



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

DEPARTMENT OF NATURAL RESOURCES

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MAR 16 2016

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

RE: Update Closure, Post-closure and Submission of Corrective Action Plans and Financial Assurance, Bridgeton Sanitary Landfill, Permit Number 0118912, St. Louis County

Dear Mr. Power:

This letter provides notice to Bridgeton Sanitary Landfill of the need for updates to the existing closure and post-closure plans and for submission of a corrective action plan or plans. These updates and corrective action plans are required, in part, due to the ongoing subsurface smoldering event/fire occurring since at least December 2010 at Bridgeton Sanitary Landfill. The event/fire has affected and continues to impact the landfill's infrastructure and engineered controls, and presents a continuing threat to the environment and public health. Monitoring and maintenance must therefore occur in a timely manner. Given the complexity and dynamic conditions observed at this facility, dates and estimates contained within this letter are based on current conditions observed at the facility and will require regular updates to continue adjusting timeframes and financial assurance commitments as the situation continues to evolve.

Current state law and regulations require that operators of permitted solid waste disposal areas:

- amend the facility's closure plan whenever changes in operating plans, area design or closure costs affect the closure plan. When the operator requests a permit modification to authorize a change in operating plans or area design, he shall request a modification of the closure plan at the same time. (260.226.2 RSMo)
- amend the facility's post-closure plan whenever changes in operating plans or events occur, during the active life of the area or the post-closure period, which affect the post-closure plan. (260.227.3. RSMo)
- provide corrective action plans for the facility to mitigate threats to the public health and environment from the permitted facility. (260.227.8 RSMo).

- provide financial assurance and required annual inflationary adjustments to the financial assurance instruments provided for the facility to ensure sufficient funds are available for a third party contractor to complete the plan(s) if for any reason the operator is unable or unwilling to do so. (260.226.4 RSMo, 260.227.5 RSMo, 260.227.11 RSMo and 10 CSR 80-2.030(4))

The current closure and post-closure plans on file with the Department are dated December 8, 1993. Numerous workplans and schedules that may be considered corrective action plans have been submitted and approved by the Department and have been or are being implemented by Bridgeton Sanitary Landfill to mitigate the impacts to the landfill and its infrastructure from the event/fire. It is anticipated that this corrective action and required construction/installation of landfill infrastructure will continue for some time into the future. As of this date no comprehensive corrective action plan has been submitted detailing methods planned to return the facility to compliance with its solid waste disposal area permit and ensuring financial assurance held by the Department is adequate to complete all corrective action required. Additionally, the impacts from the event/fire have changed significantly the infrastructure and engineered controls in place and quality and quantity of leachate generated by the landfill as well as the timing of replacements and repairs to these components and systems that result in a need to amend the plans and financial assurance for closure and postclosure care.

Current financial assurance instruments held by the Department include closure bonds and increase riders totaling \$3,504,803; post-closure bonds and increase riders, with the exception of perpetual leachate pumping, totaling \$8,890,259; a perpetual leachate pumping post-closure bond and increase riders totaling \$2,133,373; and a corrective action bond and addendum totaling \$697,053. The total amount of financial assurance presently made available by Republic Services, Inc. for the Bridgeton Sanitary Landfill is inadequate. The amount presently held has been determined to be significantly less than the sum that would be necessary to properly mitigate the effects of the ongoing subsurface fire/event, address ongoing methane migration off-site, properly complete closure activities and provide post-closure care as required by the Missouri Solid Waste Management Law and implementing regulations. New cost estimates and additions/increases to financial assurance instruments are now required.

The facility remains in inactive status with corrective action activities ongoing. Given the conditions created by the subsurface smoldering event/fire, formal closure is not anticipated to occur or be approvable by the Department until the event/fire has ceased. Cessation of the event/fire has been estimated as occurring by 2024 in documents provided by the facility. Should the event/fire cease prior to 2024, subsequent compliance dates (i.e., closure and post-closure) will be adjusted accordingly.

At this time, the facility needs to provide a corrective action plan or set of plans identifying a path forward to return the Bridgeton Sanitary Landfill to compliance with Missouri environmental laws, implementing regulations and its permits. The facility has developed an

Operations Maintenance and Monitoring (OM&M) Program to address the subsurface smoldering event/fire and a Landfill Gas Corrective Action Plan that will assist in filling the corrective action plan requirements. These documents may be incorporated by reference into the facility's comprehensive corrective action plan. The corrective action plan submittal must include, at a minimum:

- (1) Plans for remediation including the nature and extent of the problem and planned remedies. Details including those related to groundwater remediation are found at 10 CSR 80-3.010.
- (2) A schedule for implementing the measures.
- (3) A written estimate, in current dollars, of the cost of corrective action and the proposed financial assurance instrument(s) providing for corrective action activities.

