:
Emissions to the atmosphere from sludge incineration plants, sludge-drying plants, or a combination of these that process wastewater treatment plant sludge shall not exceed 3.2 kg (7.1 lb) of Hg per 24-hour period. [§61.52(b)]

Stack Sampling:
1. Sludge incineration and drying plants. [§61.53(d)]
   a) Unless a waiver of emission testing is obtained under §61.13, the permittee shall test emissions from the incinerator. Such tests shall be conducted in accordance with the procedures set forth either in §61.53(d) or in §61.54. [§61.53(d)(1)]
   b) Method 101A in NSPS Appendix B or Method 29 in NSPS Appendix A shall be used to test emissions as follows: [§61.53(d)(2)]
      i) In conjunction with each mercury performance test required by NSPS LLLL. [§70.6(a)(3)(i)(B)]
   c) The Director shall be notified at least 30 days prior to an emission test, so she may at her option observe the test. [§61.53(d)(3)]
   d) Samples shall be taken over such a period or periods as are necessary to determine accurately the maximum emissions, which will occur in a 24-hour period. No changes shall be made in the operation, which would potentially increase emissions above the level determined by the most recent stack test, until the new emission level has been estimated by calculation and the results reported to the Director. [§61.53(d)(4)]
   e) All samples shall be analyzed and Hg emissions shall be determined within 30 days after the stack test. Each determination shall be reported to the Director by a registered letter dispatched within 15 calendar days following the date such determination is completed. [§61.53(d)(5)]
   f) Records of emission test results and other data needed to determine total emissions shall be retained at the source and shall be made available, for inspection by the Director, for a minimum of five years. [§61.53(d)(6) and §70.6(a)(3)(ii)]

Monitoring:
Wastewater treatment plant sludge incineration and drying plants. All the sources for which Hg emissions exceed 1.6 kg (3.5 lb) per 24-hour period, demonstrated either by stack sampling according to §61.53, shall monitor Hg emissions at intervals of at least once per year by use of Method 105 of Appendix B or the procedures specified in §61.53(d)(2) and (4). The results of monitoring shall be reported and retained according to §61.53(d)(5) and (6). [§61.55(a)]

**Reporting:**

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.  
[§70.6(a)(3)(iii)]
IV. Core Permit Requirements

The installation shall comply with each of the following regulations or codes. Consult the appropriate sections in the CFR, the 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 permittee 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 §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 §§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 §§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 NESHAP M for any activities occurring at this installation, which would be subject to provisions of NESHAP M.

**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 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 PM 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 PM emissions to go beyond the premises of origin in quantities that the PM may be found on surfaces beyond the property line of origin. The nature or origin of the PM shall be determined to a reasonable degree of certainty by a technique proven accurate and approved by the Director.

2. The permittee shall not cause nor allow to occur any fugitive PM 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 PM 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:**

1. 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.

2. The permittee shall maintain the following monitoring schedule:
   a) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
   b) Should no violation of this regulation be observed during this period then-
      i) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
      ii) If a violation is noted, monitoring reverts to weekly.
      iii) Should no violation of this regulation be observed during this period then-
          (1) The permittee may observe once per month.
          (2) If a violation is noted, monitoring reverts to weekly.
   c) If the permittee reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.
**Recordkeeping:**
1. The permittee shall document all readings on Attachment A, or its equivalent, noting the following:
   a) Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
   b) Whether equipment malfunctions contributed to an exceedance.
   c) 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 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements**
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 to establish 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 §82.106.
   b) The placement of the required warning statement must comply with the requirements of §82.108.
   c) The form of the label bearing the required warning statement must comply with the requirements of §82.110.
   d) No person may modify, remove, or interfere with the required warning statement except as described in §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 §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 §82.158.
   c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
   d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with the record keeping requirements of §82.166. ("MVAC-like" appliance as defined at §82.152).
   e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §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 §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 40 CFR Part 82, Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in 40 CFR Part 82, Subpart B does not include the airtight 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 CFR and 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’s Compliance and Enforcement Section at 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 10 CSR 10-6.065(6)(C)7.A (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, and no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.

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)1.1 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 complies 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’s 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 §303 of the Act or §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 EPA and the Air Pollution Control Program 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.A 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

1. 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’s Compliance and Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, 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.

2. Section 502(b)(10) changes. Changes that, under §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’s Compliance and Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, 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 Air Pollution Control Program shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the Air Pollution Control Program 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 Air Pollution Control Program 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’s Compliance and Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, 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 Greg Boettcher, Executive Director. 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 permittee 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 permittee 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**
1. This permit may be reopened for cause if:
   a) The Missouri Department of Natural Resources receives notice from EPA that a petition for disapproval of a permit pursuant to §70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
   b) The Missouri Department of Natural Resources 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,
   c) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
      i) The permit has a remaining term of less than three years;
      ii) The effective date of the requirement is later than the date on which the permit is due to expire; or
      iii) 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,
   d) 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
   e) The Missouri Department of Natural Resources 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 B contains a list of abbreviations and acronyms used throughout this permit.
**Attachment A**

Fugitive Emission Observations

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Visible Emissions Beyond Boundary</th>
<th>Excess Emissions</th>
<th>Initial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>Cause</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes(^{11})</td>
<td>Corrective Action</td>
<td></td>
</tr>
</tbody>
</table>

- If there are visible emissions beyond the property boundary, the permittee shall complete the excess emissions columns.

\(^{11}\) If there are visible emissions beyond the property boundary, the permittee shall complete the excess emissions columns.
Attachment B
Abbreviations and Acronyms

°C ............ degrees Celsius
°F ............ degrees Fahrenheit
AAQIA ....... ambient air quality impact analysis
acfm .......... actual cubic feet per minute
BACT ......... Best Available Control Technology
BMPs ......... Best Management Practices
Btu .......... British thermal unit
CAM .......... Compliance Assurance Monitoring
CAS .......... Chemical Abstracts Service
CEMS ...... Continuous Emission Monitor System
CFR .......... Code of Federal Regulations
CEMS ........... Carbon Monoxide
CO2 .......... carbon dioxide
dioxins and furans
ft/cfs ........ dry standard cubic feet
ft/cm ........ dry standard cubic meter
EIQ .......... Emission Inventory Questionnaire
EP .......... Emission Point
EPA .......... Environmental Protection Agency
EU .......... Emission Unit
FGD ......... flue gas desulfurization
FIRE .......... EPA’s Factor Information Retrieval System
fps .......... feet per second
ft .......... feet
GACT ...... Generally Available Control Technology
GHG .......... Greenhouse Gas
gpm .......... gallons per minute
gr ............ grains
GWP .......... Global Warming Potential
HAP .......... Hazardous Air Pollutant
hr .......... hour
HP .......... horsepower
lb ......... pound
lb/hr ...... pounds per hour
MACT ...... Maximum Achievable Control Technology
µg/m³ .......... micrograms per cubic meter
m/s .......... meters per second
mg .......... milligrams
Mgal........ 1,000 gallons
MW .......... megawatt
MHDR ...... maximum hourly design rate
MMBtu .... Million British thermal units
mmHg ...... millimeters mercury
MMscf ...... Million standard cubic feet
MSDS ...... Material Safety Data Sheet
NAAQS .... National Ambient Air Quality Standards
NESHAPs .. National Emissions Standards for Hazardous Air Pollutants
NOx .......... nitrogen oxides
NSPS ....... New Source Performance Standards
NSR ........ New Source Review
PM .......... particulate matter
PM₂.₅ ...... particulate matter less than 2.5 microns in aerodynamic diameter
PM₁₀ ...... particulate matter less than 10 microns in aerodynamic diameter
ppm .......... parts per million
PSD .......... Prevention of Significant Deterioration
psi .......... pounds per square inch
PTE .......... potential to emit
RACT ...... Reasonable Available Control Technology
RAL .......... Risk Assessment Level
SIC .......... Standard Industrial Classification
SIP .......... State Implementation Plan
SMAL ...... Screening Model Action Levels
SO₂ .......... sulfur dioxide
SIC .......... Standard Industrial Classification
MPs ......... Best Management Practices
SO₃ .......... sulfur trioxide
tph .......... tons per hour
tpy .......... tons per year
VMT .......... vehicle miles traveled
VOC .......... Volatile Organic Compound
## Attachment C

**Inspection/Maintenance/Repair/Malfunction Log**

Emission Unit #

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Inspection/Maintenance Activities</th>
<th>Malfunction Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Malfunction</td>
</tr>
<tr>
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### Attachment D

#### Method 9 Opacity Emissions Observations

<table>
<thead>
<tr>
<th>Company</th>
<th>Observer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Observer Certification Date</td>
</tr>
<tr>
<td>Date</td>
<td>Emission Unit</td>
</tr>
<tr>
<td>Time</td>
<td>Control Device</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hour</th>
<th>Minute</th>
<th>Seconds</th>
<th>Steam Plume (check if applicable)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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</table>

### SUMMARY OF AVERAGE OPACITY

<table>
<thead>
<tr>
<th>Set Number</th>
<th>Time</th>
<th>Opacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>End</td>
<td>Sum</td>
</tr>
</tbody>
</table>

Readings ranged from _______ to _______ % opacity.

