



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

AUGUST 14, 2019

Mr. Joe Balog
Norton Environmental Company
6055 Rockside Woods Blvd., Suite 105
Independence, Ohio 44131

Mr. Freeman Mullet
Mount Eaton Reclamation, Inc.
P. O. Box 256
Mount Eaton, OH 44659

Twilight Mining
P.O. Box 220
Berlin, Ohio 44610

**Re: Mt. Eaton Landfill
Director's Authorization
Approval
Municipal Solid Waste Landfills
Wayne County
MSWL018846**

Ohio EPA AUG 14 '19
Entered Directors Journal

Subject: Mt. Eaton Landfill, Wayne County, Selection of Corrective Measure

Dear Gentleman:

On February 28, 2019, Ohio EPA, NEDO, DMWM received a proposed ground water Corrective Measures Plan (CMP) for the Mt. Eaton Landfill located in Wayne County. The CMP was submitted by Eagon & Associates on behalf of Norton Environmental, Inc.

The facility is a municipal solid waste landfill. Norton Environmental, Inc. 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 proposed ground water remediation standards meet the requirements of OAC Rule 3745-27-10(F)(7). Ground water is monitored within two zones at the Facility: The Homewood Sandstone designated as the Uppermost Aquifer System (UAS) and the underlying Mercer Limestone.

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 Levels (RSL) with additional calculations for multiple parameters, the historical upgradient background concentration, or twice the historical upgradient background concentration.

TABLE 1		
Waste Derived Constituent	GWRS	Basis for GWRS
Homewood Sandstone (UAS)		
Arsenic	10 ug/L	MCL
Barium	2 mg/L	MCL
Beryllium	4 ug/L	MCL
Cadmium	5 ug/L	MCL
Cobalt	0.007 mg/L	Highest Concentration in Upgradient Well
Lead	2.5 ug/L	Highest Concentration in Upgradient Well
Mercury	2 ug/L	MCL
Nickel	0.1 mg/L	Health Advisory

Silver	0.1 ug/L	Health Advisory
Thallium	2 ug/L	MCL
Vanadium	5.3 ug/L	RSL Calculated Result
Zinc	2 mg/L	Health Advisory
Ammonia	30 mg/L	Health Advisory
Chloride	250 mg/L	SMCL
Potassium	906 mg/L	2x Highest Concentration in Upgradient Well
Sodium	20 mg/L	2x Highest Concentration in Upgradient Well
Total Dissolved Solids	1868 mg/L	2x Highest Concentration in Upgradient Well
Alkalinity	262 mg/L	2x Highest Concentration in Upgradient Well
Sulfate	1046 mg/L	2x Highest Concentration in Upgradient Well
Magnesium	93.8 mg/L	2x Highest Concentration in Upgradient Well
Calcium	352 mg/L	2x Highest Concentration in Upgradient Well
Iron	2.28 mg/L	Highest Concentration in Upgradient Well
Manganese	0.3 mg/L	HAL
Acetone	10 ug/L	PQL
Carbon Disulfide	1 ug/L	PQL
Chloroethane	1 ug/L	PQL
1,1-Dichloroethane	1 ug/L	PQL
Cis-1,2-Dichloroethene	10 ug/L	Health Advisory
Mercer Limestone		
Arsenic	10 ug/L	MCL
Barium	2 mg/L	MCL
Cobalt	0.009 mg/L	Highest Concentration in Upgradient Well
Nickel	0.1 mg/L	Health Advisory
Selenium	0.05 mg/L	MCL
Zinc	2 mg/L	Health Advisory
Ammonia	30 mg/L	Health Advisory
Chloride	250 mg/L	SMCL
Sodium	145 mg/L	Highest Concentration in Upgradient Well
TDS	4160 mg/L	2x Highest Concentration in Upgradient Well
Alkalinity	844 mg/L	2x Highest Concentration in Upgradient Well
Nitrate/Nitrite	10 mg/L	MCL
Magnesium	204 mg/L	2x Highest Concentration in Upgradient Well
Calcium	840 mg/L	2x Highest Concentration in Upgradient Well

Iron	3.63 mg/L	Highest Concentration in Upgradient Well
Manganese	0.3 mg/L	Health Advisory
Sulfide	0.1 mg/L	2x Highest Concentration in Upgradient Well
Dichlorodifluoromethane	22.2 ug/L	RSL Calculated Result

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.
- Alternative 2 – Install (and/or Enhance) Active Gas Extraction Wells
- Alternative 3 – Install (and/or Enhance) Passive Gas Vents

In addition the alternatives above, there are other source controls including capping, leachate collection system, and storm water management in place at the facility. These existing mechanisms will help minimize potential further impacts to ground water quality. Because the UAS outcrops around the majority of the site and because there are no known residential wells screened within the UAS, there is no pathway for human exposure.

Ohio EPA has reviewed the CMP as described above and determined that the CMP and Corrective Measures Alternative 1, 2, and 3 meet 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 as ground water corrective measures at the facility, Alternatives 1, 2 and 3 noted above. Norton Environmental, Inc. shall continue implementation of the selected corrective measures at the facility in accordance with the CMP, as received on February 28, 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 of Environmental Protection (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.

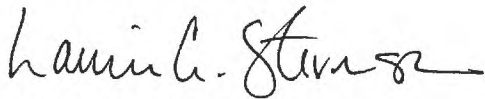
Mt. Eaton Landfill
OAC Rule 3745-27-10(F)
Page 5 of 5

An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
30 East Broad Street, 4th 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,

A handwritten signature in black ink, appearing to read "Laurie A. Stevenson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Laurie A. Stevenson
Director

LAS:JR

ec: Ken Eng, Wayne County Health Department
Rich Heier, Norton Environmental