



November 7, 2018

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 October 15 and 17, 2018, as a part of scheduled fall 2018 semi-annual environmental monitoring event.

We are providing, for your information, the notice supplied to MOECC on November 7, 2018. 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 consistent with historical results and will be evaluated in the fall semi-annual report that will be issued by January 15, 2019.

Regards,

Bill McDonough
Manager, Richmond Landfill
Waste Management of Canada Corporation

Encl.



MEMORANDUM

DATE: November 7, 2018
TO: Trevor Dagilis, District Manager, Ministry of the Environment, Conservation and Parks (MECP)
CC: David Arnott, Kyle Stephenson, Shawn Trimper and Peter Taylor (MOECC)
Chris Prucha, Bill McDonough and Jim Forney (WM)
FROM: François Richard (BluMetric)
PROJECT NO: 180149-02
SUBJECT: Notification of Off-site Exceedances, WM Richmond Landfill
Town of Greater Napanee

This memorandum is provided on behalf of Waste Management of Canada Corporation as required by Condition 8.7 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. Condition 8.7 of the ECA stipulates that monitoring results shall be reported to the MOECC District Manager within 48 hours of the determination of the exceedance (initial data screening) if they meet the following condition:

- *any off-site exceedance of the applicable criteria for groundwater (Reasonable Use Limits (RUL)) or surface water (Provincial Water Quality Objectives (PWQO))*

RESULTS

The groundwater and surface water sampling was completed as part of the fall semi-annual monitoring event between October 15 and 17, 2018, 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 at off-site monitoring location M114-2, with the exception of total dissolved solids (TDS) with a concentration of 555 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 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, M190 and M192; and,
- Volatile Organic Compounds (VOCs) including 1,4 dioxane at monitoring wells M64-2, M114-1 (as well as benzene), M121 (as well as benzene, ethylbenzene and toluene), M123, M167, M168, M178R-2, M178R-3, M178R-4 and M192.

Surface water monitoring analytical results at off-site sampling locations were below their respective PWQO, with the exception of total phosphorus at sampling location S18 where the total phosphorous concentration was 0.069 mg/L, slightly above the PWQO of 0.03 mg/L.

CLOSING

The results from the latest environmental monitoring event are consistent with those from previous sampling events, and will be reported as part of the fall semi-annual monitoring report by January 15, 2019 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
Encl.

Table 1: Summary of Off-Site RUL Exceedances from Fall 2018 Groundwater Monitoring Results

Reading Name	General and Inorganic Parameters							Volatile Organic Compounds (VOCs)			
	Alkalinity	Chloride	Dissolved Organic Carbon	Iron	Manganese	Sodium	Total Dissolved Solids	1,4-Dioxane	Benzene	Ethylbenzene	Toluene
Units	mg/L	mg/L	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	0.0013	0.0121
M64-2							475	0.0031			
M114-1	440		5.0	6.3	0.33		605	0.0059	0.0018		
M121	590	1100	3.6			740	2210	0.0064	0.25	0.011	0.017
M123			3.6					0.0048			
M167	420	420				220	1210	0.0038			
M168	470	300	4.3			150	1040	0.0074			
M178R-2			3.9	1.0	0.062			0.0037			
M178R-3			3.8	1.3	0.061			0.005			
M178R-4			4.0					0.0051			
M179				0.79	0.043						
M185-1		400				350	1070				
M186		1200		0.43	0.086	700	2260				
M190			3.6								
M192	500	580	4.0			350	1370	0.0036			

* RUL: Reasonable Use Limit