Was the emission unit in compliance at the time of evaluation?  
YES  NO  Signature of Observer
Attachment E
E16 Operating Parameters

<table>
<thead>
<tr>
<th>Minimum Combustion Chamber Temperature:</th>
<th>1,322°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most recent test date:</td>
<td>October 2017</td>
</tr>
<tr>
<td>Measurement Approach:</td>
<td>A thermocouple is located in the combustion chamber. The thermocouple was certified by the manufacturer to have an accuracy of +/- 5 percent over its range per 60.153(b)(3).</td>
</tr>
<tr>
<td>Monitoring Frequency:</td>
<td>Continuous</td>
</tr>
<tr>
<td>Recording Frequency:</td>
<td>Every 15 minutes</td>
</tr>
<tr>
<td>Averaging Period:</td>
<td>12-hour block average</td>
</tr>
<tr>
<td>Average O₂ Content:</td>
<td>6.77%</td>
</tr>
<tr>
<td>Most recent test date:</td>
<td>October 2017</td>
</tr>
<tr>
<td>Measurement Approach:</td>
<td>An O₂ CEMS is located in the stack after all other controls and has no bypass capabilities. The O₂ CEMS shall comply with NSPS Performance Specification 3.</td>
</tr>
<tr>
<td>Monitoring Frequency:</td>
<td>Continuous</td>
</tr>
<tr>
<td>Recording Frequency:</td>
<td>Every 15 minutes</td>
</tr>
<tr>
<td>Averaging Period:</td>
<td>1-hour block average</td>
</tr>
<tr>
<td>Control Device:</td>
<td>Selective non-catalytic reduction (SNCR) using direct urea injection to the incinerator freeboard section via lances.</td>
</tr>
<tr>
<td>Indicator:</td>
<td>NOₓ Emission Rate (ppmv)</td>
</tr>
<tr>
<td>Measurement Approach:</td>
<td>A NOₓ CEMS is located in the stack after all other controls and has no bypass capabilities. The NOₓ CEMS shall comply with NSPS Performance Specification 2</td>
</tr>
<tr>
<td>Indicator Range:</td>
<td>&lt;30 ppmvd</td>
</tr>
<tr>
<td>Monitoring Frequency:</td>
<td>Continuous</td>
</tr>
<tr>
<td>Recording Frequency:</td>
<td>Every 15 minutes</td>
</tr>
<tr>
<td>Averaging Period:</td>
<td>24-hour block average of 1-hour arithmetic average emission concentrations corrected to 7% O₂</td>
</tr>
<tr>
<td>Control Device:</td>
<td>Quench, combination impingement and multi-fixed venturi scrubber with sodium hydroxide injection and venturi section recirculation. The scrubbing system has no bypass capabilities.</td>
</tr>
<tr>
<td>Indicators:</td>
<td>Pressure drop across the wet scrubber</td>
</tr>
</tbody>
</table>

12 All of the current indicator ranges were established during the October 2017 testing event. Indicator ranges may be re-established during subsequent testing events.
<table>
<thead>
<tr>
<th>Measurement Approaches:</th>
<th>Pressure sensors are at the inlet and the outlet of the scrubber. The pressure sensors have a minimum tolerance of 1% of the indicator range.</th>
<th>The flow rate is measured at the inlet to the wet scrubber.</th>
<th>The pH is measured at the inlet to the wet scrubber.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most recent test date:</td>
<td>October 2017</td>
<td>October 2017</td>
<td>October 2017</td>
</tr>
<tr>
<td>Indicator Ranges:</td>
<td>≥ 32.65 inches H₂O (NSPS O) ≥ 46.54 inches H₂O (NSPS LLLL)</td>
<td>≥ 1,177 gpm</td>
<td>≥ 6.69</td>
</tr>
<tr>
<td>Monitoring Frequency:</td>
<td>Continuous</td>
<td>Continuous</td>
<td>Continuous</td>
</tr>
<tr>
<td>Recording Frequency:</td>
<td>Every 15 minutes</td>
<td>Every 15 minutes</td>
<td>Every 15 minutes</td>
</tr>
<tr>
<td>Averaging Periods:</td>
<td>15 minutes (NSPS O) and 12-hour block average (NSPS LLLL)</td>
<td>12-hour block average</td>
<td>3-hour block average</td>
</tr>
<tr>
<td>Control Device¹³:</td>
<td>Mist eliminator and fixed bed granular activated carbon (GAC) adsorber system. A carbon adsorber system bypass exists. The bypass is required to comply with §60.4900(d) and §60.4905(d).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicators:</td>
<td>Temperature of the adsorber inlet</td>
<td>Pressure drop across the adsorber</td>
<td>Mercury removal capacity of the carbon</td>
</tr>
<tr>
<td>Measurement Approaches:</td>
<td>A thermocouple is located in the inlet gas duct. The thermocouple has a relative accuracy of 0.5°F and precision of &gt;99%.</td>
<td>Pressure sensors are located on one pipe on the upstream leg and on four pipes on the downstream leg, in order to measure the pressure drop at several depths in the carbon bed. The relative accuracy of the differential pressure monitoring system is within ± 0.075% of the measurement span.</td>
<td>Sample the sulfur content at four location within each of the carbon layers within the carbon bed. Determine the sulfur content using a LECO SC-144 DR analyzer.</td>
</tr>
<tr>
<td>Indicator Ranges:</td>
<td>&gt;149.2°</td>
<td>The average weekly increase in the differential pressure shall be less than or equal to 4 in. H₂O compared to the previous week’s average.</td>
<td>&gt;20% in the fourth carbon layer of the carbon bed</td>
</tr>
<tr>
<td>Monitoring Frequency:</td>
<td>Continuous</td>
<td>Continuous</td>
<td>Monthly for the first three months of carbon bed operation, then every six months thereafter.¹⁴</td>
</tr>
<tr>
<td>Recording Frequency:</td>
<td>Every 15 minutes</td>
<td>Every 15 minutes</td>
<td>The results of each sampling event shall be recorded.</td>
</tr>
</tbody>
</table>

¹³ See Attachment F for a more detailed discussion of GAC operating parameters and monitoring.

¹⁴ The permittee shall use the sulfur content data to establish a predictive curve for the saturation of the bed. The predictive curve shall be used to forecast replacement and maintenance activities.
The true MHDR of E16 is 2.75 dtph; however, as the installation did not perform testing within 85% of the true MHDR in October 2017 as required by NSPS LLLL. The installation is limited to 2.49 dtph until subsequent testing is performed at higher sludge flow rate and demonstrates compliance with all regulatory requirements.
Attachment F
EPA Approval Letter of GAC Adsorber System Monitoring

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

FEB 13 2018

Ms. Lisa O’Dell, PE
Little Blue Valley Sewer District
21208 E. Old Atherton Road
Independence, Missouri 64058

Dear Ms. O’Dell:

On January 23, 2018, Gary Schnettgoecke of the consulting firm Black & Veatch Corporation submitted a letter on behalf of the Little Blue Valley Sewer District (LBVSD) to the United States Environmental Protection Agency’s Region 7 office in Lenexa, KS (EPA). The letter concerns the Atherton Wastewater Treatment Plant, a sewage sludge incinerator located in Independence, Missouri which is subject to the requirements of 40 C.F.R. Part 60, Subpart LLLL, Standards of Performance for New Sewage Sludge Incinerators (Subpart LLLL). The letter, as amended by supplemental materials provided by Mr. Schnettgoecke on February 5, 2018, requested EPA’s approval of an alternative monitoring plan for the granular activated carbon (GAC) adsorption system used to control mercury emissions from the sewage sludge incinerator.

