

PERMIT BOOK

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

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

Permit Number: **082011-003** Project Number: 2011-03-053
Installation Number: 095-0186

Parent Company: Little Blue Valley Sewer District

Parent Company Address: 21101 East 78 Highway, Independence, MO 64057

Installation Name: Little Blue Valley Sewer District
Atherton Wastewater Treatment Plant

Installation Address: 21208 East Old Atherton Road, Independence, MO 64058

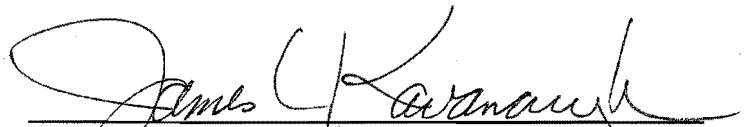
Location Information: Jackson County, S9, T50N, R31W

Application for Authority to Construct was made for:
Installation of a three ton per hour fluidized bed sewage sludge incinerator. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

AUG - 9 2011

EFFECTIVE DATE



DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 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 choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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| Project No. | 2011-03-053 |

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant
Jackson County, S9, T50N, R31W

1. Performance Testing – Fluidized Bed Incinerator (EU16)
 - A. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall perform a compliance test on the incinerator as required by 40 CFR 60 Subpart O, 40 CFR 60 Subpart LLLL, 40 CFR 61 Subpart C, and 40 CFR 61 Subpart E.
 - B. The performance test shall also be used to verify the emission factors used to calculate the potential emissions of the compounds listed in Table 1 below. The stack test results shall be used to determine a controlled emission factor in units of pounds pollutant per ton dry sewage sludge burned.

Table 1: Emission Factor Verification

| Pollutant | Emission Factor (lb Pollutant/dry ton) |
|------------------------------------|---|
| 1,4 dichlorobenzene (CAS 106-46-7) | 0.227 |
| Cadmium (all compounds) | 7.20E-6 |
| Chromium (all compounds) | 9.08E-5 |
| Lead (all compounds) | 1.02E-4 |

CAS=Chemical Abstracts Service registry number

- C. A completed Proposed Test Plan (form enclosed) must be submitted to the Air Pollution Control Program at least 30 days prior to the proposed test date of any such performance tests so that a pretest meeting may be arranged, if necessary, and to assure that the test date is acceptable for an observer to be present. The Proposed Test Plan must include specification of test methods to be used and be approved by the director prior to conducting the required emissions testing.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- D. The stack testing shall be performed within sixty (60) days after achieving the maximum production rate of the incinerator (EU16) but not later than 180 days after the initial start of operation.
 - E. Two copies of a written report of the performance test results must be submitted to the director within 90 days of completion of the performance testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required Environmental Protection Agency (EPA) Method for at least one sample run for each air pollutant tested.
 - F. No later than 30 days after the performance test results are submitted, Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall provide the director with a report that establishes the potential emissions of each air pollutant tested in Special Condition 1.B. The results shall report the emission rates in pounds per hour and pounds per dry ton sewage sludge in order that the Air Pollution Control Program may verify the potential emissions from this project.
 - G. If the results of the performance testing shows that any of the emission factors are greater than those indicated in Table 1, then Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall submit an amendment to this permit with an evaluation of what effects the higher emission rates would have had on the permit review for this project. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall submit the results of any such evaluation within 30 days of submitting the Performance Test Results report required in Special Condition 1.F. of this permit.
2. Control Device Requirement – Wet Scrubber (WS01)
- A. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall control emissions from the Fluidized Bed Incinerator (EU16) with a combination impingement and venturi wet scrubber with sodium hydroxide injection as specified in the permit application.
 - B. The following operating limits for the scrubber shall be established during the initial compliance testing.
 - 1) Minimum pressure drop across the scrubber
 - 2) Minimum liquid flowrate at the inlet to the scrubber
 - 3) Minimum scrubber liquid pH

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- C. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall maintain the scrubber within the operating limits specified in Special Condition 2.B whenever sewage sludge is being incinerated.
 - D. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall continuously monitor and record the operating parameters specified in Special Condition 2.B. as required by 40 CFR 60 Subpart LLLL.
 - E. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall maintain an operating and maintenance log for the scrubber which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
3. Minimum Temperature Requirement – Fluidized Bed Incinerator (EU16)
- A. The minimum operating temperature of the combustion chamber shall be established during the initial compliance testing.
 - B. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall maintain the combustion chamber above the minimum operating temperature specified in Special Condition 3.A whenever sewage sludge is being incinerated.
 - C. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall continuously monitor and record the combustion chamber temperature to demonstrate compliance with Special Condition 3.B. as required by 40 CFR 60 Subpart LLLL.
 - D. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall maintain an operating and maintenance log for the incinerator which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

