REPORT

SPRING 2016
SEMI-ANNUAL MONITORING REPORT

Waste Management of Canada
Richmond Landfill
Town of Greater Napanee, Ontario

Submitted to:

WASTE MANAGEMENT OF CANADA
1271 Beechwood Road
Napanee, ON K7R 3L1

Submitted by:

BluMetric Environmental Inc.
The Tower, The Woolen Mill
4 Cataraqui Street
Kingston, ON K7K 1Z7

BluMetric File No.: 160061-02

July 2016

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1. INTRODUCTION

The purpose of this report is to present results and to provide an interpretation of the data that were collected during the spring 2016 monitoring event at the Waste Management of Canada Corporation (WM) Richmond Landfill.

The WM Richmond Landfill is approved as a 16.2 hectare waste disposal (landfilling) facility within a total site area of 138 hectares, located on parts of Lots 1, 2 and 3, Concession IV of the former Township of Richmond, now in the Town of Greater Napanee, Ontario.

2. METHODOLOGY

2.1 PROGRAM SUMMARY

The spring 2016 monitoring event was conducted in accordance with the requirements outlined in the revised interim Environmental Monitoring Plan (EMP; Revision No. 05) dated April 15, 2016, as specified in the Environmental Compliance Approval (ECA) number A371203, issued by MOE January 9, 2012 and amended by Notice No. 1 dated May 3, 2013 and Environmental Review Tribunal (ERT) Order dated December 24, 2015.

The site layout and monitoring locations are shown on Figure 1. The monitoring programs for groundwater, surface water, leachate and landfill gas are summarized in Table 1.

The spring monitoring event was conducted between April 29 and May 6, 2016. The activities completed included the following:

- Water levels were recorded at groundwater monitoring wells on April 29, 2016 (41 installed within the shallow groundwater flow zone and 70 from the intermediate bedrock flow zone). No water levels were recorded at groundwater monitors M19 because it was damaged, and M191 because it was not under static conditions;
- Pond water levels were measured on April 29, 2016 from staff gauges at the three ponds located on the south side of the landfill;
- Liquid levels were measured in landfill leachate wells on April 29, 2016;
- Leachate samples were collected from the North Chamber, South Chamber, and leachate monitoring wells LW-P1 and LW-P2 on May 2, 2016, and analyzed for the suite of leachate inorganic and general parameters, polycyclic aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs);

- A total of 59 groundwater monitoring wells were sampled between May 3 and 6, 2016, as summarized in Table 1; no samples were collected from monitoring wells M58-4 (damaged) as well as M85 and M86 (both purged dry with insufficient recharge). Samples were analyzed for the suite of groundwater inorganic and general parameters and Volatile Organic Compounds (VOCs) listed in Table 2;
- Surface water sampling was conducted on May 2, 2016 from locations S2, S3, S5, S6, S7, S8R, S18, S19 and S20. No sample was collected from location S4R because it was dry. Surface water samples were analyzed for the surface water inorganic and general parameters and for 1,4 dioxane, as listed in Table 2;
- Landfill gas monitoring was conducted on May 5, 2016. Field measurements were made with a RKI Eagle probe calibrated to methane gas response at six gas monitors (GM1, GM3, GM4-1, GM4-2, GM5 and GM6); and
- A total of 18 Quality Assurance/Quality Control (QA/QC) samples were collected during the spring sampling event, including seven field duplicate samples, one equipment blank, five field blanks, and five trip blanks. De-ionised water for analysis of blank samples was supplied by the laboratory.

In addition to the aforementioned "routine" sampling requirements (Table 1), recently installed monitoring wells M178R-1 to M178R-4 and M187 to M193 were sampled as part of additional sampling events as required by the EMP as per amended ECA Condition No. 8.5(c)iv included in the ERT Order dated July 15, 2015. This condition requires that newly installed wells be tested a minimum of four times on a quarterly basis during the first year after being established.

Also included in this report are results for the off-site domestic supply well located at 1614 County Road 1 West which was sampled once permission was received from the well owner, subsequent to submission of the Fall 2015 Semi-Annual Monitoring Report.

2.2 WATER SAMPLE COLLECTION AND LABORATORY ANALYSIS

Groundwater and surface water samples were collected in accordance with accepted industry protocols. Groundwater samples were collected using dedicated Waterra inertial lift pumps connected to dedicated polyethylene tubing. Three casing volumes of water were purged from each monitoring well prior to the collection of groundwater samples. During purging, readings for pH, conductivity and temperature were recorded on a regular basis. The stabilization of the parameters was used to assess when well purging was complete. Low producing wells were purged dry and allowed to recover prior to sampling. If the monitoring well had not recovered sufficiently for sampling within 24 hours, the monitor was considered dry and a sample was not collected.

Domestic supply wells were sampled at an access point before any treatment system. A typical sampling location was a tap or access located near the pressure tank or when access prior to the treatment system was not available, the sample was collected from the kitchen tap (with the aerator screen removed). Prior to collecting the water sample, the water was allowed to run for a minimum of five but more typically closer to 10 minutes to ensure the volume of the pressure tank and supply line was purged and that the sample would be representative of well water conditions.

Surface water samples were collected using a clean bottle where water depth was sufficient; at sampling locations where water depth was an issue, a 50 cc syringe was used to carefully collect the surface water as not to disturb the bottom sediments. Surface water sampling locations were sampled from downstream to upstream to prevent any re-suspension of sediment impacting the downstream sampling locations. The pH, temperature, and conductivity of the surface water were obtained in the field at all surface water sampling points while minimizing disturbance of the bottom sediment.

All water samples were placed in bottles supplied and prepared by the laboratory. The samples were packed in coolers with ice and shipped by courier to the laboratory. All samples were analysed by Maxxam Analytics Inc. of Mississauga, ON, which is accredited by the *Canadian Association for Laboratory Accreditation Inc. (CALA).* Table 2 presents a summary of groundwater, surface water and leachate analytical parameters.

2.3 Groundwater Elevations

Water levels were recorded to the nearest 0.01 m using an electronic water level meter for the groundwater monitoring wells listed in Table 3 in relation to the landfill footprint and groundwater flow zone monitored.

3. RESULTS AND DISCUSSION

Background information concerning the site geology and hydrogeology was described in detail in the Site Conceptual Model (SCM) report[1] and updated based on results from subsequent hydrogeological investigations[2,3,4], and is summarized here. The SCM report describes the

[1] *Site Conceptual Model Report, WM Richmond Landfill*, prepared by Dr. B.H. Kueper and WESA Inc., October 2009

[2] *Supporting Document, Application to Amend Environmental Compliance Appproval No. A371203, Waste Management Richmond Landfill Site*, prepared by BluMetric Environmental Inc., March 2015

groundwater flow conditions at the Richmond Landfill. Based on the results from extensive studies conducted previously at the site, the basic hydrogeological framework for the facility has been defined as follows:

- the active groundwater flow zone at the site extends to a depth of approximately 30 m below the top of bedrock;
- the shallow groundwater flow zone is conceptualized as the overburden, the overburden-bedrock contact and the upper one to two metres of bedrock;
- the direction of groundwater flow in the shallow flow zone is strongly influenced by topography;
- the intermediate bedrock flow zone extends from one to two metres below top of bedrock to a depth of approximately 30 m below top of bedrock;
- groundwater flows through a network of fractures in the upper 30 m of bedrock;
- the dominant fracture orientation is horizontal to sub-horizontal; however, vertical to subvertical fractures are present providing hydraulic connection between horizontal fractures;
- hydraulic connections of fractures exists in the intermediate bedrock flow zone to the west, south and east of the site (horizontal and vertical connections);
- intermediate bedrock flownets show that groundwater flow directions are variable with season and generally flows to the west from the western edge of the landfill, to the southeast from the southern edge of the landfill, to the south along the eastern edge of the landfill, and north to northwest from the northern limit of the landfill;
- the hydraulic conductivity of the intermediate bedrock is lower to the north and east of the landfill compared to other areas of the site, implying that the rate of groundwater flow is lower than in areas immediately south, southeast and west of the landfill;
- south of the landfill, the intermediate bedrock flow zone has distinct areas of interacting hydrogeological zones which are not isolated from one another, but are distinct based on hydraulic conductivity, water level variations and the rate of response to recharge events; and,
- groundwater monitoring wells in the southern portion of the proposed CAZ have static groundwater elevations that are much deeper than wells further north in the CAZ.

[3] *Site Conceptual Model Update and Contaminant Attenuation Zone Delineation, Waste Management Richmond Landfill Site*, prepared by BluMetric Environmental Inc., January 2016

[4] *Addendum to Site Conceptual Model Update and Contaminant Attenuation Zone Delineation, Waste Management Richmond Landfill Site*, prepared by BluMetric Environmental Inc., April 2016

3.1 GROUNDWATER RESULTS

3.1.1 Groundwater Elevations

Groundwater elevations from program monitoring wells listed in Table 3 were measured on April 29, 2016 and are presented in Table 4. An inventory of monitoring well locations is provided in Appendix A. Groundwater elevation contours within the shallow groundwater flow zone are shown on Figure 2, while Figure 3 shows the groundwater elevation contours for the intermediate bedrock flow zone. Groundwater flow directions were inferred by interpolating the water elevations from wells screened within the corresponding groundwater flow zone, and are consistent with historical results.

