



May 27, 2022

Dear All:

You are receiving this communication to keep you apprised of the status of the ongoing environmental monitoring activities associated with the closed Waste Management (WM) Richmond Landfill property.

Under the new Environmental Compliance Approval conditions set forth in the revised Environmental Monitoring Plan and ordered by the Environmental Review Tribunal, WM has notified the Ministry of Environment, Conservation and Parks (MECP) District Manager of results from the most recent sampling event. This work was conducted between April 26 and April 29, 2022, as a part of scheduled spring 2022 semi-annual environmental monitoring event.

We are providing, for your information, the notice supplied to MECP on May 27, 2022. All results outlined in this notice are related to concentration exceedances at locations within the proposed Contaminant Attenuation Zone, as well as one location on the property to the east of the southern part of the eastern landfill property boundary. These results are generally similar to the historical exceedances observed at these locations for the parameters listed.

These results will be evaluated in the spring semi-annual report that will be issued by July 15, 2022.

Regards,

A handwritten signature in black ink, appearing to read 'Noah Wayt', with a long, sweeping flourish extending to the right.

Noah Wayt

District Manager, Richmond Landfill
Waste Management of Canada Corporation

Encl.

MEMORANDUM

DATE: May 27, 2022
TO: Trevor Dagilis, District Manager, Ministry of the Environment,
Conservation and Parks (MECP)
CC: David Arnott, Kyle Stephenson, Shawn Trimper and Peter Taylor (MECP)
Chris Prucha, Noah Wayt and Chad Moose (WM)
FROM: François Richard and Madeleine Corriveau (BluMetric)
PROJECT NO: 220196-03
SUBJECT: Notification of Exceedances, WM Richmond Landfill
Town of Greater Napanee

This memorandum is provided on behalf of Waste Management of Canada Corporation as required by Conditions 8.7 and 8.8 of Environmental Compliance Approval (ECA) No. A371203 for the Richmond Landfill, Town of Greater Napanee, Ontario. This requirement is outlined in the Environmental Monitoring Plan (EMP) for the site¹, implemented on April 16, 2016, on an interim basis as ordered by the Environmental Review Tribunal (ERT) Order dated December 24, 2015. Conditions 8.7 and 8.8 of the ECA stipulate that monitoring results shall be reported to the MECP District Manager within 48 hours of the determination of the exceedance (initial data screening) if they meet one of the following conditions:

- any *off-site* exceedance of the applicable criteria for groundwater (*Reasonable Use Limits (RUL)*) or surface water (*Provincial Water Quality Objectives (PWQO)*); and/or,
- 1,4-dioxane is detected above 1 µg/L at any groundwater or domestic well where 1,4-dioxane has not been detected in the past or at any surface water monitoring location.

RESULTS

The groundwater and surface water sampling was completed as part of the spring semi-annual monitoring event between April 26 – 29, 2022, following the requirements outlined in the latest EMP for the site.

¹ *Environmental Monitoring Plan, WM Richmond Landfill, Town of Greater Napanee, Ontario, rev. No.05*, prepared by BluMetric Environmental Inc., dated April 2016



There were no exceedances in groundwater observed from the shallow flow zone off-site monitoring location M114-2, except for total dissolved solids (TDS) with a concentration of 470 mg/L, above the RUL of 452 mg/L.

The analytical results for samples from off-site intermediate bedrock groundwater flow zone monitoring locations showed the presence of parameters that exceeded their respective RUL, as summarized in **Table 1**. These results are generally similar to the historical exceedances observed at these locations for the parameters listed, and include:

- One or several non-health based parameters (alkalinity, chloride, dissolved organic carbon, iron, manganese, sodium and/or total dissolved solids) at locations M64-2, M114-1, M121, M123, M167, M168, M178R-2, M178R-3, M178R-4, M179, M185-1, M185-2, M186 and M192; and,
- Volatile Organic Compounds (VOCs) including 1,4-dioxane at monitoring wells M64-2, M114-1, M121 (as well as benzene), M123, M167, M168, M178R-2, M178R-3, M178R-4 and M192.

Surface water analytical results at off-site sampling locations were below their respective PWQO, with the exception of total phosphorous at sampling locations S19 and S20, with concentrations of 0.09 and 0.032 mg/L, respectively, above the PWQO of 0.03 mg/L (**Table 2**).

CLOSING

The results from the latest environmental monitoring event will be reported as part of the spring semi-annual monitoring report by July 15, 2022, as required by ECA Condition 14.1.

We trust the above information is satisfactory. If you have any questions or need further information regarding the completed work, please do not hesitate to contact the undersigned.

Respectfully submitted,
BluMetric Environmental Inc.



François Richard, Ph.D., P.Geo.
Senior Hydrogeologist



Madeleine Corriveau, M.Sc., P.Geo.
Senior Geoscientist

Table 1: Summary of Off-Site RUL Exceedances from Spring 2022 Groundwater Monitoring Results

General and Inorganic Parameters								Volatile Organic Compounds (VOCs)	
Parameter	Alkalinity	Chloride	Dissolved Organic Carbon	Iron	Manganese	Sodium	Total Dissolved Solids	1,4-Dioxane	Benzene
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
RUL*	400	132	3.5	0.18	0.032	106	465	0.001	0.0014
M64-2							475	0.003	
M114-1			4.3	6.5	0.3			0.0053	
M121	510		4.3				600	0.0085	0.0037
M123	440		4.2				485	0.0063	
M167	480	200	3.7			140	790	0.0072	
M168	510	210	3.8			170	880	0.0086	
M178R-2			4.2	1.4	0.079		505	0.0049	
M178R-3	430		4.3	1.1	0.06		545	0.0052	
M178R-4	440		4.1	0.21	0.037		520	0.0062	
M179				0.43					
M185-1		440				370	1130		
M185-2							535		
M186		1200		0.27	0.05	770	2260		
M192	630	460	3.8	0.19		410	1370	0.009	

* RUL: Reasonable Use Limit

Table 2: Summary of Off-Site PWQO Exceedances from Spring 2022 Surface Water Monitoring Results

Parameter	Phosphorous (total)
Units	mg/L
PWQO*	0.03
S19	0.09
S20	0.032

* PWQO: Provincial Water Quality Objectives