4. **Continuous Emission Monitoring System (CEMS) Requirement**
Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall monitor emissions of carbon monoxide (CO) from the incinerator exhaust stack (EP16) using a CEMS as required by 40 CFR 60 Subpart LLLL.
5. **Control Device Requirement – Sand Bin Dust Collector (Baghouse)**
 - A. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall control emissions from the sand storage bin (EU17) using a baghouse at all times the sand storage bin is in operation.
 - B. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications.
 - C. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
 - D. Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall maintain an operating and maintenance log for the baghouse which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
6. **Record Keeping Requirements**
Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2011-03-053
Installation ID Number: 095-0186
Permit Number:

Little Blue Valley Sewer District
Atherton Wastewater Treatment Plant
21208 East Old Atherton Road
Independence, MO 64058

Complete: March 18, 2011

Parent Company:
Little Blue Valley Sewer District
21101 East 78 Highway
Independence, MO 64057

Jackson County, S9, T50N, R31W

REVIEW SUMMARY

- Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant has applied for the authority to install a fluidized bed sewage sludge incinerator.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are hydrogen chloride (HCl), polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDD and PCDF respectively), and compounds containing arsenic (As), beryllium (Be), cadmium (Cd), chromium (Cr), lead (Pb), mercury (Hg), and nickel (Ni).
- 40 CFR 60 Subpart O, "Standards of Performance for Sewage Treatment Plants" establishes emission limits for particulate matter (PM) from sewage sludge incinerators.
- 40 CFR 60 Subpart LLLL, "Standards of Performance for New Sewage Sludge Incineration Units" establishes emission limits for Cd, carbon monoxide (CO), HCl, Hg, nitrogen oxides (NO_x), Pb, PCDD/PCDF, PM, and sulfur dioxide (SO₂) from sewage sludge incinerators.
- 40 CFR Part 61, Subpart C, "National Emission Standard for Beryllium" establishes emission limits for Be from sewage sludge incinerators.
- 40 CFR Part 61, Subpart E, "National Emission Standard for Mercury" establishes emission limits for Hg from sewage sludge incinerators.
- 40 CFR Part 503, Subpart E, under authority of Section 405 of the Clean Water Act, establishes emission limits for As, Be, Cd, Cr, Hg, Ni, Pb, and total hydrocarbons from sewage sludge incinerators.

- 40 CFR 60 Subpart Kb, "Standards of Performance for Volatile Organic Liquid Storage Vessels" does not apply to the 10,000 gallon (37.8 cubic meters) diesel fuel storage tank because the capacity is less than 75 cubic meters.
- None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- A combination venturi and impingement tray wet scrubber is being used to control the PM emissions. Sodium hydroxide (NaOH) injection in the wet scrubber will be used to control SO₂, sulfuric acid (H₂SO₄), and HCl emissions.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.
- This installation is located in Jackson County, a maintenance area for ozone and an attainment area for all other criteria pollutants.
- This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation is classified as item number 27. Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act, because 40 CFR 60 Subpart O, "Standards of Performance for Sewage Treatment Plants" applies to the equipment. The installation's major source level is 250 tons per year and fugitive emissions are counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels and screening model action levels (SMALs).
- Emissions testing is required to verify the potential emissions of the application and to demonstrate initial compliance with the NSPS standards, and the NESHAP standards. Testing may also be required for compliance with the Clean Water Act requirements found in 40 CFR Part 503, Subpart E.
- As required by 40 CFR 60, Subpart LLLL, a Part 70 Operating Permit application is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

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). The AWWTP is an existing minor source and holds a basic state operating permit.

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

Currently, the primary and secondary solids are combined and treated with a Zimpro low pressure oxidation (LPO) system and a belt filter press to facilitate de-watering. The heat treated sludge is transferred to a coal-fired fluidized bed incinerator (E06), and the resultant ash is trucked to a nearby landfill for disposal. Odors from the treatment, storage, and handling of sludge are vented to the sewage sludge incinerator (E06) or a thermal oxidizer (E15) for destruction. The following permits have been issued to the AWWTP from the Air Pollution Control Program.