The spring 2016 shallow groundwater contours (Figure 2) are consistent with historical results and show that the Empey Hill drumlin southwest from the landfill creates a flow divide, with shallow groundwater being directed both to the north and the south towards areas of lower hydraulic heads. The water level from shallow bedrock monitors M85 was not used to prepare the spring 2016 groundwater contours, as the water level at this location was not static, believed to be influenced by recent sampling events. North of the landfill, shallow groundwater converges towards Marysville Creek in the area immediately east of County Road 10 (Deseronto Road), while shallow flow in the southern portion of the site converges on Beechwood Ditch and the southern pond system. Shallow groundwater east of the landfill is influenced by a local zone of higher water levels in the vicinity of monitoring well M96; shallow groundwater north of M96 flows to the north-northwest and ultimately Marysville Creek, while groundwater south of M96 flows to the south-southwest, towards Beechwood Ditch and the ponds.

The spring 2016 intermediate bedrock zone contours are presented on Figure 3. On the landfill property, groundwater in this hydrostratigraphic unit generally flows to the north, west, and south-southeast relative to the landfill. Water levels from intermediate bedrock monitors M71 (damaged) and M191 (water level interpreted as not being static) were not used to prepare the spring 2016 groundwater contours. Additionally, intermediate bedrock zone monitoring wells located farther to the south (e.g., M173, M174, M178R-1, M178R-4, M181-1, M181-2, M182, M187 and M189) were not considered in the groundwater contour interpolation because they exhibit much lower hydraulic heads, and appear to be part of a separate group of hydraulically responsive wells within the intermediate bedrock flow zone. Additional details on the ongoing hydrogeological investigation in the area south and southeast of the Site were provided under separate cover[5,6].

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5 *Site Conceptual Model Update and Contaminant Attenuation Zone Delineation, Waste Management Richmond Landfill Site*, prepared by BluMetric Environmental Inc., January 2016

3.1.2 Groundwater Analytical Results

Results from the groundwater monitoring wells sampled in spring 2016 as part of the EMP are presented in Table 5a, while results from the additional sampling event conducted in March 2016 in accordance with ECA Condition 8.5(c)iv are presented in Table 5b. Groundwater quality data for the spring 2016 monitoring event are similar to historical results, and include results for analytical parameters (e.g., 1,4 dioxane) and locations (monitoring wells M108 to M192), recently introduced into the Interim EMP implemented as required by ERT Order dated December 24, 2015.

3.1.2.1 Shallow Groundwater Flow Zone

As shown in Table 5a, slightly elevated concentrations of a number of water quality parameters (e.g., alkalinity, boron, chloride, conductivity, DOC, sodium and/or TDS) were observed in some shallow groundwater zone monitoring wells located in close proximity to the landfill footprint (e.g., M66-2, M101, M103 and M104), north and northwest from the unlined portion of the landfill. Toluene was also detected at monitoring well M66-2 while 1,4 dioxane was detected in monitors M101, M103 and M104.

Monitor M54-4, located approximately 200 m south of the landfill footprint, also exhibited slightly elevated alkalinity and conductivity, as well as low but detectable concentrations for some chlorinated VOCs (e.g., 1,1,1-trichloroethane, 1,1-dichloroethane, cis-1,2-dichloroethylene, tetrachloroethylene, tricholorethylene and vinyl chloride).

In other areas of the site, there is no evidence of groundwater impacts away from the landfill footprint in the shallow groundwater flow zone. Isolated occurrences of elevated concentrations of water quality parameters (i.e., one or two parameters per sample) are seen elsewhere on the Site. No indications of elevated concentrations related to landfill impacts are identified at the property boundary in the shallow flow zone.

3.1.2.2 Intermediate Groundwater Flow Zone

Analytical results from intermediate bedrock groundwater monitors sampled in spring 2016 were generally consistent with historical results. North of the landfill, elevated concentrations of water quality parameters and detectable 1,4 dioxane were observed at M6-3 and OW4, which are in close proximity to the footprint. These results indicate the presence of leachate impacts at these locations. However, the concentrations are lower and despite moderate concentrations of some

[6] *Addendum to Site Conceptual Model Update and Contaminant Attenuation Zone Delineation, Waste Management Richmond Landfill Site*, prepared by BluMetric Environmental Inc., April 2016

parameters (e.g., alkalinity at OW1 and M5-3), impacts from the landfill are not apparent further north from the footprint and near Marysville Creek (e.g., at OW1, M5-3, M75, M82-1 and M82-2).

South of the landfill, the presence of 1,4 dioxane and elevated concentrations of alkalinity (typically greater than 400 mg/L where 1,4 dioxane is present), DOC, chloride and TDS indicate groundwater impacts from the landfill at several monitoring well locations (M9-2, M9-3, M64-2, M108, M109-1, M110-1, M114-1, M121, M123, M167, M168, M170, M172, M178R-2, M178R-3 and M178R-4). Other locations south and southeast of the landfill with elevated concentrations of chloride, sodium, TDS, and/or BTEX compounds (e.g., M106, M186, M189, M191 and M193), are indicative of naturally poor quality connate (and often saline) groundwater. These pockets of naturally poor quality groundwater are isolated and do not reflect any widespread or significant upwelling of saline groundwater.

To the west of the landfill, monitoring well M91-1, located approximately 200 m west of the landfill, exhibited low concentrations reflective of background conditions for all parameters but exhibited detectable benzene above the laboratory's reportable limit (RL). Other wells in the western part of the landfill site (M58-3, M72, M74 and M95-1) exhibit concentrations of water quality parameters that are relatively low and continue to reflect background conditions.

Alkalinity and 1,4 dioxane results are shown for the shallow and intermediate bedrock flow zones on Figures 4 and 5, respectively.

3.1.3 Guideline B-7 Reasonable Use Limits (RULs)

Selected monitoring wells within the low-head areas of the WM Richmond Landfill in both the Shallow and Intermediate Bedrock Groundwater Flow Zones are compared to the RULs derived from laboratory analytical results (Table 5c). The RULs reported in Table 5c for leachate indicator parameters and trigger wells were presented in the interim EMP (Revision No. 05) dated April 2016, including 1,4 dioxane for which the site-specific RUL of 0.001 mg/L was set as required by the ERT Order dated December 24, 2015.

All results for 1,4 dioxane at trigger wells in the shallow and intermediate bedrock flow zones were below the RUL of 0.001 mg/L.

In the shallow groundwater zone, slightly elevated concentrations of a number of inorganic or general water quality parameters above their respective RUL (e.g., alkalinity, iron, manganese, sodium and/or TDS) were observed in monitoring wells (M54-4, M66-2, M67-2, M80-2 and OW37-s).

Slightly elevated concentrations of a number of water quality parameters above their respective RUL (e.g chloride, DOC, iron, manganese, sodium, and/or TDS) were also observed in some intermediate groundwater flow zone monitoring wells (M82-1, M82-2, M106, M179, M186, M187 and M190).

3.1.4 Status of Monitoring Wells and Compliance with Ontario Regulation 903

During the spring 2016 monitoring event, the conditions of groundwater monitoring wells included in the EMP were inspected. Any repairs, such as new locks, labels or well caps, were made as necessary. Watertight casings and seals remain in place at all monitors to ensure that surface water or foreign materials cannot enter groundwater monitoring wells. Where the outer protective casing was deemed to be part of the well construction by MOECC, the protective casing was fitted with a vermin proof cap to meet the requirements of O. Reg 903. All groundwater monitoring wells are locked to provide protection against vandalism as per Waste Management standard operating procedure and in line with industry best practices.

With the exception of groundwater monitoring wells M19 and M58-4 (damaged), all of the monitoring wells listed in the EMP were monitored. It is recommended that M19 and M58-4 be decommissioned when a revised EMP is approved as they cannot be repaired. Monitoring well M58-4 should be replaced, while a replacement well for M19 is considered unnecessary because groundwater flow in the shallow groundwater flow zone can be adequately assessed in this area of the site without this well. Monitoring well M68-4 may be damaged (observed presence of sediment while purging/sample) and should be inspected in future monitoring events, and possibly replaced and decommissioned.

3.1.5 Off-Site Domestic Water Supply Well Results

The following off-site domestic water supply well was sampled January 11, 2016:

Address	Well Type	Water Treatment Information*
1614 County Road 1 West	Drilled	Sediment Filter / UV / Softener

* Sample collected post-treatment

The supply well was sampled after permission was received from the owner and results were not received in time to be included in the Fall 2015 Semi-Annual Monitoring Report with the other domestic wells included in the EMP.
The concentration of 1,4 dioxane at 1614 County Road 1 West was below the laboratory's RDL of 0.001 mg/L (Table 6).

