



June 22, 2017

Dear All,

You are receiving this communication to keep you apprised of the status of the ongoing hydrogeological investigation associated with the closed Waste Management Landfill property.

Following the conclusion of the Environmental Review Tribunal (ERT) proceedings, work has continued to address activities required by the ERT Orders, under technical oversight from Ministry of the Environment and Climate Change (MOECC). Specifically, additional field investigations have been conducted to further delineate a Contaminant Attenuation Zone (CAZ Investigation) for the site that, once approved, will allow the Environmental Monitoring Plan (EMP) to be finalized.

In the interim, the EMP was modified as ordered by the ERT to include new or modified conditions to the Environmental Compliance Approval (ECA) for the site, and implemented on an interim basis as of April 16, 2016.

Under the new ECA Conditions set forth in the revised EMP and ordered by the ERT, Waste Management has notified the MOECC District Manager of results from the most recent sampling event at recently installed groundwater monitoring wells, conducted on June 8, 2017. We are providing, for your information, the notice supplied to MOECC on June 22, 2017. All results outlined in this notice are related to concentration exceedances at locations within the proposed CAZ, as well as one location on the property to the east of the southern part of the eastern landfill property boundary.

All results will be evaluated in the complementary hydrogeological investigation report that will be issued by July 15, 2017.

Regards,

Timothy Haaf  
Manager, Richmond Landfill  
Waste Management of Canada Corporation

Encl.



## MEMORANDUM

**DATE:** June 22, 2017  
**TO:** James Mahoney, Acting District Manager, Ministry of the Environment and Climate Change (MOECC)  
**CC:** Shawn Trimper, Peter Taylor and Chris Raffael (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 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<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. Conditions 8.7 and 8.8 of the ECA stipulate 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 either of the following conditions, respectively:

- (1) any off-site exceedance of the applicable criteria for groundwater (Reasonable Use Limits (RUL)) or surface water (Provincial Water Quality Objectives (PWQO)), or
- (2) 1,4 dioxane concentrations at or above the detection limit of 1 µg/L at any groundwater well or domestic well at which 1,4 dioxane has not been detected in the past or at any surface water monitoring location.

### RESULTS

Groundwater samples were collected on June 8, 2017 from five monitoring wells recently drilled as part of the ongoing hydrogeological investigation aimed at delineating an off-site Contaminant Attenuation Zone (CAZ). The new wells were installed in the proposed CAZ, including Shallow Flow Zone monitoring wells M178R-5 and M188-2, as well as Intermediate Bedrock Zone wells

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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



M194-1, M194-2 and M195. Additionally, monitoring well M193, located on the southwest portion of the property east of the landfill boundary and north of Beechwood Road was sampled during the same sampling event.

The analytical results for samples from the new monitoring locations located within the proposed CAZ and at M193 show the presence of parameters that exceed 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 M178R-5, M188-2, M193, M194-2 and M195; and
- Volatile Organic Compounds (VOCs) 1,4 dioxane at monitoring well M178R-5 and benzene at M193.

**Table 1. Summary of RUL Exceedances from June 8, 2017 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
<b>Shallow Flow Zone Monitoring Wells</b>									
RUL*	390	130	3.6	0.18	0.034	109	452	0.001	0.0014
M178R-5	420			0.21			558	0.007	
M188-2					0.071				
<b>Intermediate Bedrock Flow Zone Monitoring Wells</b>									
RUL*	400	132	3.5	0.18	0.032	106	465	0.001	0.0014
M193		350		0.25	0.26	240	868		0.003
M194-2			6.6		0.044		482		
M195						190	612		

\* RUL: Reasonable Use Limit

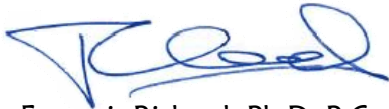
## CLOSING

All results are consistent with previous results at these locations and will be evaluated as part of the ongoing hydrogeological investigation and formally reported by July 15, 2017.

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.Ge.  
Senior Hydrogeologist