



April 5, 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) Landfill property.

Under the new Environmental Compliance Approval (ECA) Conditions set forth in the revised Environmental Monitoring Plan (EMP) dated April 15, 2016 and ordered by the Environmental Review Tribunal (ERT), WM has notified the Ministry of Environment and Climate Change (MOECC) District Manager of results from the most recent sampling event conducted on March 20, 2018.

We are providing, for your information, the notice supplied to MOECC on April 5, 2018. All results outlined in this notice are related to concentration exceedances at locations within the proposed Contaminant Attenuation Zone (CAZ).

These results consistent with historical results and will be evaluated in the spring semi-annual report that will be issued by July 15, 2018.

Regards,

Bill McDonough
Manager, Richmond Landfill
Waste Management of Canada Corporation

Encl.



MEMORANDUM

DATE: April 5, 2018
TO: Trevor Dagilis, District Manager, Ministry of the Environment and Climate Change (MOECC)
CC: David Arnott, 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 interim Environmental Monitoring Plan (EMP) for the site¹, implemented on April 16, 2016 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

Groundwater sampling was conducted at five locations on March 20, 2018. The groundwater monitoring wells sampled were installed within the proposed Contaminant Attenuation Zone (CAZ). This monitoring event was conducted following the requirements outlined in the latest EMP for the site which stipulates that newly established wells shall be sampled a minimum of four times, on a quarterly basis, during the first year following their installation. Shallow flow zone groundwater monitoring wells M178R-5 and M188-2, as well as Intermediate Bedrock flow zone monitoring wells M194-1, M194-2 and M195, were drilled, tested and installed between November 2016 and May 2017 and were previously sampled on May 25, June 8, September 7 and December 7, 2017.

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



Similar to the previous results at these locations, there were no RUL exceedances at monitoring location M194-1 during this sampling event, while the analytical results for samples at the other four monitoring wells showed the presence of some parameters that exceeded their respective Reasonable Use Limits (RUL), as summarized in **Table 1**. These include:

- M178R-5: alkalinity, dissolved organic carbon, iron, total dissolved solids and 1,4 dioxane;
- M188-2: manganese;
- M194-2: dissolved organic carbon; and
- M195: chloride, dissolved organic carbon, iron, sodium, total dissolved solids and benzene.

**Table 1. WM Richmond Landfill - Summary of RUL Exceedances from March 20, 2018
Groundwater Monitoring Results**

Parameter	General and Inorganic Parameters							VOCs	
	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
Shallow Flow Zone Monitoring Wells									
RUL*	390	130	3.6	0.18	0.034	109	452	0.001	0.0014
M178R-5	460		4.4	0.21			530	0.0061	
M188-2					0.04				
Intermediate Bedrock Flow Zone Monitoring Wells									
RUL*	400	132	3.5	0.18	0.032	106	465	0.001	0.0014
M194-1									
M194-2			10						
M195		320	4.4	0.46		350	940		0.0041

* RUL: Reasonable Use Limit

CLOSING

The results from the latest environmental monitoring event are generally consistent with those from previous sampling events, and will be reported as part of the spring semi-annual monitoring report by July 15, 2018 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