Table 2: Permit History

| Permit Number | Description |
|--------------------|---|
| 0986-002, 0986-003 | Installation of a sewage sludge/coal incinerator and associated coal storage and handling system. |
| 0390-002 | Modification of conditions based on stack test results |
| 0998-033 | Construction of two (2) duel fuel fired boiler |
| 0998-033A | Correction to Permit No. 0998-033 |
| 022003-008 | Various modifications to increase average daily capacity from 43 MGD to 52 MGD |

PROJECT DESCRIPTION

The existing coal-fired sewage sludge incinerator has a capacity of 36 dry tons per day (dtpd) and was designed for a 40 MGD wastewater treatment facility. In 2003, the AWWTP received a construction permit to increase the capacity of the wastewater treatment process from 40 MGD to 52 MGD. The AWWTP has forecasted that the facility will reach 52 MGD by 2020. In order to meet this demand, the AWWTP has proposed to replace its 36 dtpd incinerator with a 72 dtpd fluidized bed incinerator (EU16) that utilizes natural gas and diesel as supplementary fuels. The maximum hourly design rate of the incinerator will be 3.0 dry tons sewage sludge per hour. As a result of this project, the existing Zimpro LPO system and the sewage sludge incinerator (E06) that uses coal as a supplemental fuel will be removed from operation.

The incinerator (EU16) will be heated to its minimum operating temperature of 1500°F by a combination of natural gas and diesel fuel. Natural gas will also be 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, the applicant assumed a worst case fuel usage of 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 will be 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 will be introduced from the ambient air to maintain an optimal combustion temperature.

Exhaust from the incinerator (EU16) will include combustion products, evaporated water, and sand. The temperature and flowrate will be between 1500°F to 1650°F and around 86,000 actual cubic feet per minute (acfm) respectively. Exhaust gases first pass through a primary heat exchanger which preheats the fluidizing air, and cools the exhaust gas to around 1100°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 will be a caustic (NaOH) solution which also removes SO₂ and acid gases (H₂SO₄ and HCl). Exhaust from the scrubber will be vented to the existing incinerator stack which is 85 feet tall, 2.3 feet in diameter, and is equipped with a CEMS that measures oxygen and CO. The final exhaust temperature will be 110°F, and the flowrate will be 20,000 acfm.

The AWWTP will utilize the existing sand storage bin (EU17), but will be installing some new material handling equipment and adding a baghouse dust collector to the storage bin. The sand loss due to exhaust entrainment is expected to be less than 100 pounds (lbs) of sand per day, or 0.002 tons sand per hour.

Odors from the treatment, storage, and handling of sludge will be vented to the new incinerator, and the thermal oxidizer (E15) will continue to be used for odor control when the incinerator (EU16) is not in operation. However, the ash will no longer be trucked to a landfill for disposal, but rather collected in the bottom sump of the wet scrubber and pumped to an on-site ash lagoon being constructed for this project. The project also includes the installation of a new 10,000 gallon horizontal above ground storage tank (EU18) for the diesel fuel. The following table contains a summary of the emission units considered for this review.

Table 3: Emission Unit Summary

| ID | Emission Unit Description | SCC | MHDR | MHDR Units |
|------|--|-------------|--------|--------------------------|
| EU16 | Fluidized Bed Sewage Sludge Incinerator | 5-01-005-16 | 3 | dry tons sludge per hour |
| EU17 | Sand storage silo and associated material handling equipment | 3-05-020-06 | 0.002 | tons sand per hour |
| EU18 | Diesel Fuel Above Ground Storage Tank | 3-90-900-04 | 10,000 | gallons |

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in the analysis of the fluid bed incinerator and the venturi/impingement scrubber were provided by the applicant and were based on the following: manufacturer's specifications, a metal content sludge analysis, and an estimate of the maximum annual fuel usage. Most of the proposed emission factors are comparable to those published in the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 2.2 "Sewage Sludge Incineration" (January 1995). However, the emission factors for the HAP compounds listed in Table 1 are less than the AP-42 emission factors, and in order to avoid HAP modeling for these compounds, the

applicant proposed emission factors that result in potential emissions less than the SMALs. Therefore, a special condition of this permit is to verify the emission factors for these HAP compounds.

