



September 22, 2017

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 MOECC District Manager of results from the most recent sampling event conducted on September 9, 2017.

We are providing, for your information, the notice supplied to MOECC on September 22, 2017. All results outlined in this notice are related to concentration exceedances at groundwater monitoring wells located within the proposed Contaminant Attenuation Zone (CAZ).

All results are generally consistent with historical results and will be included in the fall semi-annual report that will be issued by January 15, 2018.

Regards,

Timothy Haaf  
Manager, Richmond Landfill  
Waste Management of Canada Corporation

Encl.



## MEMORANDUM

**DATE:** September 22, 2017  
**TO:** Trevor Daglis, Acting District Manager, Ministry of the Environment and Climate Change (MOECC)  
**CC:** Shawn Trimper, Peter Taylor and Christopher Horne (MOECC)  
Tim Haaf, Jim Forney, Chris Prucha and Bill McDonough, (WM)  
**FROM:** François Richard (BluMetric)  
**PROJECT NO:** 170194-02  
**SUBJECT:** Notification of Off-site Exceedances, WM Richmond Landfill, Town of Greater Napanee

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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 site<sup>1</sup>, 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

Groundwater sampling was conducted at five locations on September 9, 2017. The groundwater monitoring wells sampled were installed recently 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

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



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 and June 8, 2017.

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

**Table 1. WM Richmond Landfill - Summary of RUL Exceedances from September 9, 2017  
Groundwater Monitoring Results**

	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
<b>Shallow Flow Zone Monitoring Wells</b>									
RUL*	390	130	3.6	0.18	0.034	109	452	0.001	0.0014
M178R-5	510						492	0.0058	
M188-2					0.076				
<b>Intermediate Bedrock Flow Zone Monitoring Wells</b>									
RUL*	400	132	3.5	0.18	0.032	106	452	0.001	0.0014
M194-2			12		0.1	110	530		0.0027
M195		140		0.26		220	728		

\* RUL: Reasonable Use Limit

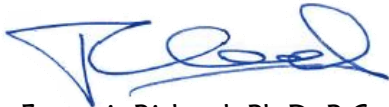
## CLOSING

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 fall semi-annual monitoring report by January 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