3.1.6 Groundwater Chemistry Quality Assurance / Quality Control (QA/QC)

An evaluation of the QA/QC data (from duplicate and blank samples) is included in Appendix B, where analytical results are compared between regular samples and their corresponding field duplicate samples. A standard margin of error of 20% (relative percent difference (RPD) between regular sample and duplicate) was deemed acceptable for field duplicates. In general, the comparison between samples and duplicates shows very good correlation for the majority of analyzed constituents. All parameters for groundwater duplicate QA/QC sampling were well within the 20% margin of error with the exception of total dissolved solids (TDS) at monitoring wells M82-2 and M168 as summarized in Appendix B. All parameters were near or below the RL in equipment and field blanks.

3.2 LEACHATE RESULTS

3.2.1 Leachate Generation

An estimate of the amount of leachate generated at the site is provided by the site records of the volume of leachate hauled to the Napanee and Cobourg municipal sewer systems and treated at the wastewater treatment plants. The volume of leachate collected from the landfill and hauled to the Napanee and Cobourg municipal sewer systems from January to May 2016 was 10,223 m^3, or just over 2,000 m^3 per month on average.

3.2.2 Liquid Levels in Leachate Wells

Liquid levels were measured in the two landfill leachate wells on April 29, 2016 and provided the following:

- The liquid level at LW-P1 was 149.81 m above sea level (masl); and,
- The liquid level at LW-P2 was 151.98 masl.

3.2.2 Leachate Chemistry

The leachate chemistry results for May 2, 2016 are summarized in Table 7 and are similar to historical results. Leachate at the Richmond Landfill is characterized by elevated concentrations of general water quality parameters such as alkalinity, ammonia, chloride, conductivity, DOC, hardness, sodium and TKN, as well as selected VOCs. Generally, the inorganic and general parameters that characterize the leachate were more elevated in the samples collected from the leachate wells compared to the leachate chambers. VOC concentrations were below the laboratory reporting limit (RL) for most parameters, with a few exceptions where VOC concentrations were measured at low concentrations in leachate. Concentrations were generally higher in leachate well LW-P2 compared to LW-P1, and were higher in the South Chamber compared to the North Chamber where leachate is diluted by shallow groundwater collected from the perimeter toe drain located in the northwest portion of the landfill footprint.

3.3 SURFACE WATER RESULTS

3.3.1 Pond Elevations

Staff gauges are installed in the three ponds on the south side of the landfill labeled SG1, SG2 and SG3. Staff gauge locations and pond elevations measured on April 29, 2016 are shown on Figure 2.

3.3.2 Surface Water Monitoring Locations

The two water courses that may receive surface water/storm water runoff from the Richmond Landfill site are Marysville Creek to the north of the waste mound and Beechwood Ditch to the south (Figure 1). The Beechwood Ditch is a man-made surface water course that flows from the east onto WM property. It then flows west across a portion of the site before again crossing Beechwood Road and travelling southwest to cross County Road 10, and joins Marysville Creek east of Highway 49 and north of Highway 401. Both the Beechwood Ditch and Marysville Creek flow intermittently in the vicinity of the landfill. Marysville Creek has some base flow locally, and flows on a continuous basis west of County Road 10 (Deseronto Road). Marysville Creek eventually discharges into the Bay of Quinte at Hungry Bay.

An unnamed local surface water course is present in the central portion of the proposed CAZ boundary, originating from a small man made pond located directly the east of Quarry Road (see Figure 1). Surface water flows westerly from this pond over a distance of approximately 600 m along a topographically low area, to a second pond located near monitoring well M187 and finally to a local topographic depression located approximately 75 m farther west, where water enters into the ground in what appears to be a near-surface local karstic feature.

Surface water monitoring locations are shown on Figure 1. Sampling location S4R was not sampled in May 2016 because it was dry.

3.3.3 Surface Water Flow

Visual observations of surface water flow and general water characteristics for the spring sampling program are summarized in Table 8a. Surface water flow velocity was measured between no flow (dry) and 0.2 m/s, giving estimated flow rates between no flow and 0.04 m^3/s.

3.3.4 Surface Water Analytical Results

The results from surface water locations sampled during the spring 2016 sampling event are presented in Table 8b.

Surface water quality was compared to the Provincial Water Quality Objectives (PWQO). Background surface water quality was monitored on site from upstream station S2 for Marysville Creek and station S5 for Beechwood Ditch, and from upstream station S18 for the unnamed local water course located in the central portion of the CAZ. Storm water runoff from the existing landfill area flows to one of three storm water sedimentation retention ponds, located to the northeast, northwest and south of the landfill footprint. Sampling location S3 is located near the downstream property boundary along Marysville Creek, while sampling location S8R is located along Beechwood Ditch near the downstream property boundary.

Constituents analysed in surface water samples collected during the spring 2016 sampling event were below their respective PWQO, with the exception of total phosphorous at sampling station SR8 which was slightly higher than the PWQO (33 μg/L vs. 30 μg/L).

Results from spring 2016 indicate that the landfill is not causing adverse impacts to surface water quality.

3.3.5 Surface Water Quality Assurance / Quality Control (QA/QC)

An evaluation of the QA/QC data (from duplicate and blank samples) is included in Appendix B, where analytical results are compared between regular samples and their corresponding field duplicate samples, submitted to the laboratory without identifying the location they were collected from. A standard margin of error of 20% was deemed acceptable for field duplicates. In general, the comparison between samples and duplicates shows very good correlation for the majority of analyzed constituents. All parameters for the surface water duplicate QA/QC sample (location S3) were well within the 20% margin of error, with the exception of boron which was measured at low concentrations (less than 5 times the RDL) and is therefore within an acceptable margin of error.

3.4 SUBSURFACE GAS SAMPLING

On May 5, 2016, BluMetric inspected the subsurface gas monitoring probes and obtained measurements at all locations. The location of the gas monitors and the measurement results are shown in Table 9. Measurements of gas wells were between 0 and 30 ppm, well below the LEL for methane of 5% by volume in air (or 50,000 ppm).

4. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The spring 2016 monitoring program included the collection of groundwater, leachate and surface water samples, as well as landfill gas monitoring, in accordance with the site monitoring requirements outlined in the revised interim EMP (Revision No. 05) dated April 15, 2016, as specified in the Environmental Compliance Approval (ECA) number A371203, issued by MOE January 9, 2012 and amended by Notice No. 1 dated May 3, 2013 and Environmental Review Tribunal (ERT) Order dated December 24, 2015. Condition 8.5 (b) of the ECA requires that WM carry out monitoring in accordance with the interim EMP until such time as further amendments to the ECA and EMP are directed by the ERT.

The following were completed as part of the spring 2016 monitoring event between April 29 and May 6, 2016:

- Water levels were measured from 111 groundwater monitoring wells: 41 in the shallow groundwater flow zone and 70 in the intermediate bedrock flow zone;
- A total of 59 groundwater monitors (16 completed in the shallow flow zone and 43 in the intermediate bedrock flow zone) were sampled for analytical testing;
- Nine surface water locations were sampled for analytical testing;
- A total of 18 Quality Assurance/Quality Control (QA/QC) samples were collected (seven field duplicates, one equipment blank, three field blanks and five trip blanks);
- Subsurface gas concentrations were recorded from six on-site gas monitoring wells; and
- One off-site domestic water supply well located near the intersection between County Road 1 West and Belleville Road was sampled on January 11, 2106 and analyzed for 1,4 dioxane.

In addition to the aforementioned sampling conducted as required by the EMP, monitoring wells M178R-1 to M178R-4 and M187 to M193 were sampled on March 7-8, 2016, as part of a supplementary monitoring event scheduled outside of the regular EMP sampling frequency as required by amended ECA Condition No. 8.5(c)iv included in the ERT Order dated July 21, 2015.

The off-site domestic water supply well at 1614 County Road 1 West was sampled January 11, 2016.

4.1 GROUNDWATER

- Groundwater flow directions interpreted from water elevations measured in monitors were consistent with historical flownets:
  - Shallow groundwater flow on site is influenced by local topographic highs in the southwestern (Empey Hill Drumlin) and eastern (groundwater monitor M96 area) portions of the site, and is characterized by a flow divide with shallow groundwater being directed both to the north (toward Marysville Creek) and the south (toward Beechwood Ditch). South of Beechwood Road shallow groundwater flow converges from local topographic highs to the north and south, and discharges to a local surface water course within a topographically low area running east-west in the central portion of the proposed CAZ;
  - Groundwater in the intermediate bedrock flow zone generally flows to the north, west, and south-southeast relative to the landfill;
- Groundwater quality data from spring 2016 are generally consistent with historical results;
- Slightly elevated concentrations of a number of water quality parameters are seen in the shallow groundwater zone within the property to the south, north and northwest of the landfill footprint. In other areas of the site including at property boundaries, there is no evidence of groundwater impact away from the landfill footprint in the shallow groundwater flow zone;
- The geochemical results for the intermediate bedrock groundwater flow zone indicate higher concentrations of water quality parameters associated with landfill leachate impacts to the south-southeast and immediately north of the landfill relative to the concentrations west and east of the landfill;
- Recent investigation of the groundwater conditions south of the landfill were completed to delineate the groundwater impacts from the landfill and to define the extent of a contaminant attenuation zone. Results from these investigations were submitted to MOECC in January and April, 2016;
- Continued groundwater monitoring within the shallow and intermediate bedrock groundwater flow zones between the landfill footprint and the low-head areas is warranted in order to further examine groundwater quality and any trends over time; and
- It is recommended that damaged groundwater monitoring wells M19 and M71 be decommissioned and removed from the monitoring program. Similarly, wells M58-4, M74 and M75 should be decommissioned, and replaced or removed from the monitoring program, because of integrity concerns (presence of bentonite in purge water), as these wells may be unreliable for water level and/or quality monitoring as a result of this issue. Monitoring well M68-4 may be damaged (presence of sediment

present at the bottom of the well) and should be inspected in future monitoring events, and possibly replaced and decommissioned.

