



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

September 10, 2013

The Honorable Richard H. Balbier
Mayor, City of Brooklyn
7619 Memphis Avenue
Brooklyn, Ohio 44144

**RE: Brooklyn Sanitary Landfill (SLF), Cuyahoga County
Ground Water Monitoring Report
Notice of Violation and Return to Compliance
November 2012 Semiannual Ground Water Sampling Event and
Response to Comments from April 2010 Sampling Event**

Dear Mayor Balbier:

The Ohio Environmental Protection Agency (Ohio EPA), Division of Materials and Waste Management (DMWM), Northeast District Office (NEDO) is in receipt of a document titled *Ground Water Detection Monitoring Report for the November 2012 Semiannual Ground Water Sampling Event* dated January 18, 2013, for the City of Brooklyn SLF (Facility) located in Cuyahoga County. This document was submitted by Civil & Environmental Consultants, Inc. (CEC) on behalf of the Facility and was received by DMWM, NEDO on January 22, 2013.

Ground water elevations were collected from all ground water monitoring wells prior to any purging or sampling. Flow directions were similar to historical observations at the site. The second semiannual water sampling event, as well as a leachate sample per OAC 3745-27-19(M)(5) collected during the November 5, 2012 semiannual ground water detection monitoring event, were field analyzed for OAC 3745-27-10 Appendix I parameters 67, 68, 69; and chemically analyzed for Appendix I parameters 1 through 66, and leachate analyzed for Appendix 1 parameters 1-78 and PCBs.

The resampling event took place on January 7, 2013, and there were confirmed Statistically Significant Increases (SSIs) for monitoring well W-12 for sodium at a concentration of 111 mg/L and 145 mg/L for the resample (statistical limit 107 mg/L), and monitoring well W-13 for 175 mg/L chloride with a resample of 189 mg/L (statistical limit 101 mg/L), and potassium at 8.8 mg/L with a resample concentration of 9.3 mg/L (statistical limit 7.5 mg/L). The Facility submitted an alternate source demonstration (ASD) for these SSIs, and the review is addressed in a separate document.

The Honorable Richard H. Balbier
Mayor, City of Brooklyn
September 10, 2013
Page 2

Upon review of the above document, Ohio EPA has the following comments:

Violations

1. The Facility is in violation of **OAC Rules 3745-27-10(D)(5)(a)(ii)(b)** and **3745-27-10(D)(5)(d)** which require the owner or operator to semiannually collect and analyze one sample from each monitoring well screened within the uppermost aquifer system (UAS) for Parameters 1-66 in Appendix I of 3745-27-10.

Downgradient detection monitoring well W-9 of the UAS was dry during the November 2012 semiannual sampling event and not sampled. UAS wells do not typically go dry and are unable to be sampled. By definition, a UAS is supposed to be able to yield significant amounts of water to wells or springs. This is not to imply that no exceptions ever occur, but it is very rare.

To return to compliance with these rules, the owner/operator needs to successfully collect and analyze a ground water sample from W-9 for parameters 1-69 in Appendix I of 3745-27-10. If the owner/operator is unable to collect a ground water sample from W-9, then the owner/operator will need to consider installing and sampling a replacement UAS well.

Previous Violations

2. **Original Ohio EPA Comment:** *Brooklyn SLF remains in violation of OAC Rule 3745-27-10(C)(7)(g), which was addressed in an earlier correspondence dated November 21, 2012. Background data can be added only in blocks of data resulting from the analysis of four or more statistically independent samples after the data have been statistically compared to the current background data and no statistical differences are detected, unless another method is deemed acceptable to the director. The background statistical database was updated, but no statistical comparison between the existing background database and the new background data was conducted before the background database was updated.*

To date, Brooklyn SLF has not addressed this violation. In order to return to compliance with this rule, Brooklyn SLF should either submit the results of a valid statistical comparison between the data to be updated and the existing background database that shows no statistically significant differences; or submit a formal request that the director approve the use of time series graphs for the purpose of updating background.

Current Brooklyn SLF Response: Background data sets were re-established and are provided in the November 2012 semiannual ground water sampling event report.

Current Ohio EPA Comment: Background data sets were re-established based on a statistical comparison as requested. This is acceptable to Ohio EPA.

- 3. Original Ohio EPA Comment:** *Brooklyn SLF remains in violation of OAC Rule 3745-27-10(C)(1), which was addressed in an earlier correspondence dated November 21, 2012. The ground water monitoring program shall include consistent sampling and analysis procedures and statistical methods that are protective of human health and the environment and that are designed to ensure monitoring results that provide an accurate representation of ground water quality at the background and downgradient wells installed in accordance with paragraph (B), (D), (E), or (F) of this rule.*

To date, Brooklyn SLF has not addressed this violation. In order to return to compliance with this rule, the statistical method chosen must protect human health and the environment. The owner/operator should re-evaluate the background datasets from wells W-2 and W-14. All sample results affected by elevated turbidity should be flagged. The owner/operator will then need to calculate new statistical limits based only on the data that is not flagged as turbidity impacted. This evaluation should be completed for the current semiannual report, and resubmitted so that the statistical comparison results are conducted using the newly calculated limits.

Current Brooklyn SLF Response: Background data sets were re-established and statistically analyzed and are provided in the November 2012 semiannual ground water sampling event report.

Current Ohio EPA Comment: Background data sets were re-established based on a statistical comparison as requested. This is acceptable to Ohio EPA.

Previous Recommendations

- 4. Original Ohio EPA Recommendation:** *It was recommended Brooklyn SLF demonstrate the source of the acetone detected in monitoring well W-2 during the April 2010 annual sampling event.*

Current Brooklyn SLF Response: *To date acetone has not been detected in monitoring well W-2 or above the laboratory PQL in the annual leachate sample for 2010-2012.*

Current Ohio EPA Comment: This is acceptable to Ohio EPA.

The Honorable Richard H. Balbier
Mayor, City of Brooklyn
September 10, 2013
Page 4

5. **Original Ohio EPA Recommendation:** *It was recommended Brooklyn SLF implement low flow purging to increase the chance of obtaining a representative ground water sample.*

Current Brooklyn SLF Response: Wells at the Facility are very low yielding and will not sustain low-flow purging. Recent purging and sampling activities have resulted in lower turbidity and thus more representative ground water samples, and so low-flow purging sampling is not necessary at this time.

Current Ohio EPA Comment: This is acceptable to Ohio EPA.

6. **Additional Items of Concern:** *Field data sheets in the past were inaccurate and illegible. Field sampling methods and analyses completed were incorrectly documented, and elevated turbidity values at the time of sampling were prohibitive of sampling at that point.*

Brooklyn SLF Response: These items were addressed and rectified for the Brooklyn SLF.

Current Ohio EPA Comment: This is acceptable to Ohio EPA.

If you have any questions concerning this letter, please contact me at (330) 963-1103, or joshua.adams@epa.ohio.gov.

Sincerely,



Joshua D. Adams, R.S.
Environmental Specialist
Division of Materials and Waste Management

JDA/cl

cc: Scott Hester, DMWM CO
Eric Adams, DDAGW NEDO
Colin Johnson, Cuyahoga County Board of Health
File: [Sowers/Land/Brooklyn/GRO/76]
DMWM #4845, 4563