



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

OHIO E.P.A.

FEB 26 2015

ENTERED DIRECTOR'S JOURNAL

FEB 25 2015

Mr. Chris Jaquet
Lorain County II Landfill
43502 Oberlin-Elyria Rd
Oberlin, Ohio 44074

Re: Lorain II Landfill
Director's Action
Non-Approval
Municipal Solid Waste Landfill
Lorain County
MSWL018801

**Subject: Lorain County II Landfill, Lorain County
Ohio Administrative Code (OAC) Rule 3745-27-10(D)(7)(c) Non-Approval**

Dear Mr. Jaquet:

On August 4, 2014, the Ohio Environmental Protection Agency (Ohio EPA), Division of Materials and Waste Management (DMWM), Northeast District Office (NEDO), received a document titled "*2014 First Semiannual Ground-Water Monitoring Event Results, Notification of Statistical Exceedance per OAC Rule 3745-27-10(D)(7)(b), and Alternate Source Demonstration per OAC Rule 3745-27-10(D)(7)(c)(ii), Lorain County II Landfill*" dated July 31, 2014, for the Lorain County II Landfill (Facility) located in Lorain County. This document was submitted by Eagon & Associates, Inc. on behalf of Lorain County II Landfill, LLC (LCL), pursuant to OAC Rule 3745-27-10(D)(7)(c), and requested continuation of the ground water detection monitoring program for a specific monitoring well at the Facility and to release the owner or operator from the obligation to comply with the ground water quality assessment monitoring program.

Pursuant to OAC Rule 3745-27-10(D)(7)(c), the owner or operator may demonstrate that a source other than the sanitary landfill facility caused the contamination, or that the statistically significant change(s) resulted from error in sampling, analysis, or statistical evaluation, or from natural variation in ground water quality, and request that the Director approve continuation of the detection monitoring program.

The July 31, 2014 document concluded that the statistically significant changes in sodium and chloride at monitoring well MW-211S were due to the application of road salt. Ohio EPA has reviewed the July 31, 2014 document and has determined that the owner or operator has not provided sufficient evidence to demonstrate that the statistically significant changes in sodium and chloride at monitoring well MW-211S were from a source other than the sanitary landfill facility; due to an error in sampling, analysis, or statistical

evaluation; or from natural variation in ground water quality. Ohio EPA concluded the following:

- The time series plots for sodium and chloride show fairly steady, long term, increasing trends in concentration. Since the application of road salt is only done during the winter months (December through March), it is expected that the time series plots would predominantly show more seasonal variation instead of the steadily increasing trends that are depicted.
- A review of the boring/well construction log for monitoring well MW-211S reveals that the monitored sand zone is overlain by at least 20 feet of silty clay. This is a significant amount of low permeability geologic material for road salt to have vertically migrated through to impact ground water quality in the sand zone. Additionally, this well was installed in 2005, but by 2007/2008 the increasing trend for chloride was already becoming apparent.
- According to LCL's description of how road salt is applied at the Facility, road salt is only applied to the "paved main haul road to the east of MW-211S." This paved main haul road is more than 600 feet due east of monitoring well MW-211S and is side gradient with regard to ground water flow in the significant zone of saturation monitored by monitoring well MW-211S. The stone road immediately adjacent to monitoring well MW-211S is not subject to the application of road salt.
- A review of the ground water quality data that has been collected from monitoring well MW-211S between 2006 and 2014 revealed that the concentration of barium in ground water at this well has sharply increased from 41 ug/L to 840 ug/L. While the rule does not require statistical analysis of barium, Ohio EPA examined the time series graph for barium as well as normality, outlier, and trend tests for the barium data from this well. The result of Sen's Slope Trend Test is a statistically significant increasing trend. The leachate results revealed that the concentration of barium in leachate was 870 ug/L. Given this, the most plausible source of the barium in ground water at this well is the landfill, reinforcing that the most likely source of the statistically significant changes in sodium and chloride in this well is also the landfill, and not outside sources.

Therefore, I cannot approve continuation of ground water detection monitoring at monitoring well MW-211S. The LCL shall comply with the ground water quality assessment program pursuant to OAC Rule 3745-27-10(E).

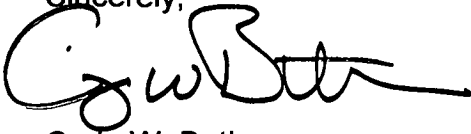
You are hereby notified that this action of the Director of Environmental Protection (Director) is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The

appeal must be filed with the Commission within 30 days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 made payable to "Treasurer, State of Ohio." The Commission, in its discretion, may reduce the fee if by affidavit it is demonstrated that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High St., 17th Floor
Columbus, Ohio 43215

A detailed account of Ohio EPA's review of the ground water demonstration will be sent to you in separate correspondence. If you have any questions concerning this letter, please contact Clarissa Gereby, DMWM, NEDO at (330) 963-1224.

Sincerely,



Craig W. Butler
Director

CWB:CG:cla

cc: Jarnal Singh, Ohio EPA, NEDO, DMWM
John Sabo, Lorain County Health Department