4.2 SURFACE WATER

- The concentrations observed during spring 2016 monitoring events are within the range of historical monitoring results and indicate that the landfill is not causing adverse impacts to surface water quality;
- The concentration of total phosphorous at sampling location S3 was slightly above PWQO; and
- All other measured parameters were consistent with natural surface water quality and below PWQO and therefore no impact to surface water quality from the landfill is believed to occur.

4.3 SUBSURFACE GAS

Measurements for methane gas were between 0 and 30 ppm for the six monitoring location, well below the LEL for methane of 5% by volume in air (or 50,000 ppm).

5. LIMITING CONDITIONS

The spring 2016 monitoring program involved the collection of groundwater (from on-site and off-site monitoring wells as well as off-site domestic supply wells) and surface water for analyses at the site monitoring locations. The data collected during this investigation represent the conditions at the sampled locations only.

The conclusions presented in this report represent our professional opinion and are based on the conditions observed on the dates set out in the report, the information available at the time this report was prepared, the scope of work, and any limiting conditions noted herein.

BluMetric Environmental Inc. provides no assurances regarding changes to conditions subsequent to the time of the assessment. BluMetric Environmental Inc. makes no warranty as to the accuracy or completeness of the information provided by others or of the conclusions and recommendations predicated on the accuracy of that information.

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Respectfully submitted,
BluMetric Environmental Inc.

Madeleine Corriveau, M.Sc., P.Geo
Intermediate Hydrogeologist

François A. Richard, Ph.D., P.Geo.
Senior Hydrogeologist

PROFESSIONAL GEOSCIENTIST
FRANÇOIS A. RICHARD
PRACTISING MEMBER
1401
ONTARIO

TABLES

Table 1: Summary of Environmental Monitoring Program

Monitoring Locations		Parameter Suite	Monitoring Frequency
Shallow Groundwater Flow Zone Monitors			
M58-4, M68-4, M70-3, M96, M99-2		Groundwater Inorganic & General	Once each year, in spring
		VOCs	
M53-4, M54-4, M66-2, M67-2, M80-2, M81, M85, M86, M87-2, M101, M103, M104, M114-2, OW37-s		Groundwater Inorganic & General	Twice each year, in spring and fall
		VOCs	
Intermediate Bedrock Groundwater Flow Zone Monitors			
M56-2, M58-3, M59-2, M59-4, M91-1, M95-1		Groundwater Inorganic & General	Once each year, in spring
		VOCs	
M5-3, M6-3, M9-2, M9-3, M52-2, M64-2, M72, M74, M75, M80-1, M82-1, M82-2, M106, M108, M109-1, M110-1, M114-1, M121, M123, M167, M168, M170, M172, M177, M178R-2, M178R-3, M178R-4, M179, M185-1, M185-2, M186, M187, M188, M190, M192, OW1, OW4		Groundwater Inorganic & General	Twice each year, in spring and fall
		VOCs	
Surface Water Sampling Locations			
Beechwood Ditch	S4R, S5 and S8R	Surface Water Inorganic and General	Three times each year, in spring, summer[1] and fall.
Marysville Creek	S2, S3, S6 and S7		
Unnamed water course in central portion of proposed CAZ	S18, S19 and S20		
Leachate Monitoring Locations			
North Chamber, South Chamber, LW-P1 and LW-P2		Leachate Inorganic & General	Once each year, in spring
		VOCs	
Landfill Gas Monitoring Wells			
GM1, GM3, GM4-1, GM4-2, GM5, GM6		% methane by volume	Twice each year, in spring and fall
Off-site Domestic Water Supply Wells			
1441 County Road 1 West 1483 County Road 1 West 1494 County Road 1 West (UNKN)[2] 1499 County Road 1 West (UNKN)[2] 1556 County Road 1 West (UNKN)[2] 1561 County Road 1 West (UNKN)[2] 1614 County Road 1 West 1654 County Road 1 West 1680 County Road 1 West 1695 County Road 1 West 1866 County Road 1 West 614 Belleville Road 696 Belleville Road		1,4 dioxane	Once every two years, starting in 2015

[1] The summer monitoring event shall be scheduled after a rainfall of more than 25 mm

[2] The final list of domestic well locations will depend on confirmation of which addresses have drilled wells (locations where well construction is unknown are denoted UNKN). A residential survey will be completed in order to determine which of these locations are to be sampled. Only those residences with drilled bedrock wells that supply water for domestic use will be sampled; residences that use shallow dug wells or cisterns for water supplies are not included in the program.

Table 2: Analytical Parameters for Water and Leachate Samples

Groundwater Inorganic and General Parameters		
Total dissolved solids	Magnesium	Manganese
Alkalinity	Sodium	Ammonia (total)
Conductivity	Potassium	Nitrate
Dissolved organic carbon	Boron	Nitrite
Calcium	Iron	Chloride
		Sulphate
Volatile Organic Compounds (VOCs)		
1,4 Dioxane	1,2-Dichlorobenzene	1,1,2-Trichloroethane
Benzene	1,3-Dichlorobenzene	1,1-Dichloroethane
Toluene	1,4-Dichlorobenzene	1,2-Dichloroethane
Ethylbenzene	Methylene chloride	1,1-Dichloroethylene
m&p-Xylene	Chloromethane	Cis-1,2-Dichloroethylene
o-Xylene	Chloroethane	Trans-1,2-Dichloroethylene
Styrene	1,1,2,2-Tetrachloroethane	Trichloroethylene
1,3,5-Trimethylbenzene	1,1,1,2-Tetrachloroethane	Tetrachloroethylene
Chlorobenzene	1,1,1-Trichloroethane	Vinyl chloride
Surface Water Inorganic and General Parameters		
1,4 Dioxane	Potassium	Nitrate
Total suspended solids	Boron	Nitrite
Total dissolved solids	Cadmium	Chloride
Biological oxygen demand	Chromium (total, Cr6+, Cr3+)	Sulphate
Chemical oxygen demand	Cobalt	Phenols
Alkalinity	Copper	Total phosphorous
Conductivity	Iron	Naphthalene
Hardness	Lead	
Calcium	Nickel	*Field measurements:*
Magnesium	Zinc	*pH, temperature, conductivity, dissolved*
Sodium	Ammonia (total & un-ionized)	*oxygen, estimated flow rate*
Leachate Inorganic and General Parameters		
Total dissolved solids	Dissolved organic carbon	Ammonia (total)
Conductivity	Boron	Total Kjeldahl nitrogen
Alkalinity	Cadmium	Nitrate
pH	Chromium (total)	Nitrite
Hardness	Cobalt	Chloride
Calcium	Copper	Sulphate
Magnesium	Iron	Total phosphorous
Sodium	Lead	Phenols
Potassium	Manganese	Naphthalene
Biological oxygen demand	Nickel	N-nitrosodimethylamine (NDMA)
Chemical oxygen demand	Zinc	

Table 3: Groundwater Elevation Monitoring Locations

Location	Shallow Groundwater Flow Zone	Intermediate Groundwater Flow Zone
West of landfill footprint	M27, M58-4, M67-2, M84, M87-2, M88-2, M89-2, M97, M98, M99-2, M100, M101, M102, OW37-s	M3A-3, M56-2, M58-3, M59-2, M59-3, M59-4, M72, M73, M74, M82-1, M82-2, M91-1, M95-1
East of landfill footprint	M19, M23, M47-3, M68-4, M70-3, M77, M94-2, M96	M50-3, M52-2, M70-2, M108, M170
North of landfill footprint	M35, M60-4, M65-2, M66-2, M83, M85, M86, M103, M104	M46-2, M60-1, OW1
South of landfill footprint; north of Beechwood Road	M12, M14, M15, M18, M41, M53-4, M54-4, M80-2, M81	M9-2, M9-3, M10-1, M49-1, M53-2, M71, M80-1, M105, M106, M107, M109-1, M109-2, M110-1, M111-1, M112-1, M113-1, M192, M193
South of landfill footprint; south of Beechwood Road	M114-2, M115-2	M63-2, M64-2, M114-1, M116, M121, M122, M123, M125, M166, M167, M168, M173, M174, M176, M177, M178R-1, M178R-2, M178R-3, M178R-4, M179, M180, M181-1, M181-2, M182, M185-1, M185-2, M186, M187, M188, M189, M190, M191