The pollutants of concern from the incinerator are PM less than ten microns (PM₁₀), PM less than 2.5 microns (PM_{2.5}), CO, NO_x, SO₂, and HAPs (including acid gases, metals, and toxic organic compounds). The use of the Fluidized Bed Combustion technology and over fire air results in lower emissions of NO_x and CO because these practices result in significantly less airflow and supplemental fuel usage than alternative technologies. Emissions of PM and PMHAPs will be controlled with the combination venturi/impingement wet scrubber. The control efficiency for PM_{2.5} is expected to be 99.9%. The control efficiency for SO₂ and acid gases is expected to be 80% due to the use of a caustic (NaOH) solution in the venturi scrubber water.

Potential emissions of PM₁₀ and PM_{2.5} from sand handling and storage (EU17) were estimated using the emission factors and control efficiencies found in AP-42, Section 11.19.2 “Crushed Stone Processing and Pulverized Mineral Processing” (August 2004). Potential emissions of volatile organic compounds (VOCs) due to the working and breathing losses from the diesel storage tank (EU18) were estimated using the TANKS software according to AP-42, Section 7.1 “Organic Liquid Storage Tanks” (November 2006). Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8,760 hours per year), and a worst case estimate of the natural gas and diesel fuel usage. The following table provides an emissions summary for this project.

Table 4: Emissions Summary (tons per year)

| Pollutant | Regulatory <i>De Minimis</i> Levels/SMAL ^[1] | Existing Potential Emissions | Existing Actual Emissions (2010 EIQ) | Potential Emissions of the Application | New Installation Conditioned Potential |
|--------------------------------|---|------------------------------|--------------------------------------|--|--|
| PM _{2.5} | 10.0 | N/D | 0.09 | 4.61 | N/A |
| PM ₁₀ | 15.0 | N/D | 0.09 | 5.58 | N/A |
| SO _x | 40.0 | N/D | 2.01 | 35.66 | N/A |
| NO _x | 40.0 | N/D | 1.90 | 36.91 | N/A |
| VOC | 40.0 | N/D | 52.98 | 12.04 | N/A |
| CO | 100.0 | N/D | 2.60 | 35.73 | N/A |
| H ₂ SO ₄ | 7.0 | N/D | N/D | 1.58 | N/A |
| Pb/Pb Compounds | 0.6/0.01 | N/D | N/D | 0.0013 | N/A |
| As Compounds | 0.005 | N/D | N/D | 6.04E-5 | N/A |
| Be Compounds | 0.008 | N/D | N/D | 5.26E-6 | N/A |
| Cd Compounds | 0.01 | N/D | N/D | 9.46E-05 | N/A |
| Cr Compounds | 0.002 | N/D | N/D | 0.0012 | N/A |
| Hg Compounds | 0.01 | N/D | N/D | 0.00079 | N/A |
| 1,4 dichlorobenzene | 3 | N/D | N/D | 2.98 | N/A |
| Combined HAPs | 25.0 | N/D | 0.00 | 8.05 | N/A |

N/A = Not Applicable; N/D = Not Determined

¹For individual HAPs, value represents the SMAL.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of a hardcopy EIQ is required by April 1 for the previous year's emissions. Otherwise, submission of an electronic EIQ via MOEIS is required by May 1.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Sewage Treatment Plants*, 40 CFR Part 60, Subpart O
- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for New Sewage Sludge Incineration Units*, 40 CFR Part 60, Subpart LLLL

- *Emission Standards for Hazardous Air Pollutants*, 10 CSR 10-6.080 – *National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Beryllium*, 40 CFR Part 61, Subpart C
- *Emission Standards for Hazardous Air Pollutants*, 10 CSR 10-6.080 – *National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Mercury*, 40 CFR Part 61, Subpart E
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260 does not apply to the fluidized bed incinerator (EU16) because it is subject to an applicable emission limit under 10 CSR 10-6.070.
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400, does not apply to the fluidized bed incinerator (EU16) because the wet scrubber is expected to achieve greater than 90% control efficiency.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Kathi Jantz
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 14, 2011, received March 18, 2011, designating Little Blue Valley Sewer District as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Kansas City Regional Office Site Survey, dated April 11, 2011.
- Sludge Analysis Report by Hazen Research, Inc, dated July 14, 2010.

Mr. Kelly Buchman
Environmental Manager
Little Blue Valley Sewer District - Atherton Wastewater Treatment Plant
21208 East Old Atherton Road
Independence, MO 64058

RE: New Source Review Permit - Project Number: 2011-03-053

Dear Mr. Buchman:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Kathi Jantz, at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:kjk

Enclosures

c: Kansas City Regional Office
PAMS File: 2011-03-053

Permit Number: