

## Appendix D

Metropolitan St. Louis Sewer District (MSD)

April 24, 2013 Emergency and Conditional Approval Letter



# Metropolitan St. Louis Sewer District

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2350 Market Street  
St. Louis, MO 63103-2555  
(314) 768-6200

## CERTIFIED MAIL / RETURN RECEIPT REQUESTED

April 24, 2013

Craig Almanza  
Area Environmental Manager  
BRIDGETON LANDFILL, LLC  
13570 St. Charles Rock Road  
Bridgeton, MO 63044

RE: Response to Bridgeton Landfill Proposal for Resumption of Direct Discharge from Bridgeton Landfill to Metropolitan St. Louis Sewer District Memorandum dated April 19, 2013

Dear Mr. Almanza:

The Metropolitan St. Louis Sewer District (MSD) has reviewed your *Proposal for Resumption of Direct Discharge from Bridgeton Landfill to Metropolitan St. Louis Sewer District* as an attachment to an email sent by Jessie Merrigan on Friday, April 19, 2013 at 6:06 PM. As requested, MSD is providing prompt response to your proposal.

On April 23, 2013 at 1:45 PM, John Lodderhose placed a telephone call to your consultant Ed Galbraith to communicate MSD's decision to allow emergency and conditional approval of Bridgeton Landfill to resume direct discharge to our Missouri River Wastewater Treatment Plant at the requested initial discharge rate of 20,000 gallons per day. This letter provides MSD terms of the conditional approval. Further and upon Bridgeton Landfill's successful completion of an MSD Application for Special Discharge Approval, MSD is willing to accept Bridgeton Landfill leachate as a hauled waste to our Bissell Point Wastewater Treatment Plant at the requested initial discharge rate of 50,000 gallons per day.

On April 23, 2013 at 5:31 PM, John Lodderhose provided a follow up email communicating MSD's decision to allow resumption of direct discharge to our Missouri River Wastewater Treatment Plant and pending approval of hauled waste discharge at our Bissell Point Hauled Waste Station.

### **MSD Terms for Emergency and Conditional Approval of Direct Discharge to our Missouri River Wastewater Treatment Plant:**

1. All wastewater discharged to MSD's Missouri River TP shall be pretreated by Bridgeton Landfill in accordance with the *Bridgeton Landfill Standard Operating Procedure, Landfill Liquids Collection and Treatment for Discharge to MSD Missouri River Wastewater Treatment Facility* dated April 2013 (Bridgeton Landfill SOP), except that the specified level of reduction for benzene in the wastewater shall be less than 0.14 mg/L rather than 0.3 mg/L as your procedure states. This is based on EPA's guidance materials for protection of workers. Once the leachate has been treated sufficiently for benzene, you may elect to discharge to MSD at that time, with the understanding that the discharge is still subject to all applicable MSD limitations and prohibitions. Regarding the benzene level, you alternately may provide sampling results for headspace that