EPA is approving LBVSD’s alternative monitoring plan for the GAC adsorption system under 40 C.F.R. Part 60, Subpart A, section 60.13(f). A similar type of monitoring application for carbon beds used to control mercury is found under 40 C.F.R. Part 63, Subpart EEEE, National Emissions Standards for Hazardous Air Pollutants for Hazardous Waste Incineration (see 40 C.F.R. 63.1209(k)(7)). The alternative monitoring plan that LBVSD has proposed, combined with the facility’s draft revision to their Part 70 Operating Permit, meets those requirements. These requirements will be incorporated into the Part 70 Operating Permit issued by the Missouri Department of Natural Resources.

According to the alternative monitoring plan, LBVSD will monitor and record:

- Temperature of the adsorber inlet (verify dry air to adsorber)
- Pressure drop across the adsorber (verify condition of media)
- Mercury removal capacity (available sulfur) of the carbon (adsorption capacity tracking)

If you have any questions regarding the determination provided in this letter, please contact Lisa Hanlon of my staff at (913) 551-7599.

Sincerely,

Mark A. Smith, Chief
Air Permitting and Compliance Branch

cc: Gary Schnettgoecke, Black & Veatch
    Alana Hess, Missouri Department of Natural Resources
Lisa – per our conversation last week regarding the petition letter dated January 23, 2018, refer to the revisions below:

- Page 2, Temperature Difference, Item 2. Replace item 2 in its entirety with the following:

2) To prevent condensation and media blockage in the GAC adsorber vessel, a heat exchanger will reheat the exhaust from the wet scrubber outlet to above the gas dew point before it is conveyed to the GAC unit. Monitoring the temperature difference, delta T, between the scrubber outlet temperature and the GAC adsorber inlet temperature will ensure that the exhaust gases are heated enough above the dew point to prevent condensation. Evaluation of the temperature difference will be based on a calculated maximum scrubber outlet temperature, as established by plant data, and the GAC adsorber inlet temperature as measured by a temperature sensor.

- Calculated maximum scrubber exhaust gas outlet temperature: Upstream of the scrubber the hot incinerator exhaust gases are cooled to the gas dew point in a quench and then further sub-cooled in the impingement tray and venturi sections of the scrubber, by plant non-potable water. The scrubber exhaust gas outlet temperature is limited by this cooling process. The scrubber outlet exhaust gas temperature data (using sensor TE/TIT-5010. See attached P&ID Drawing 12784 970 8500 100 17) obtained from the plant SCADA system was reviewed for the month of November 2016 (available in 15 minute increments), for periods when the scrubber system was operating (as identified by water flow to the venturi scrubber, also obtained from the plant SCADA system), and the maximum scrubber outlet temperature for each of these days was identified (Appendix F). The plant effluent temperature for these days, when available from plant data, was also identified and the difference between the scrubber outlet temperature and the plant effluent temperature was calculated. The maximum difference between these temperatures was 25.4°F (also shown in Appendix F). Plant effluent is the source of the plant non-potable water. The scrubber exhaust gas outlet temperature will be impacted by the temperature of the effluent used to cool it; as the effluent temperature increases the scrubber exhaust gas outlet temperature will increase, and vice versa. So to calculate the maximum scrubber outlet temperature that would occur during the year, the maximum temperature difference between the scrubber outlet temperature and plant effluent (most conservative case for determining the highest scrubber outlet temperature) was added to the summer plant effluent temperature of 26°C. The maximum scrubber outlet temperature was calculated at 104.2°F and will be used for calculating the temperature difference between this location and the GAC adsorber inlet.

- Temperature of the exhaust gas at the GAC adsorber inlet: Temperature will be monitored by sensor TE/TIT-5401 (see P&ID Drawing 00-1-607 in Appendix A).

The maximum scrubber outlet temperature will be subtracted from the GAC adsorber inlet reading to calculate the temperature difference. The temperature difference will be monitored to verify that it is
within the recommended manufacturer recommendation for the specific operating condition, including startup and normal operation.

- Page 4, Equation for Available Sulfur Content. For molar weight of mercury (Hg), replace 20.59 g/mol with 200.59 g/mol (2 places).

Please contact us with any additional questions or clarifications needed. Thanks.

Gary J. Schnettgoecke, PE | Engineering Manager, Water Americas
Black & Veatch Corporation | 8400 Ward Parkway, Kansas City, MO 64114
+1 913-458-6558 | +1 913-458-3302 | +1 913-706-2731 M | SchnettgoeckeG@bv.com
*Licensed in Missouri
Building a World of Difference.*

Please consider the environment before printing my e-mail.

From: Schnettgoecke, Gary
Sent: Tuesday, January 23, 2018 2:15 PM
To: Hanlon.Lisa@epa.gov
Cc: Lisa O'Dell; Hoener, Webster F.; Jeff Shook; Greg Boettcher; Hansen, Andrew J.; Rinkol, Michael J.; Hess, Alana
Subject: LBVSD Atherton Wastewater Treatment Plant - Petition for GAC System Monitoring Plan

Lisa – on behalf of the Little Blue Valley Sewer District (LBVSD), the attached letter and revised draft of the MDNR operating permit application cover a petition for the granular activated carbon (GAC) adsorber system monitoring plan. A hard copy of the documents will follow in the mail. Please let us know if you have any questions in regards to this request and we look forward to hearing from you in the near future. Thanks

Gary J. Schnettgoecke, PE | Engineering Manager, Water Americas
Black & Veatch Corporation | 8400 Ward Parkway, Kansas City, MO 64114
+1 913-458-6558 | +1 913-706-2731 M | SchnettgoeckeG@bv.com
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Please consider the environment before printing my e-mail.
January 23, 2018

Lisa Hanlon
Air and Waste Management Division
EPA Region 7
11201 Renner Blvd.
Lenexa, KS 66219

Dear Ms. Hanlon:

Little Blue Valley Sewer District (LBVSD) is working with the Missouri Department of Natural Resources (MDNR) to obtain an operating permit in association with advanced emissions controls being installed on the fluid bed incinerator (FBI) at their Atherton Wastewater Treatment Plant located in Independence, Missouri. The advanced emissions controls include a selective non-catalytic reduction (SNCR) system, wet electrostatic precipitator, granular activated carbon (GAC) adsorber system, redundant CEMS with NOx, and upgrades to the existing scrubber system (i.e., pH monitoring). Under the Standards of Performance for New Sewage Sludge Incineration Units (40 CFR §60 Subpart LLLL), also known as the SSI MACT rule, LBVSD is required to develop a site specific monitoring plan which lists parameters LBVSD must monitor and meet in order to demonstrate compliance with the SSI MACT requirements. The SSI MACT rule lists the parameters the facility must monitor for several control technologies. However, the proposed GAC adsorber system is not one of those technologies. As such, LBVSD is petitioning EPA to approve LBVSD’s monitoring plan outlined below, which will provide reasonable controls for this technology. Enclosed is a revised draft of the MDNR operating permit application that includes additional information on the project, description of the GAC system manufactured by CPFE (Section 2.2.3), schematic and process & instrumentation drawings (Appendix A), CPFE North American SSI References (Appendix B), Sludge Metal Concentrations (Appendix C), Kombisorbon® Process Plant and Process Description (Appendix D), CPFE Kombisorbon® Process – Statement of Process Monitoring for Compliance (Appendix E), and Maximum Scrubber Outlet Temperature (Appendix F). The appendices referenced below are from this document.