Table 4: Groundwater Elevations - April 29, 2016

Monitoring Well	Water Level (masl)	Monitoring Well	Water Level (masl)	Monitoring Well	Water Level (masl)	Monitoring Well	Water Level (masl)
Shallow Groundwater Flow Zone							
M12	125.48	M54-4	124.22	M83	123.24	M98	130.04
M14	126.70	M58-4	124.76	M84	121.99	M99-2	130.30
M15	125.04	M60-4	124.31	M85	119.74	M100	124.97
M18	127.11	M65-2	123.57	M86	122.13	M101	124.10
M19	damaged	M66-2	123.17	M87-2	124.41	M102	124.02
M23	127.25	M67-2	122.70	M88-2	128.32	M103	123.64
M27	126.24	M68-4	124.18	M89-2	129.61	M104	123.30
M35	124.30	M70-3	127.18	M94-2	123.67	M114-2	123.65
M41	125.34	M77	126.38	M96	128.88	M115-2	124.61
M47-3	124.70	M80-2	123.51	M97	125.34	OW37-s	122.06
M53-4	124.94	M81	124.53				
Intermediate Bedrock Groundwater Flow Zone							
M3A-3	124.91	M71	124.13	M113-1	123.25	M178R-4	116.59
M9-2	122.35	M72	123.08	M114-1	121.68	M179	110.07
M9-3	122.59	M73	123.14	M116	121.69	M180	112.12
M10-1	121.70	M74	123.77	M121	121.51	M181-1	96.20
M46-2	122.78	M80-1	123.34	M122	121.23	M181-2	105.35
M49-1	121.94	M82-1	121.51	M123	120.93	M182	95.34
M50-3	124.31	M82-2	122.88	M125	121.69	M185-1	116.31
M52-2	123.29	M91-1	123.29	M166	120.94	M185-2	115.95
M53-2	121.54	M95-1	123.17	M167	120.87	M186	114.81
M56-2	123.28	M105	122.36	M168	120.95	M187	94.70
M58-3	123.30	M106	123.22	M170	122.24	M188	115.60
M59-2	123.34	M107	122.30	M173	101.04	M189	104.77
M59-3	123.30	M108	121.00	M174	94.74	M190	115.63
M59-4	123.31	M109-1	122.34	M176	110.77	M191	not static
M60-1	122.62	M109-2	122.40	M177	115.33	M192	120.97
M63-2	121.13	M110-1	122.34	M178R-1	116.89	M193	122.49
M64-2	118.87	M111-1	123.22	M178R-2	120.96	OW1	122.75
M70-2	122.91	M112-1	123.24	M178R-3	120.89		

Table 5a: Groundwater Quality Results - May 3 - 6, 2016

Name	Date	Alkalinity	Ammonia	Boron	Calcium	Chloride	Conductivity	Dissolved Organic Carbon	Iron	Magnesium	Manganese	Nitrate	Nitrite	Potassium	Sodium	Sulphate	Total Dissolved Solids	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene
		mg/L	mg/L	mg/L	mg/L	mg/L	mS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Shallow Groundwater Flow Zone																							
M53-4	5/5/2016	480	< 0.15	< 0.01	150	3.2	1010	2.5	1.3	34	0.12	< 0.1	< 0.01	< 0.2	41	81	604	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M54-4	5/5/2016	460	< 0.15	0.038	140	49	1070	2.7	< 0.1	30	0.022	< 0.1	< 0.01	1.4	62	50	622	< 0.0002	0.0022	< 0.0002	< 0.0002	0.0016	< 0.0001
M66-2	5/3/2016	320	< 0.15	0.29	120	86	1170	1.8	< 0.1	40	< 0.002	< 0.1	< 0.01	4	92	210	530	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M67-2	5/3/2016	340	0.5	0.73	49	5	636	1.9	0.29	28	0.029	< 0.1	< 0.01	7.7	53	7.9	176	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M68-4	5/3/2016	340	< 0.15	0.018	110	7.9	682	2.4	0.21	18	0.14	< 0.1	< 0.01	0.25	15	28	266	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M70-3	5/6/2016	440	< 0.15	< 0.01	140	14	891	3	3.5	34	0.28	< 0.1	< 0.01	0.59	21	62	532	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M80-2	5/4/2016	330	< 0.15	0.057	96	82	905	2.1	< 0.1	49	< 0.002	< 0.1	< 0.01	4.1	18	44	442	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M81	5/4/2016	350	< 0.15	0.032	110	86	938	1.5	< 0.1	51	0.0053	< 0.1	< 0.01	2.1	10	42	454	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M87-2	5/5/2016	200	< 0.15	0.038	51	29	556	1.7	< 0.1	36	0.0094	< 0.1	< 0.01	1.9	13	48	272	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M96	5/6/2016	290	< 0.15	0.085	60	4.7	614	1.7	< 0.1	33	< 0.002	1.32	0.011	5	20	36	310	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M99-2	5/4/2016	320	< 0.15	0.07	70	23	815	2.4	0.69	59	0.015	< 0.1	< 0.01	2.3	16	110	458	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M101	5/4/2016	500	< 0.15	0.077	170	74	1180	2.8	< 0.1	54	0.015	< 0.1	< 0.01	4.2	17	59	674	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.00051	< 0.0001
M103	5/4/2016	730	< 0.15	0.25	160	200	1950	5.1	< 0.1	99	0.0034	0.22	< 0.01	6.3	130	52	1030	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M104	5/4/2016	1500	4.32	2.4	150	800	5020	110	3.1	140	0.54	< 0.1	< 0.01	14	770	37	3060	< 0.0005	< 0.00025	< 0.0005	< 0.0005	< 0.00025	< 0.00025
M114-2	5/5/2016	300	< 0.15	0.018	100	81	886	1.6	< 0.1	16	0.0064	1.2	0.011	0.77	76	40	376	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
OW37-s	5/3/2016	51	< 0.15	0.029	12	5.1	114	0.8	< 0.1	2.7	0.049	< 0.1	< 0.01	2.6	6.3	1.6	42	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
Intermediate BedrockGroundwater Flow Zone																							
M5-3	5/3/2016	450	1.28	1	33	44	949	1.3	< 0.1	25	< 0.002	< 0.1	< 0.01	12	130	1.2	526	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005
M6-3	5/3/2016	1200	4.38	0.6	320	1400	8840	52	< 0.1	12	< 0.002	< 0.1	< 0.01	37	670	45	4150	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.00019	< 0.0001
M9-2	5/4/2016	460	0.63	0.27	120	89	1080	6.9	9.6	30	0.35	< 0.1	< 0.01	4.7	76	3.3	382	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.0006	0.00016
M9-3	5/4/2016	310	1.08	0.5	56	87	840	2.5	1.2	28	0.081	< 0.1	< 0.01	14	70	2.4	348	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005
M52-2	5/6/2016	360	1.48	1.2	22	250	1540	1.7	0.18	14	0.0054	< 0.1	< 0.01	12	280	10	780	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M56-2	5/5/2016	290	< 0.15	0.059	75	18	743	1.7	< 0.1	46	0.063	< 0.1	< 0.01	2.8	12	84	378	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M58-3	5/5/2016	310	< 0.15	0.012	84	4	632	1.1	< 0.1	31	< 0.002	0.18	< 0.01	1.5	5.1	38	276	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M59-2	5/6/2016	430	0.47	0.24	130	63	975	7.8	< 0.1	38	0.015	< 0.1	< 0.01	5.4	35	37	518	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M59-4	5/6/2016	260	0.28	0.44	65	8.2	611	2.7	0.65	33	0.011	< 0.1	0.015	5.6	15	56	278	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M64-2	5/6/2016	280	1.02	0.96	53	120	957	1.2	< 0.1	30	0.0081	< 0.1	< 0.01	10	92	3.4	392	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M72	5/3/2016	270	0.55	0.34	57	32	631	1.7	< 0.1	35	0.003	< 0.1	< 0.01	7.3	15	35	62	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005
M74	5/3/2016	380	1.85	0.95	31	31	830	2.3	< 0.1	17	0.038	< 0.1	< 0.01	16	150	28	452	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M75	5/4/2016	450	3.28	1.2	33	73	1130	1.6	< 0.1	24	0.0071	< 0.1	0.026	14	170	39	460	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M80-1	5/4/2016	150	0.4	0.39	22	16	347	1.1	< 0.1	12	0.0045	< 0.1	< 0.01	4.2	32	16	116	< 0.005	< 0.0025	< 0.005	< 0.005	< 0.0025	< 0.0025
M82-1	5/5/2016	320	0.79	0.91	52	43	890	2.5	< 0.1	26	0.005	< 0.1	< 0.01	9.7	91	72	490	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M82-2	5/5/2016	330	0.24	0.15	100	21	765	2.6	< 0.1	29	0.019	< 0.1	< 0.01	3.8	18	58	428	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M91-1	5/5/2016	290	0.87	0.78	43	14	674	1.1	< 0.1	23	0.0069	< 0.1	< 0.01	7.3	64	46	314	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M95-1	5/3/2016	320	< 0.15	0.029	100	5.8	644	1.7	< 0.1	26	< 0.002	< 0.1	< 0.01	2.2	5.8	47	252	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M106	5/4/2016	350	2.84	2	120	1700	5720	1.7	< 0.1	80	0.0023	< 0.1	< 0.01	23	880	1.6	2990	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.0016	0.00043
M108	5/4/2016	470	0.84	0.26	100	66	1040	5.5	0.73	33	0.072	< 0.1	< 0.01	7.2	73	3.7	604	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.00032	< 0.0001
M109-1	5/5/2016	550	1.12	0.47	130	140	1410	9.3	11	48	0.3	< 0.1	< 0.01	7.3	130	< 1	760	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M110-1	5/5/2016	680	0.66	0.52	180	200	1830	12	0.13	64	0.02	< 0.1	< 0.01	7.6	160	< 1	1020	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.00044	< 0.0001
M114-1	5/5/2016	350	0.32	0.16	83	45	814	4.3	5.3	20	0.3	< 0.1	< 0.01	4.3	59	7.3	286	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.00045	0.00025
M121	5/5/2016	520	1.56	0.48	110	390	2090	5.2	< 0.1	58	0.0028	< 0.1	< 0.01	13	230	12	1130	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005
M123	5/5/2016	410	0.33	0.18	110	42	887	4.2	< 0.1	24	0.012	< 0.1	< 0.01	4	56	7.9	512	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M167	5/5/2016	430	1.9	0.94	87	250	1640	4.2	< 0.1	56	0.0022	< 0.1	< 0.01	18	180	12	874	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M168	5/6/2016	410	1.29	0.39	150	290	1660	4.6	< 0.1	50	0.0034	< 0.1	< 0.01	14	120	15	950	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M170	5/4/2016	700	1.53	2.4	29	450	2670	5.3	< 0.1	22	0.0023	< 0.1	< 0.01	13	580	6.5	1480	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M172	5/5/2016	310	0.62	0.11	83	28	667	4.4	11	20	0.44	< 0.1	< 0.01	3.7	35	8	366	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.002	0.00015
M177	5/3/2016	240	0.48	0.27	76	6.7	522	2	< 0.1	16	0.0065	< 0.1	< 0.01	5.3	9.6	34	308	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005
M178R-2	5/3/2016	380	0.26	0.19	110	42	850	5	0.92	23	0.051	< 0.1	< 0.01	4.9	49	18	502	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.0012	< 0.0001
M178R-3	5/3/2016	410	0.32	0.21	120	56	937	5.6	0.56	26	0.042	< 0.1	< 0.01	5.2	54	19	552	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.00097	< 0.0001
M178R-4	5/3/2016	460	0.26	0.22	140	73	1020	5.1	< 0.1	29	0.0099	< 0.1	< 0.01	4.4	60	18	626	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.00018	< 0.0001
M179	5/4/2016	250	< 0.15	0.14	87	45	666	3.8	0.48	11	0.027	< 0.1	< 0.01	3.9	42	24	388	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M185-1	5/3/2016	290	0.28	0.16	67	25	687	2.9	< 0.1	9.7	0.015	1.07	0.091	11	73	55	432	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M185-2	5/3/2016	290	0.2	0.16	120	13	578	2.5	< 0.1	10	0.015	< 0.1	< 0.01	2.8	7.8	22	362	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M186	5/4/2016	320	2.48	2	78	1200	4390	2.7	0.7	54	0.21	< 0.1	< 0.01	21	700	19	2360	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M187	5/4/2016	250	< 0.15	0.13	150	49	921	2.7	< 0.1	13	0.0051	0.3	< 0.01	2.9	41	160	602	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M188	5/3/2016	320	0.66	0.61	63	65	821	2.2	< 0.1	23	0.0095	< 0.1	< 0.01	6.7	86	18	464	< 0.0005	< 0.00025	< 0.0005	< 0.0005	< 0.00025	< 0.00025
M190	5/4/2016	260	0.34	0.1	110	45	697	3.8	< 0.1	12	0.011	< 0.1	< 0.01	3.3	27	29	420	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M192	5/6/2016	330	2.37	1.3	81	580	2620	2.5	< 0.1	57	0.035	< 0.1	< 0.01	19	320	2	1390	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
OW1	5/3/2016	440	1.3	0.99	43	62	974	1.7	< 0.1	31	0.0027	< 0.1	< 0.01	12	130	13	516	< 0.002	< 0.001	< 0.002	< 0.002	< 0.001	< 0.001
OW4	5/4/2016	1000	1.4	1.3	130	410	3100	38	13	85	0.15	< 0.1	< 0.01	12	440	41	1720	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001