- demonstrate direct compliance with OSHA and ACGIH standards. You may also provide alternate data for MSD to consider regarding possibly allowing the 0.3 mg/L level.
2. In Bridgeton Landfill's April 19, 2013 Proposal for Resumption of Direct Discharge from Bridgeton Landfill to Metropolitan St. Louis Sewer District, you requested a temporary variance from the permit limitation for total zinc discharged to the collection system. MSD will grant a temporary zinc variance, as requested, with the zinc limit set on a mass basis that shall not exceed 30 pounds of total zinc per day, approximately equal to the amount that formerly could have been discharged for Bridgeton Landfill's historical volume of 200,000 gallons per day. The variance may be revoked by MSD should conditions warrant, or upon installation of a pretreatment system by Bridgeton Landfill.
  3. The daily direct discharge rate shall not exceed 20,000 gallons per day in any given 24 hour period. The hourly direct discharge rate shall not exceed 1500 gallons per hour. Records of volumes discharged, including certification that the daily and hourly limits were not exceeded, shall be submitted to MSD on a weekly basis.
  4. Analytical sampling results that demonstrate treated liquid is verified to have achieved the appropriate reduction of toxic pollutants to prevent violation of MSD Ordinance No. 12559, Article V, Section One.A.8 regarding prohibited substances and emission of toxic gases, vapors or fumes, shall be submitted to MSD on a weekly basis.
  5. Each batch shall also be analyzed for BOD, COD, Total Suspended Solids, ammonia, pH, Oil & Grease, VOCs by EPA Method 624, SVOCs by EPA Method 625, Metals by EPA Methods approved under 40 CFR 136. Analytical sampling results shall be submitted to MSD on a weekly basis.
  6. Bridgeton Landfill shall immediately notify MSD of any circumstances that may result in a change of pretreated landfill leachate character.
  7. The "Data Collection" items specified in the Bridgeton Landfill SOP shall be submitted to MSD on a weekly basis.
  8. Bridgeton Landfill shall record discharge meter readings on a daily log sheet, certified as correct and in compliance with the volume and rate restrictions, under signature of a Bridgeton Landfill authorized agent. The daily log sheets shall be submitted to MSD on a weekly basis, and Bridgeton Landfill will be billed on the total volume and surcharge strength documented.
  9. Bridgeton Landfill shall pay an estimated \$0.07 per gallon for the total volume documented on daily log sheets and for surcharge levels calculated by MSD from the analytical data submitted by Bridgeton Landfill. To calculate this estimated billing rate, MSD used the sample results for Sample ID# 3041134-01 & 3041168-07 to 10 from Table A provided as Page 7 of your proposal, and the rate formulas contained in MSD Ordinance No. 13402. A copy of the billing rate calculation has been attached to this letter. Actual billing rates will be calculated using MSD Ordinance No. 13402. The billed amounts will be added to Bridgeton Landfill's normal wastewater bill, similar to how Bridgeton Landfill currently is billed for its discharged volume.
  10. Failure on the part of Bridgeton Landfill to meet any one of the above terms will result in immediate suspension of this emergency and conditional approval.

**MSD Terms for Special Discharge Approval of Hauled Waste Discharge to our Bissell Point Wastewater Treatment Plant:**

1. Only MSD approved haulers are authorized to discharge at our Bissell Point Hauled Waste Station. Bridgeton Landfill shall either utilize already approved hauler(s) or complete the MSD Waste Transporter Authorization Application.
2. All wastewater discharged to MSD's Bissell Point TP shall be pretreated by Bridgeton Landfill in accordance with the *Bridgeton Landfill Standard Operating Procedure, Landfill Liquids Collection and Treatment for Discharge to MSD Missouri River Wastewater Treatment Facility* dated April 2013 (Bridgeton Landfill SOP), except that the specified level of reduction for benzene in the wastewater shall be less than 0.14 mg/L rather than 0.3 mg/L as your procedure states. This is based on EPA's guidance materials for protection of workers. Once the leachate has been treated sufficiently for benzene, you may elect to discharge to the Bissell Point Hauled Waste Station at that time, with the understanding that the discharge is still subject to all MSD limitations and prohibitions, including requirement that the wastewater be nonhazardous. Regarding the benzene level, you alternately may provide sampling results for headspace that demonstrate

- direct compliance with OSHA and ACGIH standards. You may also provide alternate data for MSD to consider regarding possibly allowing the 0.3 mg/L level.
3. Analytical sampling results that demonstrate treated liquid is verified to have achieved the appropriate reduction of toxic pollutants to prevent violation of MSD Ordinance No. 12716 and is not hazardous material, shall be submitted to MSD on a weekly basis.
  4. The daily discharge shall not exceed 50,000 gallons per day and shall be delivered within the hours of operations as outlined in MSD Ordinance No. 12716. The delivery of hauled waste shall be evenly spread out throughout the hours of operation of the hauled waste station to avoid any slugging of the Bissell Point TP.
  5. Analytical sampling results that demonstrate treated liquid is verified to have achieved the appropriate reduction of toxic pollutants to prevent violation of MSD Ordinance No. 12559, Article V, Section One.A.8 regarding prohibited substances and emission of toxic gases, vapors or fumes, shall be submitted to MSD on a weekly basis.
  6. Each batch shall also be analyzed for BOD, COD, Total Suspended Solids, ammonia, pH, Oil & Grease, VOCs by EPA Method 624, SVOCs by EPA Method 625, Metals by EPA Methods approved under 40 CFR 136. Analytical sampling results shall be submitted to MSD on a weekly basis.
  7. Bridgeton Landfill will immediately notify MSD of any circumstances that may result in a change of pretreated landfill leachate character.
  8. The "Data Collection" items specified in the Bridgeton Landfill SOP shall be submitted to MSD on a weekly basis.
  9. MSD will temporarily reduce our hauled waste tipping fee from \$0.08 per gallon at the truck capacity to \$0.07 per gallon at the truck capacity. The \$0.07 per gallon is equal to the billing rate MSD would charge for an onsite discharge as outlined in the attached calculation. MSD reserves the right to return the tipping fee to \$0.08 per gallon, or higher, at the truck capacity at any time per our discretion and as allowed under MSD Ordinance No. 12716.
  10. Failure on the part of Bridgeton Landfill to meet any one of the above terms will result in immediate suspension of this emergency and conditional approval.

