



Mike DeWine, Governor  
Jon Husted, Lt. Governor  
Laurie A. Stevenson, Director

JUNE 19, 2019

Mr. Scott Herman  
Waste Management, Inc.  
6640 Cochran Road  
Solon, Ohio 44139

**Re: Cuyahoga Landfill Inc  
Director's Authorization  
Approval  
Municipal Solid Waste Landfills  
Cuyahoga County  
MSWL020118**

**Subject: Cuyahoga Regional Sanitary Landfill, Cuyahoga County  
Selection of Corrective Measure**

Dear Mr. Herman:

Ohio EPA JUN 19 '19  
Entered Directors Journal

On March 19, 2019, the Ohio Environmental Protection Agency (Ohio EPA), Division of Waste Management and Materials (DMWM), Northeast District Office (NEDO) received the Revised Corrective Measures Plan (CMP) for the Cuyahoga Regional Sanitary Landfill (Facility) located in Cuyahoga County. The CMP was submitted by Eagon & Associates on behalf of Waste Management, Inc.

The Facility is a municipal solid waste landfill. Waste Management, Inc. currently conducts ground water quality assessment monitoring at the Facility.

Ohio Administrative Code (OAC) Rule 3745-27-10(F) requires the owner or operator of a municipal solid waste landfill to submit a CMP upon determining, through assessment activities performed in accordance with OAC Rule 3745-27-10(E), that waste-derived contaminants have been detected in the ground water. In accordance with OAC Rule 3745-27-10, the director shall select from the CMP the corrective measure(s) which best meet(s) the criteria listed in paragraphs (F)(2), (F)(3), and (F)(7) of the rule.

OAC Rule 3745-27-10(F)(2) requires the CMP to evaluate all practicable remediation procedures which are available for remediating any contamination discovered during assessment monitoring. OAC Rule 3745-27-10(F)(3) requires the CMP to include an evaluation of each proposed remediation procedure.

In accordance with OAC Rule 3745-27-10(F)(7), the CMP shall propose a concentration level for each waste-derived constituent detected in the ground water at a statistically significant level. In accordance with OAC Rule 3745-27-10(F)(7)(a), the proposed concentration levels are required to be protective of human health and safety and the environment. In accordance with OAC Rule 3745-27-10(F)(7)(b)(i), if there is a maximum contaminant level (MCL) promulgated for the constituent, that shall be used as the concentration level. If an MCL has not been established, the background concentration

shall be used unless the director establishes an alternate ground water remediation standard in accordance with OAC Rule 3745-27-10(F)(7)(d).

The CMP was reviewed to determine if it meets the requirements listed in OAC Rules 3745-27-10(F)(2), (F)(3), and (F)(7). Upon review, it has been determined that the CMP includes provisions for semiannual sampling in accordance with OAC Rule 3745-27-10(F)(2); all practicable remediation procedures were evaluated for each assessment area in accordance with OAC Rule 3745-27-10(F)(3); and the ground water remediation standards meet the requirements of OAC Rule 3745-27-10(F)(7).

Ground water remediation standards (GWRS) specified in Table 1 were derived from the following:

- The GWRS for the constituents identified above background have been set equal to the MCL established for the constituent unless the constituent does not have an MCL;
- For the parameters that do not have an MCL, the GWRS has been established using a U.S. Health Advisory, Secondary Maximum Contaminant Limits (SMCL), U.S. E.P.A. Regional Screening Level (RSL), or twice the historical upgradient background concentration.

<b>TABLE 1</b>		
<b>Waste Derived Constituent</b>	<b>GWRS (mg/L)</b>	<b>Basis for GWRS</b>
<b>Upper Sand (UAS)</b>		
Alkalinity	1440	2x Highest Concentration in Upgradient Well
Ammonia	30	Health Advisory Limit
Arsenic	0.010	MCL
Calcium	325.7	2x Highest Concentration in Upgradient Well
Chloride	250	SMCL
Iron	25.8	2x Highest Concentration in Upgradient Well
Lead	0.015	Action Level
Magnesium	116.8	2x Highest Concentration in Upgradient Well
Manganese	0.3	Health Advisory Limit
Nickel	0.100	Health Advisory Limit
Nitrate/Nitrite	10	MCL
Potassium	11.12	2x Highest Concentration in Upgradient Well
Selenium	0.050	MCL
Sodium	105.2	2x Highest Concentration in Upgradient Well
Sulfate	250	SMCL
TDS	1380	2x Highest Concentration in Upgradient Well
Thallium	0.002	MCL
1,1 – Dichloroethane	0.001	Regional Screening Level: calculated result

1,2 - Dichloroethane	0.005	MCL
Chloroethane	0.001	Regional Screening Level: calculated result
Cis – 1,2 – Dichloroethene	0.07	MCL
Dichlorodifluoromethane	0.025	Regional Screening Level: calculated result
Vinyl Chloride	0.002	MCL
<b>Middle/Shallow Sand (UAS)</b>		
Alkalinity	1276	2x Highest Concentration in Upgradient Well
Ammonia	30	Health Advisory
Barium	2.0	MCL
Chloride	250	SMCL
Iron	34.2	2x Highest Concentration in Upgradient Well
Sodium	45.4	2x Highest Concentration in Upgradient Well

The CMP describes a quantitative source control evaluation process by which ground water monitoring well data is statistically analyzed, and evaluates the following potential corrective measures:

- Alternative 1: Continued Monitoring with Natural Attenuation – Continuation of semiannual monitoring of ground water wells with additional parameters (DO, ORP, and Ferrous Iron).
- Alternative 2: Source Control – Gas Extraction, Leachate Collection, and Capping.
- Alternative 3: Groundwater Extraction.

Waste Management, Inc. has proposed Alternatives 1, 2, and 3. Alternative 1 provides corrective measures monitoring for any future changes in ground water quality. Source controls including capping, toe drain, and the gas extraction system are in place. The ground water extraction system continues to improve the ground water quality at the Site and Tinkers Creek.

There is currently no risk to human health or the environment beyond the property boundary because ground water discharges to Tinkers Creek and there are no known residential wells screened within the UAS.

Ohio EPA has reviewed the CMP as described above and determined that the CMP and Corrective Measures Alternative 1, 2, and 3 meets the requirements listed in OAC Rules 3745-27-10(F)(2), (F)(3), and (F)(7), including the requirement to be protective of human health and safety and the environment. Therefore, I select Alternative 1: Continued Monitoring with Natural Attenuation, Alternative 2: Source Control, and Alternative 3: Groundwater Extraction as the corrective measures to be implemented at the Facility. Waste Management, Inc. shall continue implementation of the selected corrective measure at the Facility in accordance with the CMP, as received on March 19, 2019.

This letter shall not be construed to release the owner or operator from the obligation to comply with the requirements of any other ground water quality assessment monitoring program being conducted at the Facility.

You are hereby notified that this action of the director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Ohio Revised Code Section 3745.04. 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 thirty (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 (3) 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  
30 East Broad Street, 4<sup>th</sup> Floor  
Columbus, Ohio 43215

If you have any questions concerning this letter, please contact Jeffrey Rizzo of Ohio EPA's Northeast District Office at (330) 963-1115.

Sincerely,



Laurie A. Stevenson  
Director

LAS:JR

ec: Jenni Friedhoff, Cuyahoga County Board of Health