



December 21, 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, Conservation and Parks (MECP). 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, conducted on December 5, 2018, at recently installed groundwater monitoring wells. We are providing, for your information, the notice supplied to MECP on December 21, 2018. All results outlined in this notice are related to concentration exceedances at locations within the proposed CAZ.

All results will be included in the next semi-annual monitoring report.

Regards,

Bill McDonough
Manager, Richmond Landfill
Waste Management of Canada Corporation

Encl.



MEMORANDUM

DATE: December 21, 2018
TO: Trevor Dagilis, District Manager, Ministry of the Environment, Conservation and Parks (MECP)
CC: David Arnott, Shawn Trimper and Peter Taylor (MECP)
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 (WM) 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 MECP 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

Nine (9) groundwater monitoring wells were recently installed in the proposed Contaminant Attenuation Zone (CAZ) in the Shallow Flow Zone (M199, M200, M201, M202, M203, M204, M205, M206 and M207) as part of hydrogeological investigation work aimed at delineating an off-site CAZ. Groundwater samples were collected on December 5, 2018 from the recently installed monitoring wells, as well as previously existing shallow monitoring wells located in the same area of the proposed CAZ (M178R-5 and M188-2). Monitoring well M202 is a poor producer that had limited water volume for sampling 24 hours after purging, and as a result some parameters could not be analyzed.

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



Tel. 613-531-2725

Fax. 613-531-1852

BluMetric Environmental Inc.

The Tower, The Woolen Mill, 4 Cataraqui Street, Kingston, Ontario, Canada K7K 1Z7

www.blumetric.ca

The analytical results for samples from off-site shallow 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, M200, M201, M203, M204, M206 and M207; and,
- Volatile Organic Compound (VOC) 1,4 dioxane at monitoring wells M178R-5 and M206. Results at monitoring well M202 were below detection (< 0.02 mg/L), however because of the limited sampling volume available in the well, the reportable detection limit was elevated.

The results presented here are consistent with those from previous sampling events at these locations.

CLOSING

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.

A handwritten signature in blue ink, appearing to read 'F. Richard', with a stylized flourish at the end.

Francois Richard, Ph.D. P.Geo.
Senior Hydrogeologist

Encl.

Table 1: Summary of Off-Site RUL Exceedances from December 5, 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>
<i>RUL*</i>	<i>400</i>	<i>3.5</i>	<i>0.18</i>	<i>0.032</i>	<i>465</i>	<i>0.001</i>
M178R-5	400	4.0			525	0.0049
M200			0.49	0.086		
M201					470	
M202**						< 0.02
M203				0.16	530	
M204					465	
M206		3.7	2.1	0.21	500	0.0036
M207				0.11		

* RUL: Reasonable Use Limit

** M202: Insufficient sampling volume for low level analysis of 1,4 dioxane (Reportable Detection Limit = 0.02 mg/L)