



June 28, 2018

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 11, 2018. We are providing, for your information, the notice supplied to MOECC on June 28, 2018. All results outlined in this notice are related to concentration exceedances at locations within the proposed CAZ.

All results will be evaluated in the next complementary hydrogeological investigation report.

Regards,

Bill McDonough
Manager, Richmond Landfill
Waste Management of Canada Corporation

Encl.



MEMORANDUM

DATE: June 28, 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 and Phil Tibble (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 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 site¹, 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

Nine (9) new groundwater monitoring wells were installed in the proposed Contaminant Attenuation Zone (CAZ) in the Shallow Flow Zone (M199, M200, M201, M202, M203, M204,

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



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M205, M206 and M207) as part of the ongoing hydrogeological investigation aimed at delineating an off-site CAZ. Groundwater samples were collected on June 11, 2018 from eight (8) of the newly installed monitoring wells (M202 did not have sufficient water volume for sampling), as well as previously existing shallow monitoring wells located in the same area of the proposed CAZ (M178R-5 and M188-2).

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 include:

- One or several non-health based parameters (alkalinity, dissolved organic carbon, iron, manganese and/or total dissolved solids) at locations M178R-5, M199, M201, M203, M204, M206 and M207; and,
- Volatile Organic Compound (VOC) 1,4 dioxane at monitoring wells M178R-5, M205 and M206.

CLOSING

The complete results from this groundwater monitoring event and related hydrogeological investigation will be reported in the next site conceptual model update and CAZ delineation report.

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



Phil Tibble, M.Sc., P.Geo.
Senior Hydrogeologist

Encl.

Table 1: Summary of Off-Site RUL Exceedances from June 11, 2018 Groundwater Monitoring Results

	General and Inorganic Parameters					VOCs
	Alkalinity	Dissolved Organic Carbon	Iron	Manganese	Total Dissolved Solids	1,4-Dioxane
<i>Units</i>	<i>mg/L</i>	<i>mg/L</i>	<i>mg/L</i>	<i>mg/L</i>	<i>mg/L</i>	<i>mg/L</i>
RUL*	400	3.5	0.18	0.032	465	0.001
M178R-5	430	4.2	0.19		540	0.0056
M199				0.077		
M201				0.07		
M203				0.22	555	
M204				0.073		
M205						0.0011
M206			0.56	0.14		0.001
M207				0.064		

** RUL: Reasonable Use Limit*