Table 5a: Groundwater Quality Results - May 3 - 6, 2016

Name	Date	1,2-Dichlorobenzene (o)	1,2-Dichloroethane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene (m)	1,4-Dichlorobenzene (p)	1,4-Dioxane	Benzene	Chlorobenzene	Chloroethane	Chloromethane	Cis-1,2-Dichloroethylene	Dichloromethane	Ethylbenzene	m+p-Xylene	o-Xylene	Styrene	Tetrachloroethylene	Toluene	Trans-1,2-dichloroethylene	Trichloroethylene	Vinyl Chloride
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Shallow Groundwater Flow Z																						
M53-4	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M54-4	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	0.0017	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	0.0044	< 0.0002	< 0.0001	0.00061	0.0003
M66-2	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	0.0018	< 0.0001	< 0.0001	< 0.0002
M67-2	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M68-4	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M70-3	5/6/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M80-2	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M81	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M87-2	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M96	5/6/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M99-2	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M101	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0057	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M103	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.02	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M104	5/4/2016	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.2	< 0.00025	< 0.00025	< 0.0005	< 0.0013	< 0.00025	< 0.0013	< 0.00025	< 0.00025	< 0.00025	< 0.0005	< 0.00025	< 0.0005	< 0.00025	< 0.00025	< 0.0005
M114-2	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
OW37-s	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
Intermediate BedrockGround																						
M5-3	5/3/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0025	< 0.0005	< 0.0025	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.001
M6-3	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.28	0.0012	< 0.0001	< 0.0003	< 0.0005	< 0.0001	< 0.0005	0.00027	0.002	0.00063	< 0.0002	< 0.0001	0.0099	< 0.0001	< 0.0001	< 0.0002
M9-2	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.018	< 0.0001	< 0.0001	0.026	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	0.00048
M9-3	5/4/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0026	< 0.0005	< 0.0005	0.0033	< 0.0025	< 0.0005	< 0.0025	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.001
M52-2	5/6/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M56-2	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M58-3	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M59-2	5/6/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M59-4	5/6/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M64-2	5/6/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0031	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M72	5/3/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0025	< 0.0005	< 0.0025	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.001
M74	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M75	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M80-1	5/4/2016	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.0025	< 0.0025	< 0.005	< 0.013	< 0.0025	< 0.013	< 0.0025	< 0.0025	< 0.0025	< 0.005	< 0.0025	< 0.005	< 0.0025	< 0.0025	< 0.005
M82-1	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M82-2	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M91-1	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	0.001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M95-1	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M106	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	0.0003	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	0.00014	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M108	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.011	< 0.0001	< 0.0001	0.0047	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M109-1	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.03	0.0001	< 0.0001	0.013	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	0.00021
M110-1	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.043	0.0005	< 0.0001	0.017	< 0.0005	< 0.0001	< 0.0005	< 0.0001	0.00034	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	0.00028
M114-1	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0052	< 0.0001	< 0.0001	0.011	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0004
M121	5/5/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.01	0.034	< 0.0005	0.0046	< 0.0025	< 0.0005	< 0.0025	0.00098	0.0098	0.00056	< 0.001	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.001
M123	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0063	< 0.0001	< 0.0001	0.0036	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M167	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0035	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M168	5/6/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0064	< 0.0001	< 0.0001	0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	0.001	< 0.0001	< 0.0001	< 0.0002
M170	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.009	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M172	5/5/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0039	0.0001	< 0.0001	0.0045	< 0.0005	0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M177	5/3/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0025	< 0.0005	< 0.0025	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.001	< 0.0005	< 0.0005	< 0.001
M178R-2	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0052	< 0.0001	< 0.0001	0.0017	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M178R-3	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0061	< 0.0001	< 0.0001	0.0028	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M178R-4	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0068	< 0.0001	< 0.0001	0.002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M179	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M185-1	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M185-2	5/3/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	0.0002	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M186	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	0.0007	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	0.00018	0.001	0.00043	< 0.0002	< 0.0001	0.00067	< 0.0001	< 0.0001	< 0.0002
M187	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	0.00025	< 0.0001	< 0.0001	< 0.0002
M188	5/3/2016	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.00025	< 0.00025	< 0.0005	< 0.0013	< 0.00025	< 0.0013	< 0.00025	< 0.00025	< 0.00025	< 0.0005	< 0.00025	< 0.0005	< 0.00025	< 0.00025	< 0.0005
M190	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M192	5/6/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	0.0003	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	0.00011	< 0.0001	< 0.0002	< 0.0001	0.0013	< 0.0001	< 0.0001	< 0.0002
OW1	5/3/2016	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.002	< 0.005	< 0.001	< 0.005	0.0013	< 0.001	< 0.001	< 0.002	< 0.001	< 0.002	< 0.001	< 0.001	< 0.002
OW4	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.087	0.0009	0.0022	< 0.0002	< 0.0005	< 0.0001	< 0.0005	0.0035	0.00014	0.00014	< 0.0002	< 0.0001	0.0003	< 0.0001	< 0.0001	< 0.0002

