



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

November 21, 2012

RE: **BROOKLYN LANDFILL  
GROUND WATER MONITORING  
NOTICE OF VIOLATION**

**CERTIFIED MAIL 7011 0470 0002 3496 1122**

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

Dear Mayor Balbier:

The Ohio Environmental Protection Agency (Ohio EPA) Division of Materials and Waste Management (DMWM) reviewed the Ground Water Monitoring Report of the April 2012 Semiannual Ground Water Sampling Event for Brooklyn Landfill. The report is dated June 29, 2012, and received by Ohio EPA on July 2, 2012. The report was submitted by Civil & Environmental Consultants, Inc. on behalf of the City of Brooklyn (Brooklyn). The report was reviewed for compliance with OAC 3745-27-10 of the revised 2003 solid waste regulations, and the facility's site-specific ground water detection monitoring plan (GWDMP).

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. All water samples collected during the April 18-19, 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.

There was a confirmed Statistically Significant Increase (SSI) for monitoring well W-13 for chloride. Brooklyn submitted an alternate source demonstration (ASD) for this SSI, which was not included in this report. Ohio EPA addressed the ASD in a separate correspondence.

Upon review of the document, Ohio EPA determined that Brooklyn is in violation of the following:

1. **OAC Rule 3745-27-10(C)(7)(g)** states "*[b]ackground 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.*"

Brooklyn is in violation of this rule for failure to submit background data that has been statistically compared to the current background data or other method accepted by the director. Brooklyn provided time series graphs, which are not an approved statistical comparison method and would need approval by the Director of Ohio EPA or his

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authorized representative. However, outlier testing was performed on the data included, and no outliers were determined to be present within the dataset included within the OAC Rule 3745-27-10(C)(7)(g) update.

To return to compliance with this rule, Brooklyn 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.

2. **OAC Rule 3745-27-10(C)(1)** states “[t]he 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...”

Brooklyn is in violation of this rule for failure to develop a ground water monitoring program that is protective of human health and the environment. However, the existing background dataset (used to establish statistical limits) includes multiple values that are out of bounds, even exceeding MCLs in some cases. Generally, it is not protective of human health and the environment if the background dataset is populated with unrepresentative data and corresponding statistical limits exceed MCLs. This is because ground water would be severely degraded before any statistically significant differences would be identified. This is contrary to the entire purpose of ground water monitoring at sanitary landfills; that purpose being, to identify any releases as early as possible so they can be addressed in a timely fashion before they are an imminent threat to human health and the environment.

To return to compliance with this rule, the statistical method chosen must protect human health and the environment. Brooklyn should re-evaluate the background datasets from wells W-2 and W-14. All sample results affected by elevated turbidity should be flagged. Brooklyn 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.

Nothing in this letter shall be construed to authorize any waiver from the requirements of any applicable state or federal laws or regulations. This letter shall not be interpreted to release the entity from responsibility under Chapters 3704, 3714, 3734, or 6111 of the Ohio Revised Code or under the Federal Clean Water or Comprehensive Environmental Response, Compensation, and Liability Acts for remedying conditions resulting from any release of contaminants to the environment.

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Please contact Katherine Springer Amey at (330) 963-1289 if you have any technical questions regarding this review. Otherwise, please submit all correspondence to Colum McKenna, Division of Materials and Waste Management, Northeast District Office, Ohio EPA, 2110 East Aurora Road, Twinsburg, Ohio 44087.

Sincerely,



Colum McKenna  
Environmental Specialist  
Division of Materials and Waste Management

CM/cl

cc: Katherine Springer Amey, DDAGW, NEDO  
Laura Travers, Cuyahoga County Board of Health  
John Verba, Brooklyn Service Department  
Chris Jones, Calfee  
File [Sowers/LAND/Brooklyn LF/GRO/18]  
DMWM #4563