



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

## DEPARTMENT OF NATURAL RESOURCES

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**AUG 13 2014**

Mr. Brian Power  
Environmental Manager  
Republic Services, Inc.  
13570 St. Charles Rock Road  
Bridgeton, MO 63044

RE: 2014 Stormwater Improvements, South Quarry Area, Bridgeton Landfill LLC, Permit Number 0118912, St. Louis County

Dear Mr. Power:

This letter is in response to your email submittal dated July 29, 2014, to the Missouri Department of Natural Resources' Solid Waste Management Program (SWMP). The submittal included 14 drawings titled "2014 Stormwater Improvements, South Quarry Area at Bridgeton Landfill", dated June 2014, revised July 10, 2014, and an Anticipated Project Schedule. The drawings were prepared by Cornerstone Environmental Group, LLC. The drawings and schedule were not signed or sealed by a professional engineer registered in the state of Missouri.

The SWMP has reviewed the submittal for compliance with the Missouri Solid Waste Management Law and regulations and hereby approves your request. The following conditions are integral to this approval. Compliance with these conditions shall, in part, determine compliance with Permit Number 0118912.

### **CONDITIONS:**

All stormwater improvements will need to be incorporated into a submittal from Bridgeton Landfill. The submittal must include two (2) hard copies of the as-built drawings along with a summary narrative signed and sealed by a professional engineer registered in the state of Missouri. This submittal will become a part of the facility's permit file and will need to be received by the SWMP no more than 45 days from the completion of the project.

1. Flowable fill is not yet approved for projects at the Bridgeton Landfill. Reference is made to the use of either clay or flowable fill for this stormwater project. As of the date of this letter, Bridgeton Landfill is approved to use clay on this project. Bridgeton Landfill has yet to respond to the department's request for additional information about planned application method, ratios of materials, permeability and quantities of flowable fill to be used at the facility. The use of flowable fill at Bridgeton Landfill will be addressed under separate cover. (Note: Given the schedule for completion of these improvements (late October), flowable fill may be incorporated for use at a later date, upon its approval by the department.)

2. The following information will need to be submitted to the SWMP as soon as possible:

- a) Odor mitigation continues to be of primary concern during construction activities at the facility. No reference to an odor mitigation plan was included in the submittal. In reading the Notes to the plan sheets, it appears capping and stormwater liner materials will be temporarily displaced and in some cases, removed and replaced with new material. Did the facility consider the potential for an increase in odors given the proximity of some of this work to the property boundaries? And how does Bridgeton Landfill plan to manage any odors or instances where odors potentially may migrate off-site?
- b) Reference is made to jetting sediment and silt from a reinforced concrete pipe and a concrete culvert. The submittal did not provide information concerning testing of these materials. During the winter months of 2013-14, the facility experienced instances where leachate was released into the stormwater system. Given these features of the system appear to have been impaired by silt or sediment potentially from those winter months, what is Bridgeton Landfill's plan for testing of these residual materials for possible contaminants?
- c) From the construction schedule and plan sheets, it appears access along the perimeter road, especially along the west side of the landfill, will be restricted for a number of days to allow for work on the roadway and stormwater basins. Should emergency personnel need access during the construction period, what are the facility's plans for providing alternate access, given the periodic impacts seen from the ongoing subsurface fire?

3. The following clarifications will need to be included in Bridgeton Landfill's final submittal of the stormwater work plan:

- a) Sheet 1 shows portions of the proposed work areas crossing over the solid waste boundary. If waste is encountered during the work, the submittal must state how the waste was managed, i.e., placed in a container, transported to the Bridgeton Transfer Station and then transferred to a permitted solid waste landfill for disposal.
- b) Will these improvements affect the existing cap? And if so, how will they affect the cap. In reading the Notes to the plan sheets, it appears material will be temporarily displaced and in some cases, replaced. Will existing capping material be covered with a second layer of EVOH, HDPE or other GCL material or will the work result in sections of existing EVOH or HDPE cap being temporarily displaced and how will this be managed?
- c) Sheet 1, Note 4 states: "The contractor shall manage stormwater and install temporary devices as necessary to manage, control and collect impacted water without mixing impacted water with stormwater during the construction of the project." What is being defined as 'impacted water'?
- d) We appreciate the details provided in the plan sheets' Notes. However, we did not find the reason for removal and replacement of the existing sumps and underdrains. Please provide a brief description of the processes used for removal and replacement.
- e) We noted various modifications to the grading levels (some grades higher and some lower) across various plan sheets. Will there be an overall increase in the stormwater storage volume the facility will be able to manage as a result of this work? Please include the new

total planned stormwater storage volume for the site along with the stormwater storage and volumes for each of the new modified basins.

- f) Sheet 5 shows planned walk way supports with boots welded to the liner. Additional details will need to be provided about these walk way supports and the boots welded to the liner. Specifically, we are needing the materials used and the welding process used to install the boots.
- g) These proposed modifications change the drainage pipe sizes on some of the crossings. In a review of the plan sheets, we believe verification of the previous stormwater flow calculations is warranted to ensure the calculations remain accurate and to allow any needed amendments to be included in the final work plan submittal.
- h) Sheet 11 shows an under cap gas collection (for future use) but not an underdrain that was shown in the other plan sheets. Please clarify if there will be an under cap gas collector or an underdrain in this area.
- i) Please state whether the 8-inch pipe that is attached to the winch is the normal stormwater drain and whether the winch and cable will be used to stop the flow between the ditches.
- j) Please ensure the SWMP's receipt of concurrence from the Lambert-St. Louis International Airport regarding the stormwater improvements and vector controls.

This approval is only for the storm water improvements depicted in the drawing set received July 29, 2014, by email.

The following document is hereby incorporated into Permit Number 0118912:

**DOCUMENT:**

Drawings titled "2014 Stormwater Improvements, South Quarry Area at Bridgeton Landfill" dated June 2014, revised July 10, 2014, received via email on July 29, 2014, and submitted by Cornerstone Environmental Group, LLC. The email includes a set of 14 plan sheets and an Anticipated Project Schedule.

This approval should not be construed as compliance with any existing federal or state laws other than the Missouri Solid Waste Management Law; nor should this be construed as a waiver for any other regulatory requirements. This approval is not to be construed as compliance with any existing local permitting or zoning ordinances; nor does it supersede any local permitting and/or zoning requirements.

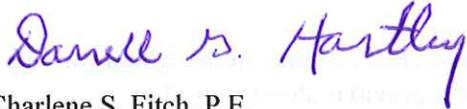
The department reserves the right to revoke, suspend, or modify Permit Number 0118912 after due notice, if the permit holder fails to operate the facility in compliance with the Missouri Solid Waste Management Law and regulations, terms and conditions of the permit, and the approved engineering plans and specifications.

Mr. Brian Power  
Bridgeton Landfill  
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If you have any questions or comments regarding this letter, please contact Mr. J. P. Boessen of my staff at (573) 526-3940 or P.O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

SOLID WASTE MANAGEMENT PROGRAM



for Charlene S. Fitch, P.E.  
Chief, Engineering Section

CSF:jbl

- c: Cornerstone Environmental Group, LLC
- Ms. Laura Yates, St. Louis County Department of Health
- Mr. Larry Lehman, Chief, Compliance/Enforcement Section, SWMP
- Ms. Brenda Ardrey, Chief, Operations Section, SWMP
- St. Louis Regional Office via Electronic Shared File