#### **MSD Comments on Bridgeton Landfill Proposal for Resumption of Direct Discharge from Bridgeton Landfill to Metropolitan St. Louis Sewer:**

MSD has reviewed the proposal submitted on April 19, 2013 and has identified numerous data gaps and incomplete tasks. MSD has also identified several items that must be addressed as part of its conditional approval to discharge. Bridgeton Landfill will need to complete the following before MSD is able to consider any discharge rate or location beyond the above stated terms. *In addition, failure to complete the following may result in MSD's revocation of the conditional approvals of Direct Discharge to our Missouri River Wastewater Treatment Plant or for Special Discharge Approval of Hauled Waste Discharge to our Bissell Point Wastewater Treatment Plant.*

- Air monitoring: MSD has reviewed the memorandum *Reference: 182608005* prepared by Stantec dated April 9, 2013 and compared the results to the *Bridgeton Landfill Air and Landfill Gas Sampling, August 2012: Summary of Findings* report prepared by Stantec dated October 19, 2012. MSD has identified data gaps in "Table 2: Sample Results - Summa Canisters – Bridgeton Landfill Leachate Processing (Sparge) Tanks."
  - The constituents in the analyte list did not include results for dimethyl sulfide, and other reduced sulfur compounds, including hydrogen sulfide.
    - If these constituents were included in the analytical results, but inadvertently not included in the memorandum, provide the results.
    - If these constituents were not included in the analytical results, the sampling event shall be repeated with the inclusion of dimethyl sulfide, and other reduced sulfur compounds, including hydrogen sulfide.
    - Submit data for the constituents by May 1, 2013. If the constituents were not analyzed, complete the necessary repeated sampling by May 10, 2013, with results to be submitted by June 10, 2013.