Under §60.4855(b)(2), the facility must provide the following information when petitioning the Administrator for specific operating parameters, operating limits, and averaging periods:

1) Identification of the specific parameters you propose to monitor.
2) A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters, and how limits on these parameters will serve to limit emissions of regulated pollutants.
3) A discussion of how you will establish the upper and/or lower values for these parameters that will establish the operating limits on these parameters, including a discussion of the averaging periods associated with those parameters for determining compliance.
4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments.
5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

The following paragraphs summarize the information required in §60.4855(b)(2) for the GAC system at the Atherton Wastewater Treatment Plant.
LBVSD is proposing to monitor the following operating parameters:

- temperature of the adsorber inlet (verify dry air to adsorber)
- pressure drop across the adsorber (verify condition of media)
- mercury removal capacity (available sulfur) of the carbon (adsorption capacity tracking)

**Temperature Difference**

1) Condensation on the carbon media surface can interfere with its ability to adsorb mercury plus can lead to exothermic reactions in the unit. Increasing the exhaust gas sensible temperature downstream of the scrubber will lower the relative humidity of the exhaust gas and ensure that condensation does not occur in the media bed. The manufacturer recommends various temperature differences between the scrubber outlet and the GAC adsorber inlet, including 25°F for startup (Section 2.5 of Appendix D) and 45°F for normal operation (Section 1.3(iii) of Appendix E), in order to maintain acceptable operating conditions. The differential temperature will be continuously monitored and recorded every fifteen minutes in the plant SCADA system as an indication of acceptable operating conditions. Exhaust gas will be proportioned through the secondary heat exchanger and its bypass by means of an automatic damper in the bypass ductwork. The automatic damper will be modulated based on the GAC adsorber inlet temperature to maintain an adequate temperature difference and relative humidity as recommended by the manufacturer.

2) The temperature difference, delta T, is determined by the scrubber outlet temperature and the GAC adsorber inlet temperature. Upstream of the scrubber, the hot incinerator exhaust gases are cooled to the gas dew point in a quench and then further sub-cooled in the impingement tray and venturi sections of the scrubber, by plant non-potable water. The scrubber exhaust gas outlet temperature is controlled by this process. The scrubber outlet temperature from the plant SCADA system was reviewed for the month of November 2016 (available in 15 minute increments), for periods when the scrubber system was operating (as identified by water flow to the venturi scrubber), and the maximum scrubber outlet temperature for each of these days was identified (Appendix F). The plant effluent temperature for these days, when available, was also identified and the difference between the scrubber outlet temperature and the plant effluent temperature was calculated. The maximum difference between these temperatures was 25.4°F (also shown in Appendix F). Plant effluent is the source of the plant non-potable water. The scrubber exhaust gas outlet temperature will be impacted by the temperature of the effluent used to cool it, so to calculate the maximum scrubber outlet temperature that would occur during the year, the maximum temperature difference between the scrubber outlet temperature and plant effluent was added to the summer plant effluent temperature of 26°C. The maximum scrubber outlet temperature was calculated at 104.2°F and will be used for calculating the temperature difference between this location and the GAC adsorber inlet. The temperature to the GAC adsorber inlet will be monitored by a temperature sensor and the maximum scrubber outlet temperature will be subtracted from the inlet reading to calculate the temperature difference. The temperature difference will be monitored to verify that it is within the recommended manufacturer recommendation for the specific operating condition, including startup and normal operation.

3) Measurement of gas temperature at adsorber inlet will be via continuous online measurement with temperature sensors (thermocouple with thermowell) properly installed in the gas ducts. These will be connected to transmitters to send signals to the plant PLC for alarming, switching and trending purposes. Relative accuracy of 0.5 °F and precision of >99% for the thermocouple/transmitter system has been specified for instrument selection.
4) Frequency of recalibration of temperature sensor/transmitter is recommended every 12 months. The procedure for recalibration will be provided by the instrument manufacturer.

**Pressure Drop**

1) The pressure drop across the carbon is an indication of the buildup of dust, moisture or precipitates, and normally exhibits a very slow and gradual increase over time. An acceleration of the rate of increase in delta P across the adsorber is an indication that the process has been operating outside the recommended (design) envelope (e.g., high gas flow rate, presence of contaminants in the gas). In addition, a sudden decrease in pressure drop across the system will indicate that the gas flow is short-circuiting the carbon layer(s). The differential pressure across the GAC adsorber will be monitored for sudden increases or decreases that would indicate unacceptable operating conditions and recorded in the plant SCADA system.

2) Differential pressure measurement will be arranged with one pipe on the upstream leg and four pipes on the downstream leg of the sensor, in order to measure the pressure drop at several depths of the carbon bed. The differential pressure sensor will be connected to a transmitter which will send the signal to the plant’s programmable logic controller (PLC). Relative accuracy of the differential pressure monitoring system has been specified to be within ± 0.075% of the measurement span.

3) Frequency of recalibration of differential pressure sensor/transmitter is recommended every 12 months. The procedure for recalibration will be provided by the instrument manufacturer.

**Carbon Capacity**

1) The activated carbon is impregnated with sulfur to 10-13% wt - this sulfur reacts with mercury to form HgS. There is a direct relationship between the measurement of mercury removal capacity (available sulfur) of the carbon at various depths of the carbon bed, and the emission of mercury from the process. As the available sulfur content of the carbon decreases, the lifetime of the activated carbon bed for mercury removal reduces. The available sulfur content of the carbon will determine the mercury removal potential remaining for the process.

2) Of importance are the lower values for mercury removal capacity (available sulfur) of the carbon. Under normal operation, the available sulfur sites on the activated carbon are exhausted by chemisorption with the mercury to form a tightly held HgS activated compound in the carbon. LBVSD is proposing to perform monthly samples for the first three months, and then every six months after that, to establish the saturation behavior of the carbon bed. Initially, the samples will be collected from the first layer of the bed, as that layer will become saturated first. A predictive curve will be established, and verified to forecast the replacement and program maintenance activities for this. This enables the carbon replacement program to occur well before the Hg limits are exceeded, but not prematurely so that close to the full value of the carbon can be used. When the available sulfur content (average of the samples) of the carbon in a particular layer reaches ≤ 20% then samples will be collected from the next downstream layer. When the fourth layer of carbon reaches 20% of the original sulfur capacity, planning for replacement of the carbon in all layers will proceed.

3) The available sulfur content of the carbon is calculated from measurements of (A) total sulfur (B) sulfate and (C) mercury content of the carbon. The available sulfur content is estimated in accordance with the following (next page):
Available Sulfur Content (%wt) = \( A - B - \left( C \times \frac{32.07}{20.59} \right) \)

Where,

\( A \) = Total Sulfur content (%wt as S)
\( B \) = Sulfate-Sulfur content (%wt as S)
\( C \) = Mercury content (%wt as Hg)

Molar Weights:

\( \text{Hg} = 20.59 \text{ g/mol} \)
\( \text{S} = 32.07 \text{ g/mol} \)

Chemisorption: \( \text{Hg} + S \rightarrow \text{HgS} \)

1 mol Hg bonds with 1 mol S

i. Determination of the total sulfur content of the activated carbon uses a LECO-analyzer. The instrument (LECO SC-144 DR) burns a portion of the ground carbon sample in an oxygen atmosphere. The oxygen passes an infrared detection system where the total amount of formed SO\(_2\) is detected. A computer calculates the total sulfur content of the carbon sample from the total amount of the sample mass used for the determination.

ii. Determination of the sulfate content of the activated carbon is performed firstly by applying the quantitative extraction of water soluble substances. Then after acidifying and boiling the extracted solution, and forming a precipitate by addition of BaCl\(_2\) gravimetric and titrimetric determinations are performed to estimate the sulfate concentration of the sample of known mass (US EPA Method 375.3 - Sulfate (Gravimetric)).

iii. Determination of the mercury content of the carbon is performed using an approved method (e.g. US EPA Method 7471B) whereby the solids sample is digested followed by application of atomic absorption spectrophotometry.

4) These analyses will be performed by a certified laboratory to ensure compliance with USEPA requirements. The frequency and methods for recalibration of instrumentation will therefore correspond to the certification obligations of the testing laboratory.

Please let me know if you have any questions in regards to the request. We would greatly appreciate your timely review of this petition and look forward to hearing from you in the near future.