Closure at a solid waste disposal area routinely is completed within 18 to 24 months after waste ceases being accepted by the landfill. The ongoing subsurface smoldering fire/event has resulted in the facility being unable to complete the required closure activities. Closure activities will need to follow upon cessation of the event/fire and are projected to begin no later than 2024 and be completed by 2026. In developing the updated closure plan, at a minimum, the plan must include:

- (1) A description of how and when the area will be closed.
 - a. The plan is required to include all plans, designs, specifications and other relevant data which specify the methods and schedules necessary for closure in order to prevent or minimize potential or existing health hazards, public nuisance or environmental pollution. As part of this closure plan, the following must be performed: placement of cover and establishment of vegetation in a manner to minimize erosion, control drainage and provide a pleasing appearance, and
 - b. The plan must incorporate the necessary construction and maintenance activities, as determined by specific site conditions and the necessary engineering design.
- (2) A written estimate, in current dollars, of the cost of closure of the total area in accordance with 260.200 to 260.245 RSMo and the proposed financial assurance instrument(s) providing for closure activities.
- (3) The name, address and telephone number of the person or office to contact about the facility during the closure period.

Once the event/fire has ceased and closure has been achieved, the post-closure care period will begin. The post-closure care period will begin in 2026 and end in approximately 2055, except for the post-closure care for perpetual leachate pumping which is planned to end in 2126. At a minimum, the post-closure plan must include:

- (1) Plans for monitoring the area after closure and the required post-closure period.

- a. The plan shall include all plans, designs, specifications and other relevant data which specify the methods and schedules necessary for post-closure in order to prevent or minimize potential or existing health hazards, public nuisance or environmental pollution. As part of this post-closure plan, the following care is required:
 - i. Maintenance of cover integrity, such as recovering and regrading, vegetative growth to protect cover material and surface water drainage systems.
 - ii. Operation and maintenance of the leachate collection system(s) and methane gas control system(s).
 - iii. Maintenance, sampling and testing of groundwater monitoring wells and methane gas monitoring systems.
 - iv. Necessary operation or maintenance, or both, of any other environmental control features which are included in the design and operation of the solid waste disposal area to protect the public health and environment.
 - b. The plan must incorporate the necessary construction and maintenance activities, as determined by specific site conditions and the necessary engineering design.
- (2) The planned maintenance schedule; and
 - (3) An estimate of the cost of post-closure monitoring and care for, at a minimum, a 30 year post-closure period and the proposed financial assurance instrument(s) providing for post-closure activities. As Bridgeton Sanitary Landfill was permitted as an inward gradient site, the Department set forth in the facility's operating permit the post-closure care and maintenance requirement for a perpetual leachate pumping fund for protection of the state's groundwater. As such, the permitted facility in relation to leachate pumping is required by the operating permit to maintain and provide for perpetual leachate pumping for, at least, a 100 year post-closure period. Bridgeton Sanitary Landfill will need to provide an estimate of the cost of such perpetual leachate pumping and the proposed financial assurance instrument(s) providing for these activities.
 - (4) The name, address and telephone number of the person or office to contact about the facility during the post-closure period.
 - (5) The Department may extend the post-closure period if it finds that site conditions warrant an extension unless the operator demonstrates that the area does not and in all likelihood will not present a threat to public health or the environment.

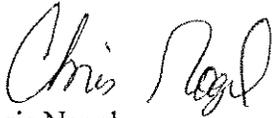
Bridgeton Sanitary Landfill must submit amended closure and post-closure plans, associated cost estimates and proposed financial assurance instruments within 30 days to the Solid Waste Management Program (SWMP). Additionally, the facility must submit corrective action plans, associated cost estimates and proposed financial assurance instruments within 60 days to the SWMP.

Mr. Brian Power
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If you should have questions concerning the requirements for these plans, cost estimates or financial assurance, please feel free to contact me at (573) 751-5401 or via e-mail at christopher.nagel@dnr.mo.gov

Sincerely,

SOLID WASTE MANAGEMENT PROGRAM



Chris Nagel
Program Director

CN:meh

c: Ms. Thais Folta, Missouri Attorney General's Office
Mr. William "Bill" Beck, Lathrop & Gage
Ms. Ally Cunningham, Lathrop & Gage
Ms. Kim Case, DEQ Solid Waste Management Program
Mr. Aaron Libbert, DEQ Solid Waste Management Program