May 28, 2021

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 May 4 and May 7, 2021, as a part of scheduled spring 2021 semi-annual environmental monitoring event.

We are providing, for your information, the notice supplied to MECP on May 28, 2021. 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, 2021.

Regards,

Bill McDonough
Manager, Richmond Landfill
Waste Management of Canada Corporation

Encl.

MEMORANDUM

DATE:	May 28, 2021
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, Bill McDonough and Jim Forney (WM)
FROM:	François Richard and Madeleine Corriveau (BluMetric)
PROJECT NO:	210166-03
SUBJECT:	Revised Notification of Exceedances, WM Richmond Landfill Town of Greater Napanee

This revised memorandum replaces the notification issued on May 27, 2021 and has been issued to correct a typographical error in the original document. The correct value for ammonia (unionized) at sampling location S20 is 0.071 mg/L.

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 site[1], 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.*

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

Tel. 613-531-2725
Fax. 613-531-1852
BluMetric Environmental Inc.
The Tower, The Woolen Mill, 4 Cataraqui Street, Kingston, Ontario, Canada K7K 1Z7
www.blumetric.ca

RESULTS

The groundwater and surface water sampling was completed as part of the spring semi-annual monitoring event between May 4 and May 7, 2021, following the requirements outlined in the latest EMP for the site.

There were no exceedances in groundwater observed from the shallow flow zone off-site monitoring location M114-2.

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, 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 ammonia (unionized) at sampling location S20, with a concentration of 0.071 mg/L, above the PWQO of 0.02 mg/L 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, 2021 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.

Francois 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 2021 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							490	0.0032	
M114-1			5.2	8	0.37		480	0.008	
M121	490		4.9				615	0.0068	0.0026
M123	450		4.1				500	0.0058	
M167	560		5.4				640	0.0097	
M168	490	260	4.1			170	890	0.0084	
M178R-2	410		4.7	1.3	0.077			0.0051	
M178R-3	410		4.4	1.3	0.068		510	0.0048	
M178R-4	420		4.1	0.19	0.037		550	0.0053	
M179				0.28					
M185-1		490				390	1060		
M186		1200		0.3	0.054	700	2120		
M192	650	410	4.3			370	1150	0.007	

** RUL: Reasonable Use Limit*

Table 2: Summary of Off-Site PWQO Exceedances from Spring 2021 Surface Water Monitoring Results

Parameter	Ammonia (unionized)
Units	mg/L
PWQO*	**0.02**
S20	0.071

** PWQO: Provincial Water Quality Objectives*