Table 5b: Groundwater Quality Results from Supplementary Sampling

		Alkalinity	Ammonia	Boron	Calcium	Chloride	Conductivity	Dissolved Organic Carbon	Iron	Magnesium	Manganese	Nitrate	Nitrite	Potassium	Sodium	Sulphate	Total Dissolved Solids	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene
Name	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
M178R-1	3/7/2016	420	5.82	3.8	220	4600	15600	25	< 0.1	140	0.16	< 0.5	< 0.05	41	2900	420	9020	< 0.005	< 0.0025	< 0.005	< 0.005	< 0.0025	< 0.0025
M178R-1	5/3/2016	430	5.29	4.2	230	4700	14700	7.8	< 0.5	140	0.071	< 0.5	< 0.05	41	2900	400	8950	< 0.01	< 0.005	< 0.01	< 0.01	< 0.005	< 0.005
M178R-2	3/7/2016	420	0.27	0.19	130	63	1010	5.5	1.1	27	0.056	< 0.1	< 0.01	5.2	56	19	558	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.0012	< 0.0001
M178R-3	3/7/2016	460	0.35	0.2	140	83	1140	5.6	0.74	30	0.051	< 0.1	< 0.01	5.6	61	18	610	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.0011	< 0.0001
M178R-4	3/7/2016	470	0.28	0.22	150	100	1210	6.9	< 0.1	31	0.01	< 0.1	< 0.01	4.5	62	20	656	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.00016	< 0.0001
M187	3/8/2016	250	< 0.15	0.12	150	48	931	2.8	< 0.1	12	< 0.002	0.34	< 0.01	2.7	30	160	562	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M188	3/7/2016	340	0.73	0.61	64	82	931	2.6	< 0.1	24	0.0095	< 0.1	< 0.01	6.8	98	18	496	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M189	3/8/2016	270	0.22	0.32	120	40	767	2.9	0.19	17	0.13	0.48	0.016	6.6	46	57	442	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M189	5/4/2016	340	0.23	0.64	120	71	1030	3.2	0.78	23	0.2	< 0.1	< 0.01	8.4	88	99	624	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M190	3/8/2016	260	< 0.15	0.087	110	58	740	3.7	< 0.1	12	0.0067	< 0.1	< 0.01	3.4	26	37	390	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M191	3/8/2016	150	20	2.9	5000	44000	95200	180	7.7	3600	1.5	< 0.5	< 0.05	170	17000	480	74700	< 0.01	< 0.005	< 0.01	< 0.01	< 0.005	< 0.005
M191	5/3/2016	140	22.3	3.7	5700	45000	87400	140	5.2	4200	1.3	< 1	< 0.1	220	18000	380	86000	< 0.004	< 0.002	< 0.004	< 0.004	< 0.002	< 0.002
M192	3/8/2016	350	2.32	1.3	83	580	2600	2.1	< 0.1	57	0.041	< 0.1	0.01	19	340	2.3	1410	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005
M192	3/21/2016	340	2.22	1.4	85	580	2600	2.2	< 0.1	60	0.037	< 0.1	< 0.01	20	360	8	1270	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M192	5/6/2016	330	2.37	1.3	81	580	2620	2.5	< 0.1	57	0.035	< 0.1	< 0.01	19	320	2	1390	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M193	3/8/2016	260	1.46	0.46	26	370	1790	4.2	< 0.1	25	0.032	< 0.1	< 0.01	16	300	34	944	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0002	< 0.0002
M193	3/21/2016	280	1.46	0.5	28	320	1680	5.5	< 0.1	21	0.13	< 0.1	< 0.01	15	360	24	746	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001
M193	5/6/2016	300	1.49	0.55	35	370	1900	2.6	< 0.1	33	0.08	< 0.1	< 0.01	16	250	23	844	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001

Table 5b: Groundwater Quality Results from Supplementary Sampling

		1,2-Dichlorobenzene (o)	1,2-Dichloroethane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene (m)	1,4-Dichlorobenzene (p)	1,4-Dioxane	Benzene	Chlorobenzene	Chloroethane	Chloromethane	Cis-1,2-Dichloroethylene	Dichloromethane	Ethylbenzene	m+p-Xylene	o-Xylene	Styrene	Tetrachloroethylene	Toluene	Trans-1,2-dichloroethylene	Trichloroethylene	Vinyl Chloride
Name	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
M178R-1	3/7/2016	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.0025	< 0.0025	< 0.005	< 0.013	< 0.0025	< 0.013	< 0.0025	< 0.0025	< 0.0025	< 0.005	< 0.0025	0.0055	< 0.0025	< 0.0025	< 0.005
M178R-1	5/3/2016	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005	< 0.01	< 0.025	< 0.005	< 0.025	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.01	< 0.005	< 0.005	< 0.01
M178R-2	3/7/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0053	< 0.0001	< 0.0001	0.0016	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M178R-3	3/7/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0071	< 0.0001	< 0.0001	0.0032	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M178R-4	3/7/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0078	< 0.0001	< 0.0001	0.0016	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M187	3/8/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	0.00058	< 0.0001	< 0.0001	< 0.0002
M188	3/7/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M189	3/8/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	0.00017	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M189	5/4/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	0.00012	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	0.00016	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0001	< 0.0002
M190	3/8/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	0.00026	< 0.0001	< 0.0001	< 0.0002
M191	3/8/2016	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	0.14	< 0.005	< 0.01	< 0.025	< 0.005	< 0.025	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	0.12	< 0.005	< 0.005	< 0.01
M191	5/3/2016	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.001	0.16	< 0.002	< 0.004	< 0.01	< 0.002	< 0.01	< 0.002	< 0.002	< 0.002	< 0.004	< 0.002	0.033	< 0.002	< 0.002	< 0.004
M192	3/8/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0025	< 0.0005	< 0.0025	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005	0.002	< 0.0005	< 0.0005	< 0.001
M192	3/21/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	0.0003	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	0.00014	< 0.0001	< 0.0002	< 0.0001	0.002	< 0.0001	< 0.0001	< 0.0002
M192	5/6/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	0.00028	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	< 0.0001	0.00011	< 0.0001	< 0.0002	< 0.0001	0.0013	< 0.0001	< 0.0001	< 0.0002
M193	3/8/2016	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	0.0037	< 0.0002	< 0.0004	< 0.001	< 0.0002	< 0.001	< 0.0002	0.00089	0.00043	< 0.0004	< 0.0002	0.0078	< 0.0002	< 0.0002	< 0.0004
M193	3/21/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	0.0033	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	0.00012	0.001	0.00038	< 0.0002	< 0.0001	0.007	< 0.0001	< 0.0001	< 0.0002
M193	5/6/2016	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	0.004	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0005	0.00024	0.0021	0.00074	< 0.0002	< 0.0001	0.0024	< 0.0001	< 0.0001	< 0.0002

Table 5c: Groundwater Quality Results and Reasonable Use Limits - May 3 - 5, 2016

Name	Date	1,4-dioxane	Alkalinity	Chloride	Dissolved Organic Carbon	Iron	Manganese	Sodium	Total Dissolved Solids	1,1-dichloroethylene	Benzene	Ethylbenzene	Xylenes (total)	Toluene
Name	Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Shallow Groundwater Flow Zone														
RUL		*0.001**	*390*	*130*	*3.6*	*0.18*	*0.034*	*109*	*452*	*0.0035*	*0.0014*	*0.0013*	*0.15*	*0.0121*
M54-4	5/5/2016	< 0.001	*460*	49	2.7	< 0.1	0.022	62	*622*	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002
M66-2	5/3/2016	< 0.001	320	86	1.8	< 0.1	< 0.002	92	*530*	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0018
M67-2	5/3/2016	< 0.001	340	5	1.9	*0.29*	0.029	53	176	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002
75% RUL†		*n/a*	*293*	*98*	*2.7*	*0.14*	*0.026*	*82*	*339*	*0.0026*	*0.0011*	*0.00098*	*0.11*	*0.0091*
M80-2	5/4/2016	< 0.001	*330*	82	2.1	< 0.1	< 0.002	18	*442*	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002
M87-2	5/5/2016	< 0.001	200	29	1.7	< 0.1	0.0094	13	272	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002
OW37-s	5/3/2016	< 0.001	51	5.1	0.8	< 0.1	*0.049*	6.3	42	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002
Intermediate BedrockGroundwater Flow Zone														
RUL		*0.001**	*400*	*132*	*3.5*	*0.18*	*0.032*	*106*	*465*	*0.0035*	*0.0014*	*0.0013*	*0.15*	*0.0121*
M177	5/3/2016	< 0.001	240	6.7	2.0	< 0.1	0.0065	9.6	308	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001
M179	5/4/2016	< 0.001	250	45	3.8	*0.48*	0.027	42	388	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002
M185-1	5/3/2016	< 0.001	290	25	2.9	< 0.1	0.015	73	432	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002
M185-2	5/3/2016	< 0.001	290	13	2.5	< 0.1	0.015	7.8	362	< 0.0001	0.00018	< 0.0001	< 0.0001	< 0.0002
M186	5/4/2016	< 0.001	320	*1200*	2.7	*0.70*	*0.21*	*700*	*2360*	< 0.0001	0.00067	0.00018	0.0015	0.00067
M187	5/4/2016	< 0.001	250	49	2.7	< 0.1	0.0051	41	*602*	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.00025
M188	5/3/2016	< 0.001	320	65	2.2	< 0.1	0.0095	86	464	< 0.00025	< 0.00025	< 0.00025	< 0.00025	< 0.0005
M190	5/4/2016	< 0.001	260	45	*3.8*	< 0.1	0.011	27	420	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002
75% RUL†		*n/a*	*300*	*99*	*2.6*	*0.14*	*0.024*	*80*	*349*	*0.0026*	*0.0011*	*0.00098*	*0.11*	*0.0091*
M80-1	5/4/2016	< 0.001	150	16	1.1	< 0.1	0.0045	32	116	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.005
M82-1	5/5/2016	< 0.001	320	43	2.5	< 0.1	0.005	*91*	*490*	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002
M82-2	5/5/2016	< 0.001	330	21	2.6	< 0.1	0.019	18	*428*	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002
M106	5/4/2016	< 0.001	350	*1700*	1.7	< 0.1	0.0023	*880*	*2990*	0.00043	0.00031	< 0.0001	0.00014	< 0.0002