Very truly yours,

Black & Veatch Corporation

Gary J. Schnettgoecke
Engineering Manager

cc: Lisa O'Dell, Little Blue Valley Sewer District, w/enclosure
    Alana Hess, Missouri Department of Natural Resources, w/enclosure
Attachment G

EPA Approval Letter of alternative WESP Monitoring

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Ranney Boulevard
Lenexa, Kansas 66219

MAR 2 1 2018

Ms. Lisa O'Dell, PE
Little Blue Valley Sewer District
21208 E. Old Atherton Road
Independence, Missouri 64058

Dear Ms. O'Dell:

On March 13, 2018, Gary Schnettgoecke of the consulting firm Black & Veatch Corporation submitted a letter on behalf of the Little Blue Valley Sewer District (LBVSD) to the United States Environmental Protection Agency’s Region 7 office in Lenexa, KS (EPA). The letter concerns the Atherton Wastewater Treatment Plant, a sewage sludge incinerator located in Independence, Missouri which is subject to the requirements of 40 C.F.R. Part 60, Subpart LLLL, Standards of Performance for New Sewage Sludge Incinerators (Subpart LLLL). The letter requested EPA’s approval of Alternative Operating Parameters for the Wet Electrostatic Precipitator (WESP) system used to measure the flushing water flow.

EPA is approving LBVSD’s alternative monitoring plan for the Alternative Operating Parameters under 40 C.F.R. Part 62.15960. These parameters will be incorporated into the Part 70 Operating Permit issued by the Missouri Department of Natural Resources.

You have identified the following Alternate Operating Parameters:
- Secondary voltage of the WESP collection plates
- Secondary amperage of the WESP collection plates
- Water flow rate at the inlet of the WESP

Operating Limits and monitor measurements, recordings and averaging periods are detailed in your March 13, 2018 letter. These conditions are included in this approval.

If you have any further questions, please do not hesitate to contact Lisa Hanlon of my staff at (913) 551-7599.

Sincerely,

[Signature]

Mark A. Smith, Chief
Air Permitting and Compliance Branch

cc: Gary Schnettgoecke, Black & Veatch
Alana Hess, Missouri Department of Natural Resources
March 13, 2018

Lisa Hanlon  
Air and Waste Management Division  
EPA Region 7  
11201 Renner Blvd.  
Lenexa, KS  66219

Subject: Little Blue Valley Sewer District  
Atherton Wastewater Treatment Plant  
(40 CFR §60 Subpart LLLL) - Request for EPA Approval for Alternate Operating Parameters for Wet Electrostatic Precipitator

Dear Ms. Hanlon:

Little Blue Valley Sewer District (LBVSD) is working with the Missouri Department of Natural Resources (MDNR) to obtain an operating permit in association with advanced emissions controls being installed on the fluid bed incinerator (FBI) at their Atherton Wastewater Treatment Plant located in Independence, Missouri. The advanced emissions controls include a selective non-catalytic reduction (SNCR) system, wet electrostatic precipitator (WESP), granular activated carbon (GAC) adsorber system, redundant CEMS with NOx, and upgrades to the existing scrubber system. LBVSD is petitioning EPA to approve LBVSD's alternative operating parameters for the WESP, specifically measurement of the flushing water flow.

We propose to measure the WESP inlet water flow rate in lieu of the WESP effluent outlet water flow rate because a more accurate reading will be possible for water in a pipe under pressure than in a partially filled drain with additional flushing flows. A WESP gravity effluent pipe with a diameter of 4" or 6", necessary to avoid clogging, is too large for a meter to accurately measure the low rate of flow. A magnetic flow meter (FE/FIT-5361) will be used in the non-potable water service pipe supplying the WESP as shown on the attached process & instrumentation drawing (00-1-605). The approach was accepted by EPA for the Mattabassett District's monitoring plan for their FBI, a facility included in EPA's Applicability Determination Index for sewage sludge incinerators. The flow rate will be recorded in the SCADA system. During preliminary discussions with EPA Region 7 staff regarding the water flow rate measurement location, a concern was expressed that monitoring flow at the inlet would not identify if the drain was plugged, which could allow water to pool in the bottom of the unit and in turn potentially allow captured particulate in the water to become re-entrained in the exhaust gas as it passed over the water surface. To address this concern, an ultrasonic level switch (LSH-5362) will be provided in the bottom section of the WESP to verify that the drain is not plugged. A high level alarm will alert operators via the SCADA system.

Operating parameters to be monitored for the WESP are summarized on the next page.
<table>
<thead>
<tr>
<th>OPERATING PARAMETER</th>
<th>OPERATING LIMIT</th>
<th>DATA MEASUREMENT</th>
<th>DATA RECORDING</th>
<th>DATA AVERAGING PERIOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary voltage of the WESP collection plates</td>
<td>Minimum power input to the WESP collection plates</td>
<td>Continuous</td>
<td>Hourly</td>
<td>12-Hour block</td>
</tr>
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<td>12-Hour block</td>
</tr>
<tr>
<td>Water flow rate at the inlet of the WESP</td>
<td>Minimum water flow rate at the inlet of the WESP</td>
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</tr>
</tbody>
</table>

Please let me know if you have any questions in regards to this request. We would greatly appreciate your timely review of this petition and look forward to hearing from you in the near future.

Very truly yours,

Black & Veatch Corporation

Gary J. Schnettgoecke
Engineering Manager

cc: Lisa O'Dell, Little Blue Valley Sewer District, w/enclosure
    Alana Hess, Missouri Department of Natural Resources, w/enclosure
STATEMENT OF BASIS

Installation Description

Little Blue Valley Sewer District (LBVSD) – Atherton Wastewater Treatment Plant (AWWTP) treats wastewater generated from portions of Jackson County and Cass County. The plant is designed for an average dry weather flow of 52 million gallons per day (MGD).

Wastewater is treated in a primary and secondary treatment process. Degritted solids are recovered from the primary clarifiers through gravitational settling. Secondary waste solids are recovered using coagulating chemicals. Treated water is discharged to the Missouri River.

The AWWTP operates a 2.75 dtph fluidized bed sewage sludge incinerator (E16) that utilizes natural gas and diesel as supplementary fuels. The incinerator (E16) is heated to its minimum operating temperature by a combination of natural gas and diesel fuel. Natural gas is also used as needed during normal incinerator operation to maintain the temperature in the combustion chamber. Diesel fuel and natural gas usage depends on the number of start-ups and the Btu content of the sludge. Based on the manufacturer’s specifications, worst-case fuel usage is 72 million cubic feet of natural gas and 46,200 gallons of diesel fuel per year. Once the incinerator reaches its minimum operating temperature, dewatered sludge is pumped from a collection bin to four injection ports in the bottom of the incinerator. Sand is used as a fluidizing medium and over fire air is introduced from the ambient air to maintain an optimal combustion temperature.

Current Control Scheme

Exhaust from the incinerator (E16) includes combustion products, evaporated water, and sand. Exhaust gases first pass through a primary heat exchanger, which preheats the fluidizing air, and cools the exhaust gas to around 1,100°F. The cooled exhaust gas is vented to a wet scrubber, which includes a quench section, impingement trays, and a venturi section to remove PM. The venturi water is a caustic (NaOH) solution, which also removes SO2 and acid gases (H2SO4 and HCl). Exhaust from the scrubber is vented to the existing incinerator stack, which is 85 feet tall, 2.3 feet in diameter, and is equipped with a CEMS that measures O2 and CO. The final exhaust temperature is 250°F and the flowrate is 20,444 acfm.

