



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

DEPARTMENT OF NATURAL RESOURCES

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NOV 12 2014

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

RE: Temperature Monitoring Point Installation Plan, Bridgeton Landfill, L.L.C.,
Permit Number 0118912, St. Louis County

Dear Mr. Power:

This letter is in response to a submittal, "Installation of Nine Additional Temperature Monitoring Probes in the North Quarry", dated November 5, 2014, and received by the Missouri Department of Natural Resources' Solid Waste Management Program (SWMP) via email on the same date. The submittal consisted of a three (3) page cover letter and a set of 5 plan sheets identifying the locations and installation plans for nine (9) additional temperature monitoring probes (TMP) in the North Quarry, prepared by Feezor Engineering, and dated November 2014.

The submittal seeks approval of locations and installation of a line of nine (9) new TMPs in the North Quarry. The new TMPs are required to be located along the line defined in the SWMP's October 7, 2014, letter. The North Quarry sentry monitoring line, when complete, is required to total twelve (12) TMPs, which includes three (3) existing TMPs installed earlier this summer to comply with the SWMP's August 27, 2013, letter.

With the southern extent of the radiologically-impacted material in the North Quarry remaining unknown and a recent USACE report indicating the start of construction for the isolation barrier as at least 18 months away, a continuing lack of data to identify any movement or migration of the subsurface fire towards the North Quarry is unacceptable from a public health and safety as well as an environmental concern standpoint. Proactive monitoring and data collection to ensure evaluation of any northward migration of the subsurface fire is critical given the complex nature of the on-going subsurface fire occurring at Bridgeton Landfill. The addition of these nine (9) TMPs in the North Quarry sentry line will allow for this evaluation to continue over the coming winter months.

The neck area TMPs continue to experience thermocouple failures with over half being reported as no longer accurate for reporting purposes, which results in an ever-widening gap in temperature data that is collected and submitted by Bridgeton Landfill. This gap in data limits the SWMP's ability to timely analyze and identify the location and rate of movement of the subsurface fire. The SWMP recently determined a slow upward trend in temperatures is on-going in the neck area of the landfill. Of specific concern is the area beginning near TMP-12 and continuing into the North Quarry near gas extraction well-53 (GEW-53). The widening gap in data, the noted warming trend, and the coming onset of winter led to the SWMP's requirement that installation of the new

TMPs begin within 30 days of the SWMP's October 7, 2014, letter. The SWMP does not consider the construction of TMPs that occurred prior to the SWMP's October 7, 2014, letter evidence of compliance with the 30 day schedule. To date, the facility has stated that materials for the new TMPs have been ordered. Under the provided work schedule, the expectation is now set for installation to be complete and TMP data collection and submittal to occur within 75 calendar days of the SWMP's plan approval.

The SWMP has reviewed the submittal in concurrence with the St. Louis County Department of Health's (SLCDH) Solid Waste Management Program. On November 10, 2014, you provided clarification that the detail in Drawing 4 which shows installation of an EVOH liner boot with 316 stainless steel low-profile clamp applies not only to TMP-16, but also to any other TMPs where EVOH liner already covers the soil cap.

The SWMP has reviewed this submittal in accordance with the Missouri Solid Waste Management Law and regulations. The SWMP hereby **approves** the location and installation of these temperature monitoring probes at the Bridgeton Sanitary Landfill with the following conditions. Compliance with these conditions will, in part, determine compliance with Solid Waste Disposal Area Permit Number 0118912.

CONDITIONS:

1. Bridgeton Landfill must have the ability to collect and identify temperature data to ensure the facility takes timely corrective measures to stabilize and maintain temperatures in the North Quarry below 200° F when data is collected from TMPs and 185° F when data is collected from GEWs. Therefore, the new North Quarry TMPs must allow for monitoring of temperatures in the same range as the currently installed and monitored TMPs which incorporate a type T thermocouple with an approximate temperature range of -300° F to 600° F.
2. Plan sheet number 004 shows the installation of a thermocouple switch box. Please ensure that the "boxes" are placed in a timely fashion to ensure the integrity of the thermocouple wires.
3. The schedule as outlined in the submittal shows a timeline of 75 calendar days. Please expedite as many steps as possible to install the additional nine (9) TMPs in the shortest timeframe possible. The SWMP anticipates that the installation can be completed in 60 days.
4. You must notify the SWMP five (5) days prior to beginning construction/installation of the TMPs.

The following document was reviewed and are hereby incorporated into permit number 0118912:

DOCUMENT:

"Installation of Nine Additional Temperature Monitoring Probes in the North Quarry"
dated November 5, 2014, received by the SWMP via email on the same date. The

submittal consisted of a three (3) page cover letter from Brian J. Power, Environmental Manager, Bridgeton Landfill, LLC, and a set of 5 plan sheets prepared by Feezor Engineering for Bridgeton Landfill, LLC, dated November 2014 seeking approval of the location and installation of nine (9) new TMPs in addition to the existing three (3) TMPs in the North Quarry.

This approval is not to be construed as compliance with any existing federal or state environmental laws; 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 this approval and/or Permit Number 0118912 after due notice, if the permit holder fails to maintain the facility in compliance with the Missouri Solid Waste Management Law and regulations, the terms and conditions of the permit, and the approved engineering plans and specifications.

We appreciate your continued efforts toward environmentally sound solid waste management practices. If you have any questions or comments, please contact me at (573) 526-3940 or at P.O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

SOLID WASTE MANAGEMENT PROGRAM



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

CSF:jbl

- c: Mr. James Getting, Bridgeton Landfill, LLC
Mr. John Haasis, P.E., St. Louis County Department of Health
Ms. Laura Yates, St. County Department of Health
Mr. Mark Milward, St. Louis County Department of Health
Mr. Larry Lehman, Chief, Compliance/Enforcement Section, SWMP
Mr. Joe Trunko, St. Louis Regional Office
Mr. Tom Phillips, Attorney General's Office
Ms. Brenda Ardrey, Chief, Operations Section, SWMP