- MSD may reevaluate this requirement upon receipt of the final report for the next bullet item pertaining to sampling the Westlake Pump Station, if that report is provided by May 10, 2013.
- Pending air monitoring: Bridgeton Landfill committed to air sampling the MSD Westlake Pump Station before the discharge was to resume in order to establish a baseline. Bridgeton Landfill has not yet satisfied this commitment.
  - However, MSD received an email sent by Jessie Merrigan today, April 24, 2013 at 12:30 PM. MSD is in agreement with the air sampling scope for pre-discharge and during discharge and timeframe outlined in the email. All compounds from the August 2012 sampling event must be included. An industrial hygienist should evaluate the air monitoring and certify that the MSD pump station confined space is safe for our workers to enter.
  - Please note that MSD may require additional air sampling events, based on the results of sampling or future concerns that may arise.
- Pump station ventilation and 4-gas meter: Bridgeton Landfill shall complete the installation of the 4-gas meter and ventilation system at the MSD Westlake Pump Station as agreed upon, by May 10, 2013.
- Leachate/wastewater monitoring: As stated above, MSD has reviewed the April 19, 2013 *Proposal for Resumption of Direct Discharge from Bridgeton Landfill to Metropolitan St. Louis Sewer District*.
  - Analytical results are identified as still pending for "several analytes with longer analytical times (radium and dioxin, for example)."
    - If these analytes include Gross Alpha Radiation, Gross Beta Radiation, Gross Gamma Radiation (as Cesium-137), Radium-226, and Radium-228, provide the results for these analytes.
    - If any of the analytes are not included, the sampling event shall be repeated with the inclusion of all missing analytes.
    - Submit data for the constituents by May 1, 2013. If the constituents were not analyzed, complete the necessary repeated sampling by May 10, 2013, with results to be submitted by June 10, 2013.
- Toxicity concerns: MSD continues to be concerned over the toxicity of Bridgeton Landfill's leachate and its detrimental effects to our sewer system and treatment plants. Should toxic effects compromise the operation of our system or plants, Bridgeton Landfill's discharge may need to be reduced or terminated. We encourage Bridgeton Landfill to conduct toxicity testing on its leachate and to take appropriate preventative action, including additional treatment or reduction in discharge volume, to prevent toxic effects from the leachate discharge.
- Past analytical data: Submit, by May 1, 2013, all laboratory data collected on previously treated leachate that has been disposed off-site.
- Pretreatment system: Bridgeton Landfill has previously stated that it will be installing a pretreatment system for its landfill leachate. However, no additional information, plans, nor specifications have been submitted to MSD.
  - Submit, by June 1, 2013, a plan and schedule to install a pretreatment system to reduce the strength and toxicity of Bridgeton Landfill's leachate discharge to achieve compliance with MSD Ordinance No. 12559, without the use of variances, and to return the strength of Bridgeton Landfill's leachate to previously certified levels of 312 mg/L BOD, 953 mg/L COD, and 65 mg/L TSS.
- Gas condensate: Bridgeton Landfill has previously stated that it was modifying its collection system to segregate the gas condensate from the landfill leachate. MSD believes that segregation of the gas condensate, and treatment or disposal of it separately from the leachate, would be best to protect the MSD system and workers.
  - Submit, by June 1, 2013, a report showing the status of such modifications, or a report showing the feasibility of making such modifications.

Thank you for helping us comply with federal and state regulations. If you have any questions, please contact John Lodderhose at 314.436-8714.



Sincerely,

**METROPOLITAN ST. LOUIS SEWER DISTRICT**



Brian Hoelscher, P.E.  
Executive Director

Enclosures: Surcharge calculation, MSD Ordinance No. 12716, MSD Ordinance 13402

**Bridgeton Landfill sample from April 5, 2013**

BOD = 26,000 mg/L      BOD extra strength billing rate = \$620.14/ton  
COD = 50,000 mg/L      COD extra strength billing rate = \$310.07/ton

BOD/COD = 0.52, use BOD

TSS = 1,500 mg/L      TSS extra strength billing rate = \$231.35/ton

Extra Strength Surcharge per gallon = \$0.0665 for BOD + \$0.0012 for TSS

Volume rate per gallon = \$0.0033

Total estimate rate per gallon = \$0.071

From MSD Ordinance No. 13402:

$$ESS = \frac{0.00624 \times V \times [(SS-300) \times RSS + (BOD-300) \times RBOD]}{2000}$$

If the BOD/COD ratio of a User's Wastewater is equal to or less than 0.35 the BOD measurement may not be considered representative of the User's actual Wastewater strength. The District may substitute Chemical Oxygen Demand (COD) which average concentration exceeds 600 milligrams per liter, with said Extra Strength Surcharge ("ESS") calculated for each billing period according to the following formula, to wit:

$$ESS = \frac{0.00624 \times V \times [(SS-300) \times RSS + (COD-600) \times RBOD]}{2000}$$

In the above formulas the following terms shall mean:

ESS= Extra Strength Surcharges.

300 = Maximum concentration of total BOD in Normal Wastewater in milligrams per liter.

300 = Maximum concentration of total Suspended Solids in Normal Wastewater in milligrams per liter.

600 = Maximum concentration of total COD in Normal Wastewater in milligrams per liter.

0.00624 = Conversion factor for milligrams per liter to pounds per hundred cubic feet.

V = Volume of water usage or Wastewater discharged expressed in hundred cubic feet.

RSS = Rate for SS in dollars per ton.

RBOD = Rate for BOD in dollars per ton.

RCOD = Rate for COD in dollars per ton.

2,000 = The number of pounds per ton.