Initial Compliance Testing

The installation conducted initial compliance testing of E16 Fluidized Bed Sewage Sludge Incinerator in September 2014. During the initial compliance test the installation demonstrated compliance with NSPS LLLL PM, CO, D/F, SO2, cadmium, and lead limits, NSPS O PM and opacity limits, the NESHAP C beryllium limit, the NESHAP E mercury limit, 40 CFR Part 503 lead, arsenic, cadmium, chromium, and nickel limits, and Construction Permit 082011-003’s 1,4-dichlorobenzene, cadmium, chromium, and lead emission factors. During the initial compliance test, operating parameters were also established for the minimum temperature of the combustion chamber, the average oxygen content in the exhaust stream, the pressure drop across the scrubbing system, the flow rate at the inlet of the scrubbing system, and the pH at the inlet to the scrubbing system. During the initial compliance test, the installation did not demonstrate compliance with the NSPS LLLL NOx, HCl, or Hg limits.
Administrative Order on Consent No. APCP-2015-077
In order to resolve the NSPS LLLL violations, the installation entered into an Administrative Order on Consent with the Missouri Department of Natural Resources. This consent decree requires the installation to install granular activated carbon (GAC) filters to achieve the required mercury removal and add aqueous ammonia to achieve NOx compliance and provides the following compliance schedule:

- Execute Administrative Order on Consent – completed on February 19, 2016
- Execute Agreement for Design of AAEC – completed on April 19, 2016
- Submit Construction Permit Modification Application\(^{16}\) – completed on January 26, 2017
- Receive Permit Modification Approval\(^{16}\) – N/A
- Advertise for Bids – completed on May 16, 2017
- Open Bids – completed on June 22, 2017
- Execute Agreement for Construction of AAEC – completed August 4, 2017
- Major Equipment Arrives on Site - Little Blue Valley Sewer District is required to complete this within 455 days of the previous step (i.e. by no later than November 2, 2018)
- Begin Commissioning - Little Blue Valley Sewer District is required to complete this within 270 days of the previous step (i.e. by no later than July 30, 2019)
- Performance Test - Little Blue Valley Sewer District (LBVSD) is required to complete this within 180 days of the previous step (i.e. by no later than January 26, 2020)

Proposed Control Scheme
The following control equipment was proposed by the installation in their January 2018 operating permit application revision. The control equipment has been included in the permit as it is necessary to achieve compliance with NSPS LLLL.

SNCR technology will be installed and used as needed to control NOx emissions from the incinerator. SNCR uses direct de-NOx chemical reagent (urea) injection to the incinerator freeboard section via lances. The de-NOx chemical reacts with NOx in the exhaust gases to form nitrogen gas and water. The incinerator is equipped with six existing \(\frac{3}{4}\)" diameter injection ports.

The pilot testing conducted in the summer of 2016 demonstrated that aqueous ammonia or urea could achieve a NOx concentration of <30 ppmvd (7% Dry O2) using the existing six injection ports, if the baseline inlet NOx concentration was at or below 140 ppmvd (7% Dry O2). LBVSD is implementing best practices to reduce NOx, as evidenced by the 2016 emission test result of 29.2 ppmvd without the use of the SNCR. As such, the installation of the SNCR will be used when the best practices are not able to maintain the NOx below the standard on their own. A NOx CEMS will be installed to continuously monitor the NOx emission rate. NOx CEMS data will be used to demonstrate that the SNCR system is operating appropriately.

A storage and injection system will be provided to feed the chemical reagent solution (32.5% industrial grade urea) into the incinerator. The chemical reagent will be delivered to the site by tanker truck and

\(^{16}\) It was determined by the Air Pollution Control Program’s Permits Section that an operating permit application was required instead of a construction permit application. The emissions evaluated by Construction Permits 082011-003 and 082011-003A were based on the incinerator achieving compliance with NSPS LLLL; therefore, the installation of additional control equipment to achieve compliance with NSPS LLLL did not increase project emissions.
stored in a bulk storage tank. The bulk storage tank will be sized to accept a full truckload of chemical
reagent and provide at least 45 days of storage at average conditions. Metering pumps will feed the urea
to a water dilution system where the chemical-water mixture will be delivered to the incinerator
freeboard injection lances and atomized by plant compressed air. Potable water will be used that will be
softened to prevent scaling of the feed system and injection lances.

The existing injection ports are located approximately 9’ and 8” above the existing work platform and
are installed at an upward angle of approximately 30 degrees. A new equipment access platform at
Elevation 767.00 will be installed to permit safe and routine access to the injection ports and
maintenance of the lances. The injection ports will be located 12-18” above the grated surface.

A WESP will be installed downstream of the existing wet scrubber to remove fine particulates and
submicron metal particles such as cadmium and lead from the exhaust gases. The WESP is a single
vessel with an ionizing electrode section followed by a parallel-grounded plate section for particulate
removal. Grounded collector plates will be intermittently washed with nonpotable water and the
particulate is drained from the bottom of the vessel. The wet particulate drain will be routed to a floor
drain and recycled to the head of the plant.

Previous compliance testing has demonstrated that the existing air pollution control equipment can meet
particulate and metal emission requirements, except for mercury, which the WESP is not designed to
remove; therefore, the installation will include a WESP bypass. As such, the WESP is being installed in
the event that future increases in metal concentrations in the incinerator feed would require its operation
to meet emission limits. The WESP may also be used to provide additional particulate removal
protection for the GAC media. The installation is required to note during all future NSPS LLLL
compliance tests if the WESP or the WESP bypass operated during each performance test run. If in the
future the installation uses the WESP to demonstrate compliance with NSPS LLLL, the installation is
required to conduct all of the required WESP NSPS LLLL monitoring to ensure continued compliance
with NSPS LLLL.

The mercury, dioxins and furans removal system will be comprised of the following major components:

- Demister: A chevron baffle coalescer section agglomerates water mist and a van type baffle mist
  eliminator section removes the agglomerated particulates to prevent large water droplet carry
  over to downstream equipment.
- Heat Exchanger: Re-heats exhaust gases to above dew point to prevent condensation and media
  blockage in GAC adsorber vessel. Existing secondary heat exchanger bypass will be used to re-
  heat exhaust gases to 45°F above dew point during normal operation.
- GAC Adsorber: Holds GAC media used to adsorb mercury, dioxins, and furans from exhaust
  gases. The GAC media will be “impregnated” with sulfur, which enhances chemisorption
  capabilities of the carbon.

The GAC system will be a positive pressure type for this application. The induced draft (ID) fan
maintains a “zero” point exhaust at the exit of the incinerator consistent with current operation: primary
heat exchanger, secondary heat exchanger (tube side), wet scrubber and new WESP will be under
vacuum. The mercury removal equipment: demister, secondary heat exchanger (shell side), GAC
adsorber, and stack will be placed downstream of the ID fan under positive pressure.
The GAC vessel will have four vertical carbon media adsorption sections, or layers, each 13 inches deep through which the exhaust gases will pass horizontally. The four sections permit removal and replacement of the carbon media one layer at a time. Each layer has four sampling lances, two at the top and two at the bottom. As the exhaust gases pass through the layers, the first layer will adsorb the mercury before the downstream layers and in time become saturated.

The GAC system is provided with a start-up heater to preheat the carbon bed before exhaust gases are introduced to the unit. During startup of the unit, incinerator exhaust gases (before introduction of sludge to the incinerator) are bypassed around the unit and heated ambient air is directed through the carbon bed, raising the bed temperature. Heating the bed before exhaust gases are introduced ensures that moisture does not condense on the media surface and interfere with the ability of mercury to adsorb on the media.

The Kombisorbon® GAC system is being provided by Carbon Process & Plant Engineering (CPPE). CPPE has been supplying GAC systems to remove mercury for SSIs in North America since 2004. CPPE has calculated a media life of greater than three years based on a mercury sludge concentration of 0.37 mg/dscm and a 99.7% removal rate (0.37 mg/dscm to 0.001 mg/dscm). CPPE has sized the GAC system based on laboratory and site testing. 2.4 mg/kg is the maximum mercury sludge concentration result from the data set of sludge samples from January 19, 2007 to January 14, 2016. The average mercury concentration over this period was 0.96 mg/kg. Based on a 2.4 mg/kg sludge concentration, sludge loading of 66 dtpd, and a design exhaust gas flow of 17,000 scfm, the specified inlet loading of mercury to the GAC system is 0.21 mg/dscm. 0.21 mg/dscm is less than the 0.37 mg/dscm used by the vendor to size the unit, providing an additional factor of safety. With an overall carbon layer thickness of 52 inches for the proposed unit, the unit is comparably sized to other units that have passed compliance testing.

To measure performance of the sorbent (GAC) bed over time, periodic media/carbon samples will be extracted from the adsorber. Testing samples from the front and back sample lances of the first layer will establish the rate at which the capacity of the media is used. Samples will be analyzed to determine remaining life of the media bed. The carbon is impregnated with sulfur which reacts with mercury to form HgS. The amount of available sulfur is directly related to the remaining life of the carbon media. The spent carbon will be tested to determine the proper disposal method. If the spent carbon is determined to be a hazardous waste, the services of a separate licensed contractor will be required for handling and disposal.

GAC will be delivered to the site using 1,500-lb super sacks. The new roof opening for installation of the adsorber vessel will be provided with a 6’ x 8’ aluminum hatch to allow GAC carbon loading. A crane will be rented when the GAC requires replacement.

Ammonia may be present in exhaust gases at various levels because of urea used for NOx control. This unreacted ammonia is referred to as ammonia slip from the SNCR system. Ammonia slip has the potential to react with sulfur trioxide (SO3) to form a “sticky” ammonium salt particulate that can coat the GAC adsorber reducing its efficiency and media useful life. During pilot testing conducted in the summer of 2016, the by-product of ammonia slip as measured at the scrubber inlet did not exceed 30 ppmvd with urea. Due to the variability of the baseline NOx concentrations (10-20% higher than 140 ppmvd), ammonia slip may be as high as 35 ppmvd. When ammonia was used as the chemical reagent, the baseline NOx concentrations varied by 20-65% (higher than 140 ppmvd); therefore, some of the
ammonia slip tests were inconclusive. Ammonia slip using ammonia as the chemical reagent is estimated at less than or equal to 40 ppmvd. The ammonia concentration at the scrubber outlet was less than 1 ppmvd during the testing. Due to the potential for higher NOx baseline concentrations, scrubber modifications are recommended under this project for pH monitoring as well as provisions for future acid injection; however, implementation of best practices developed during the pilot testing should limit this potential.

The existing wet scrubber mist eliminator section will be modified for external drain and feed water piping and installation of pH sensor/transmitter for monitoring. Provisions will be included for future installation of a “once-thru” acid injection system for vapor phase ammonia control, if needed. Sulfuric acid (98% H2SO4) would be added to the mist eliminator feed piping to keep the mist eliminator drain pH at 5.

Subsequent Compliance Testing
The installation conducted additional HCl testing in June 2015, which failed to demonstrate compliance with NSPS LLL.

The installation conducted testing in October 2016, which demonstrated compliance with NSPS LLLL emission limits for PM, HCl, CO, D/F, NOx, SO2, Cadmium, and Lead; however, test results failed to demonstrate compliance with the NSPS LLLL emission limit for Hg.

The installation conducted testing in October 2017, which demonstrated compliance with NSPS LLLL emission limits for PM, HCl, CO, D/F, NOx, SO2, Cadmium, and Lead; however, test results failed to demonstrate compliance with the NSPS LLLL emission limit for Hg.
### Updated Potential to Emit for E16 Fluidized Bed Sewage Sludge Incinerator

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Potential to Emit (tons per year)(^{17})</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM(_{10})</td>
<td>7.07</td>
</tr>
<tr>
<td>PM(_{2.5})</td>
<td>6.09</td>
</tr>
<tr>
<td>SO(_x)</td>
<td>9.82</td>
</tr>
<tr>
<td>NO(_x)</td>
<td>24.54</td>
</tr>
<tr>
<td>VOC</td>
<td>9.84</td>
</tr>
<tr>
<td>CO</td>
<td>28.43</td>
</tr>
<tr>
<td>HAP</td>
<td>14.71</td>
</tr>
<tr>
<td>1,4-Dichlorobenzene (106-46-7)</td>
<td>5.78</td>
</tr>
<tr>
<td>Polycyclic Organic Matter</td>
<td>2.29</td>
</tr>
<tr>
<td>Naphthalene (91-20-3)</td>
<td>2.29</td>
</tr>
<tr>
<td>Lead Compounds</td>
<td>1.93</td>
</tr>
<tr>
<td>HCl (7647-01-0)</td>
<td>1.20</td>
</tr>
<tr>
<td>DEHP (117-91-7)</td>
<td>0.99</td>
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<tr>
<td>Hexane (110-54-3)</td>
<td>0.07</td>
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<tr>
<td>Chloroform (67-66-3)</td>
<td>0.05</td>
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<tr>
<td>Nickel Compounds</td>
<td>0.04</td>
</tr>
<tr>
<td>Methylene Chloride (74-87-3)</td>
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<tr>
<td>Cadmium Compounds</td>
<td>0.01</td>
</tr>
<tr>
<td>Toluene (108-88-3)</td>
<td>0.01</td>
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<tr>
<td>Manganese Compounds</td>
<td>0.01</td>
</tr>
<tr>
<td>1,1,1-Trichloroethane (71-55-6)</td>
<td>0.01</td>
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<tr>
<td>Chromium Compounds</td>
<td>0.01</td>
</tr>
<tr>
<td>Mercury Compounds</td>
<td>7.32 x 10(^{-4})</td>
</tr>
<tr>
<td>Arsenic Compounds</td>
<td>3.69 x 10(^{-4})</td>
</tr>
<tr>
<td>Beryllium Compounds</td>
<td>5.25 x 10(^{-6})</td>
</tr>
<tr>
<td>D/F</td>
<td>6.60 x 10(^{-7})</td>
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</tbody>
</table>

\(^{17}\) The Potential to Emit is based on 8,760 hour of operation per year, combustion of 72 MMscf of natural gas per year, combustion of 46,200 gallons of fuel oil per year, and compliance with the limits in NSPS LLLL. In order to achieve compliance with NSPS LLLL the installation operates a wet scrubbing system and will soon operate a SNCR system, a fixed bed GAC adsorber system, and a WESP. This potential to emit is only for E16 Fluidized Bed Sewage Sludge Incinerator, the remaining portions of the installation are subject to a Basic Operating Permit (i.e. have potential emissions below 100 tons per year).
Reported Air Pollutant Emissions\textsuperscript{18}, tons per year

<table>
<thead>
<tr>
<th></th>
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</thead>
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<tr>
<td>PM\textsubscript{10}</td>
<td>0.50</td>
<td>0.48</td>
<td>0.12</td>
<td>0.27</td>
<td>0.11</td>
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<tr>
<td>PM\textsubscript{2.5}</td>
<td>0.42</td>
<td>0.48</td>
<td>0.12</td>
<td>0.24</td>
<td>0.10</td>
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<tr>
<td>SO\textsubscript{x}</td>
<td>0.006</td>
<td>0.0001</td>
<td>0.30</td>
<td>0.35</td>
<td>2.29</td>
</tr>
<tr>
<td>NO\textsubscript{x}</td>
<td>3.70</td>
<td>3.14</td>
<td>25.98</td>
<td>7.69</td>
<td>2.40</td>
</tr>
<tr>
<td>VOC</td>
<td>32.59</td>
<td>34.34</td>
<td>48.23</td>
<td>39.76</td>
<td>46.33</td>
</tr>
<tr>
<td>CO</td>
<td>1.30</td>
<td>1.10</td>
<td>0.53</td>
<td>0.90</td>
<td>3.15</td>
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<tr>
<td>HAP</td>
<td>0.01</td>
<td>0.001</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.00005</td>
</tr>
</tbody>
</table>

\textbf{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 September 3, 2015, revised January 24, 2017, revised January 2018.
4. Administrative Order on Consent No. APCP-2015-077
5. Construction Permits 082011-003 and 082011-003A

\textbf{Air Regulations Determined Not to Apply to the Operating Permit}

The Air Pollution Control Program has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

10 CSR 10-6.100 \textit{Alternate Emission Limits} is not applicable to the installation and has not been applied in this permit. The installation is in an ozone attainment area.

10 CSR 10-6.191 \textit{Sewage Sludge Incinerators} is not applicable to E16 Fluidized Bed Sewage Sludge Incinerator and has not been applied in this permit. 10 CSR 10-6.191(1)(A) states that this regulation applies to SSI units for which construction was commenced on or before October 14, 2010. Construction of E16 Fluidized Bed Sewage Sludge Incinerator commenced on April 17, 2012.

10 CSR 10-6.220 \textit{Restriction of Emission of Visible Air Contaminants} is not applicable to E16 Fluidized Bed Sewage Sludge Incinerator and has not been applied in this permit. 10 CSR 10-6.220(1)(H) exempts emission units regulated by 10 CSR 10-6.070 and the provisions of 40 CFR Part 60. E16 Fluidized Bed Sewage Sludge Incinerator is subject to NSPS O and NSPS LLLL (see Permit Conditions 003 and 004).

10 CSR 10-6.260 \textit{Restriction of Emission of Sulfur Compounds} is not E16 Fluidized Bed Sewage Sludge Incinerator and has not been applied in this permit. 10 CSR 10-6.260(1)(A)1 exempts emission sources

\textsuperscript{18} The installation’s reported air pollutant emissions are obtained from their annual EIQ. Reported air pollutant emissions are for the entire installation, not just E16 Fluidized Bed Sewage Sludge Incinerator. Other emission sources include two 6 MMBtu/hr natural gas boilers, a 240 gallon gasoline tank, a 240 gallon diesel tank, the wastewater treatment operations, natural gas space heaters -- 8 MMBtu/hr total, a sand storage bin, and a 10,000 gallon diesel tank.
subject to an applicable sulfur compound emission limit under 10 CSR 10-6.070 *New Source Performance Regulations*. E16 Fluidized Bed Sewage Sludge Incinerator is subject to an SO₂ emission limit in NSPS LLLL (see Permit Condition 004).

10 CSR 10-6.261 *Control of Sulfur Dioxide Emissions* is not applicable to E16 Fluidized Bed Sewage Sludge Incinerator and has not been applied in this permit. 10 CSR 10-6.261(1)(C)2 exempts individual units subject to a more restrictive fuel sulfur content limit under any federally enforceable permit. E16 Fluidized Bed Sewage Sludge Incinerator is subject to a 0.05 wt% sulfur content limit in Special Condition 2.A of Construction Permit 082011-003A (see Permit Condition 004) which is more restrictive than the 8,812 ppm (0.8812 wt%) sulfur content limit in 10 CSR 10-6.261(3)(C).

10 CSR 10-6.400 *Restriction of Emission of Particulate Matter From Industrial Processes* is not applicable to E16 Fluidized Bed Sewage Sludge Incinerator and has not been applied in this permit. 10 CSR 10-6.400(1)(B)15 exempts any particulate matter emission unit that is subject to a federally enforceable requirement to install, operate, and maintain a particulate matter control device system that controls at least 90% of particulate matter emissions. E16 Fluidized Bed Sewage Sludge Incinerator is required to operate a wet scrubber by Special Condition 2.A of Construction Permit 082011-003 (see Permit Condition 002).

**Construction Permit History**

Construction Permit 082011-003A, Issued January 27, 2015:
- The installation only installed a fluidized bed incinerator (E16) with an MHDR of 66 dry tons per day (2.75 dry tons per hour) and combusts fuel oil rather than diesel; therefore, the installation obtained Amendment A to “true-up” their permit.
- Special Conditions 1 and 2 have been applied in Permit Condition 001.

Construction Permit 082011-003, Issued August 9, 2011:
- This minor NSR permit is for the installation of a 3 tph fluidized bed sewage sludge incinerator (E16). Based on the manufacturer’s specifications, worst-case supplemental fuel usage was determined to be 72 MMscf of natural gas and 46,200 gallons of fuel oil per year. The new fluidized bed sewage sludge incinerator replaces a 36 dry tons per day coal-fired sewage sludge incinerator.
- Special Condition 1.A required the installation to conduct testing to demonstrate compliance with NSPS O, NSPS LLLL, NESHAP C, and NESHAP E. Initial testing was conducted in September 2014. Subsequent testing is required by Permit Conditions 003, 004, 005, and 006.
- Special Condition 1.B required testing of 1,4-dichlorobenzene, cadmium compounds, chromium compounds, and lead compounds to verify that the emission rates analyzed by the construction permit were accurate and did not exceed Missouri’s SMALs. These HAPs were tested in September 2014 and the results indicate that the emission rates are indeed below Missouri’s SMALs; therefore, this requirement was not included in this operating permit.
- Special Conditions 1.C through 1.G contained stack-testing procedures associated with the stack tests required by Special Conditions 1.A and 1.B.
- Special Condition 2.B required the installation to establish the minimum pressure drop across the scrubber, minimum liquid flowrate at the inlet of the scrubber, and the minimum scrubber liquid pH.
during the initial performance test. The initial performance test was conducted in 2014 and these operating limits were initially established. These operating parameters are re-established each year during the installation’s annual NSPS LLLL compliance test. The current operating parameters are stated in Attachment E.

- Special Condition 3.A required the installation to establish the minimum operating temperature of the combustion chamber during the initial performance test. The initial performance test was conducted in 2014 and the minimum operating temperature of the combustion chamber was established. This operating parameter is re-established each year during the installation’s annual NSPS LLLL compliance test. The current operating parameter is stated in Attachment E.

- Special Condition 5 applies to E17 Sand Storage Bin. E17 Sand Storage Bin is not required to be included in this Title V operating permit; therefore, Special Condition 5 has not been included in this permit. Special Condition 5 has been applied to E17 Sand Storage Bin in a state only Basic operating permit (Project 2014-12-017).

The installation has also been issued minor NSR permits 022003-008, 0998-033A, 0998-033, 0390-002, and 0986-002; however, the special conditions of these permits are not applicable to E16 Fluidized Bed Sewage Sludge Incinerator and have not been applied in this permit. Any reference to an incinerator in these permits refers to the coal-fired sewage sludge incinerator, which has since been removed from the installation.

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

40 CFR Part 60, Subpart O – *Standards of Performance for Sewage Treatment Plants* is applicable to the E16 Fluidized Bed Sewage Sludge Incinerator and has been applied in Permit Condition 003.

40 CFR Part 60, Subpart LLLL – *Standards of Performance for New Sewage Sludge Incineration Units* is applicable to E16 Fluidized Bed Sewage Sludge Incinerator and has been applied in Permit Condition 004.

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

None of the currently promulgated MACT regulations apply to E16 Fluidized Bed Sewage Sludge Incinerator.

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

40 CFR Part 61, Subpart C – *National Emission Standards for Beryllium* is applicable to E16 Fluidized Bed Sewage Sludge Incinerator and has been applied in Permit Condition 005. Beryllium testing was conducted during the initial compliance test in September 2014. Subsequent testing is required by this permit to meet the periodic testing requirements in §70.6(a)(3)(i)(B).

40 CFR Part 61, Subpart E – *National Emission Standards for Mercury* is applicable to E16 Fluidized Bed Sewage Sludge Incinerator and has been applied in Permit Condition 006.

40 CFR Part 61, Subpart M – *National Emission Standards for Asbestos* is applicable to the installation and has been applied within this permit (see Section IV. Core Permit Requirements).
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-controlled emissions that exceed or are equivalent to the major source threshold.

E16 Fluidized Bed Sewage Sludge Incinerator is subject to emission limitations and standards and does use control devices to demonstrate compliance. E16 Fluidized Bed Sewage Sludge Incinerator does not have pre-control emissions of beryllium or mercury that exceed the major source threshold; therefore, CAM does not apply to NESHAP C or NESHAP E limitations. §64.2(b)(1)(i) states that CAM does not apply to emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to §§111 or 112 of the Act; therefore, CAM does not apply to NSPS LLLL limitations. §64.2(b)(1)(vi) states that CAM does not apply to emission limitations or standards for which the Part 70 specifies a continuous compliance determination method; therefore, CAM does not apply to the NSPS O PM limit as continuous compliance methods for the wet scrubber are included as part of NSPS LLLL requirements (i.e. pressure drop, liquid flow rate, and liquid pH).

Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis

Any regulation, which is not specifically listed either in 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 Air Pollution Control Program'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 Air Pollution Control Program a schedule for achieving compliance for that regulation(s).
Response to Public Comments

The draft Part 70 Operating Permit for Little Blue Valley Sewer District was placed on public notice August 10, 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: https://dnr.mo.gov/env/apcp/permit-public-notices.htm. No public comments were received during the public notice period.
Mr. Greg Boettcher  
Executive Director  
Atherton WWTP Incinerator  
21208 East Old Atherton Road  
Independence, MO 64058  

Re: Atherton WWTP Incinerator, 095-0186  
Permit Number: OP2018-087  

Dear Mr. Boettcher:  

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/](http://dnr.mo.gov/regions/). The online CAV request can be found at [http://dnr.mo.gov/cav/compliance.htm](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 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the 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:ahj  

Enclosures  

PAMS File: 2015-09-013  

Recycled paper