



State of Ohio Environmental Protection Agency

Northeast District Office

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Twinsburg, Ohio 44087

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Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director

August 12, 2009

**RE: CITY OF AVON LAKE LANDFILL  
LORAIN COUNTY  
GROUND WATER  
NOTICE OF VIOLATION**

**CERTIFIED MAIL**

Mr. Thomas E. Lescher  
Service Director  
City of Avon Lake  
750 Avon Belden Rd.  
Avon Lake, Ohio 44012

Dear Mr. Lescher:

The Ohio Environmental Protection Agency (Ohio EPA) has reviewed the ground water quality reports for the Avon Lake Municipal Landfill, Lorain County, Ohio:

1. 2006 Semi-Annual Report of Ground Water Quality, dated August 2006, and received by Ohio EPA on August 9, 2006.
2. 2007 Semi-Annual Report of Ground Water Quality, dated July 2007, and received by Ohio EPA on July 24, 2007.
3. 2008 Semi-Annual Report of Ground Water Quality, dated July 2008 and received by Ohio EPA on August 1, 2008.
4. 2008 Annual Report of Ground Water Quality and the Semi-Annual Ground Water Assessment Activities Report for 2008, dated January 2009, and received by Ohio EPA on January 26, 2009.

The monitoring events were conducted in accordance with OAC 3745-27-10(E) and the GWQAP (March 2003) (as effective August 15, 2003). Upon review of the documents, the following violations were identified:

1. **The owner/operator is in violation of OAC 3745-27-10(E), which states: Ground water quality assessment monitoring program. The owner or operator shall comply with the following requirements regarding ground water quality assessment monitoring.**

**(1) General requirements. Unless the director approves the report submitted in accordance with paragraph (D)(7)(c) of this rule, the owner or operator shall implement a ground water quality assessment plan capable of determining the concentration, rate, and extent of migration of waste-derived constituent(s) in the ground water upon determining a statistically significant increase over background in accordance with paragraph (D)(7)**

**of this rule. The owner or operator shall implement and comply with the ground water quality assessment plan and the requirements of this rule.**

The ground water assessment program at Avon Lake Landfill is incomplete. Based on a review of the water quality reports, the wells surrounding the site continue to show an impact from the landfill and therefore, more wells are needed to define the extent of the contamination.

Additional wells should be installed in the till/shale interface downgradient of the affected wells (including monitoring wells MW-1 and MW-2) up to the property boundary to determine the horizontal extent of impact from the landfill. If those wells show an impact from the facility, or if any current well is located near the property line, the owner/operator should make every effort to put wells beyond the facility boundary, in accordance with OAC 3745-27-10(E)(6). If permission to install wells on adjacent property is denied, the owner/operator should obtain the appropriate documentation and submit it to Ohio EPA. Additionally, the owner/operator should install an appropriate number of deeper wells to determine the vertical extent of the contamination.

The number of additional wells should be dictated by the monitoring systems ability to provide an accurate and conclusive contamination plume map. The owner/operator should be aware that Ohio EPA considers the plume boundary to be between a well showing contamination and one that does not.

2. **The owner/operator is in violation of OAC 3745-27-10(B)(1)(b) for not adequately monitoring the ground water passing downgradient of the landfill, OAC 3745-27-10(B)(4)(b) by not adequately being able to detect a release from the landfill, OAC 3745-27-10(B)(5) which requires that the owner/operator evaluate the ground water surface elevation data to determine if the requirements of paragraph (B) of this rule continue to be satisfied and immediately make any changes if necessary, and OAC 3745-27-10(E)(1) for failing to implement a ground water quality assessment plan capable of determining the rate, extent, and concentration of waste derived constituents in the ground water.**

Upon review of the July 2007 assessment report, it was noted that monitoring wells MW-1 and MW-2 are designated as upgradient when, in fact, they are downgradient based on the potentiometric map. Monitoring well MW-4 remains the only background well that is clearly upgradient and, therefore, assumed to be unaffected by the landfill.

In order to return to compliance, the owner/operator should revise the GWQAP, and Sampling and Analysis Plan (SAP), to re-designate monitoring wells MW-

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1and MW-2 as downgradient. The owner/operator will also need to re-evaluate the data using MW-1 and MW-2 as downgradient and MW-4 as background. The Statistical Analysis Plan (StAP) should also be revised as necessary.

The following issues identified during the review of the documents need more information to determine compliance:

- 1. OAC 3745-27-10(C)(3)(c) requires that ground water elevations be collected in all wells monitoring the same unit(s) or portion of units for development of the potentiometric map.**

It was noted that monitoring well MW-5A is screened deeper, and entirely in shale, than the other wells but was included in the development of the potentiometric map.

The owner/operator should evaluate, in accordance with OAC 3745-27-10(B)(5), whether this well is hydraulically connected to the other wells and if it is appropriate to include the water level with the other wells when creating the map.

- 2. The owner/operator should determine the cause of the frequent, and numerous, false positives and estimated results, reportedly, being caused by the laboratory.**

The data reports submitted for the facility typically have numerous estimated concentrations of constituents flagged with a "J". There are also a number of VOC's that the owner/operator attributes to laboratory contamination. This report had more than usual. Because ground water contamination migrating from the landfill also appears to contain various VOC's, it is not clear if these additional VOC's are from the landfill or a result of laboratory contamination, as stated by the owner/operator. Continued reporting of sample results that are influenced by laboratory contamination may result in the sample not being considered as representative of ground water in accordance with OAC 3745-27-10(B) and OAC 3745-27-10(C).

The owner/operator should evaluate the laboratory's procedures and ensure future data reports better explain the presence of estimated concentrations and eliminate the influence of laboratory contamination.

On July 7, 2009, a meeting was held at your office to discuss the ground water monitoring plan for the Avon Lake Landfill. Present for the meeting were you, Russ Kocher of the Division of Drinking and Ground Waters, Ohio EPA, Suzanne Eden and John Zampino of HzW Environmental Consultants, LLC., and me. The

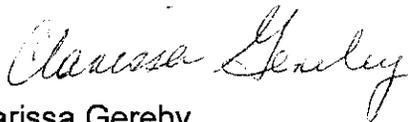
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violations/deficiencies contained in this letter were discussed at the meeting. A site visit was also conducted to identify the possible locations of additional monitoring wells.

Please submit the revised plans to Clarissa Gereby, Ohio EPA, Division of Solid and Infectious Waste Management, Northeast District Office 2110 East Aurora Road, Twinsburg, Ohio 44087. If you have any technical questions regarding this review, please do not hesitate to contact Russ Kocher at (330) 963-1203.

Nothing in this letter shall be construed to authorize any waiver from any requirements of applicable state solid waste laws or regulations. This authorization shall not be interpreted to release the City or others from responsibility under ORC Chapters 3704, 3714, 3734, or 6111, the Federal Clean Water Act, the Resource Conservation and Recovery Act, the Toxic Substances and Control Act or the Comprehensive Environmental Response, Compensation and Liability Act, or from other applicable requirements for remedying conditions resulting from any release of contaminants from the facility to the environment.

Sincerely,



Clarissa Gereby  
Environmental Specialist  
Division of Solid and Infectious Waste Management

CG:cl

cc: Fleming Mosely, Lorain City Health Department  
Russ Kocher, DDAGW, NEDO  
Suzanne Eden, HzW Environmental Consultants, LLC  
File:[Kurko/Land/Avon Lake/GRO/18]

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*Thomas E. Lescher*  
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PS Form 3800, August 2006 See Reverse for Instructions

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