* Site-specific RUL for 1,4 dioxane set by ERT Order dated December 24, 2015

† Wells located on the boundary of WM property, including the CAZ boundary, are compared to 75% of RUL concentrations

Groundwater results exceed Reasonable Use Limits (RUL) *0.05*

Table 6: Water Quality Results from Off-Site Domestic Supply Wells - January 11, 2016

Address	Date	1,4-dioxane (mg/L)
1614 County Road 1 West	11-Jan-16	< 0.001

Table 7: Leachate Chemistry Results - May 2, 2016

		North Chamber 2016-05-02	South Chamber 2016-05-02	LW-P1 2016-05-02	LW-P2 2016-05-02
General and Inorganic Parameters					
Alkalinity	mg/L	2400	4900	7800	6700
Ammonia	mg/L	310	850	1600	1200
Biochemical Oxygen Demand	mg/L	41	180	110	390
Boron	mg/L	3.1	6.4	14	21
Cadmium	mg/L	< 0.0001	< 0.0005	< 0.001	< 0.001
Calcium	mg/L	200	120	55	49
Chemical Oxygen Demand	mg/L	510	1600	3600	4200
Chloride	mg/L	670	1600	2300	2900
Chromium	mg/L	0.033	0.12	0.14	0.15
Cobalt	mg/L	0.013	0.035	0.072	0.067
Conductivity	µS/cm	6600	13000	20000	20000
Copper	mg/L	0.004	0.015	< 0.02	< 0.02
Dissolved Organic Carbon	mg/L	150	470	1000	820
Hardness	mg/L	830	770	450	650
Iron	mg/L	15	4.1	4.1	3.3
Lead	mg/L	0.0011	< 0.003	0.012	< 0.005
Magnesium	mg/L	98	120	74	120
Manganese	mg/L	0.84	0.31	0.04	0.062
Naphthalene	mg/L	0.013	< 0.01	< 0.05	0.13
Nickel	mg/L	0.055	0.16	0.23	0.32
Nitrate	mg/L	< 0.5	< 1	< 2	< 1
Nitrite	mg/L	< 0.05	< 0.1	< 0.2	< 0.1
Nitrite + Nitrate	mg/L	< 0.5	< 1	< 2	< 1
N-nitrosodimethylamine	mg/L	< 0.000008	0.000046	0.000011	0.000013
pH (Lab)	unitless	7.23	7.78	7.95	7.73
Phenols	mg/L	0.47	2.3	0.22	0.23
Phosphorus (total)	mg/L	1.5	6.7	6	5.4
Potassium	mg/L	160	350	500	800
Sodium	mg/L	580	1300	2000	2500
Sulphate	mg/L	< 1	27	< 20	< 20
Total Dissolved Solids	mg/L	2900	5600	7910	9730
Total Kjeldahl Nitrogen	mg/L	330	900	1600	1200
Zinc	mg/L	0.022	< 0.05	< 0.1	< 0.1

Table 7: Leachate Chemistry Results - May 2, 2016

		North Chamber 2016-05-02	South Chamber 2016-05-02	LW-P1 2016-05-02	LW-P2 2016-05-02
Volatile Organic Compounds (VOCs)					
1,1,1,2-Tetrachloroethane	mg/L	< 0.002	< 0.004	< 0.02	< 0.02
1,1,1-Trichloroethane	mg/L	< 0.001	< 0.002	< 0.01	< 0.01
1,1,2,2-Tetrachloroethane	mg/L	< 0.002	< 0.004	< 0.02	< 0.02
1,1,2-Trichloroethane	mg/L	< 0.002	< 0.004	< 0.02	< 0.02
1,1-Dichloroethane	mg/L	0.0011	< 0.002	< 0.01	< 0.01
1,1-Dichloroethylene	mg/L	< 0.001	< 0.002	< 0.01	< 0.01
1,2-Dichlorobenzene (o)	mg/L	< 0.002	< 0.004	< 0.02	< 0.02
1,2-Dichloroethane	mg/L	< 0.002	< 0.004	< 0.02	< 0.02
1,3,5-Trimethylbenzene	mg/L	0.007	< 0.004	< 0.02	0.029
1,3-Dichlorobenzene (m)	mg/L	< 0.002	< 0.004	< 0.02	< 0.02
1,4-Dichlorobenzene (p)	mg/L	0.0083	0.0052	< 0.02	< 0.02
1,4-Dioxane	mg/L	0.077	0.058	0.37	0.35
Benzene	mg/L	0.0069	0.0041	< 0.01	< 0.01
Chlorobenzene	mg/L	0.0041	< 0.002	0.025	< 0.01
Chloroethane	mg/L	0.003	< 0.004	< 0.02	< 0.02
Chloromethane	mg/L	< 0.005	< 0.01	< 0.05	< 0.05
Cis-1,2-Dichloroethylene	mg/L	< 0.001	< 0.002	0.013	< 0.01
Dichloromethane	mg/L	< 0.005	< 0.01	< 0.05	< 0.05
Ethylbenzene	mg/L	0.0038	0.0036	0.027	0.088
m+p-Xylene	mg/L	0.071	0.016	0.055	0.17
o-Xylene	mg/L	0.018	0.0091	0.029	0.072
Styrene	mg/L	< 0.002	< 0.004	< 0.02	< 0.02
Tetrachloroethylene	mg/L	< 0.001	< 0.002	< 0.01	< 0.01
Toluene	mg/L	0.0084	0.01	0.022	0.29
Total Xylenes	mg/L	0.089	0.025	0.084	0.24
Trans-1,2-dichloroethylene	mg/L	< 0.001	< 0.002	< 0.01	< 0.01
Trichloroethylene	mg/L	< 0.001	< 0.002	< 0.01	< 0.01
Vinyl Chloride	mg/L	< 0.002	< 0.004	< 0.02	< 0.02

Table 8a: Surface Water Characteristics - May 2, 2016

Date	Parameter		Surface Water Station									
			S2	S3	S4R	S5	S6	S7	S8R	S18	S19	S20
2-May-16	Velocity:	m/s	NM	0.1	NM	0.1	0.1	0.2	0.2	NM	NM	NM
	Depth:	m	0.38	0.23	NM	0.11	0.29	0.17	0.12	NA	0.21	0.15
	Width:	m	2.00	0.73	NM	0.54	0.75	1.20	0.28	10*	3.00	10*
	Estimated Flow Rate:	m^3/s	NM	0.02	NM	0.01	0.02	0.04	0.01	NM	NM	NM

NM: Not Measured (flow was insufficient to register on the flow meter - very small flow observed)
NA: Not Accessible
* Large area of slow moving pooled water, width estimated

Table 8b: Surface Water Quality Results – May 2, 2016

			Marysville Creek				Beechwood Ditch*		South of Beechwood Road		
			S2	S3	S6	S7	S5	S8R	S18	S19	S20
			(upstream)	(downstream)	(downstream)	(downstream)	(upstream)	(downstream)	(upstream)	(downstream)	(downstream)
		Date	5/2/2016	5/2/2016	5/2/2016	5/2/2016	5/2/2016	5/2/2016	5/2/2016	5/2/2016	5/2/2016
Reading Name	Units	PWQO									
Inorganic and General Parameters											
Alkalinity	µg/L		220000	230000	220000	220000	280000	230000	160000	260000	250000
Ammonia	µg/L		< 150	< 150	< 150	< 150	< 150	< 150	< 150	< 150	< 150
Ammonia (unionized)	µg/L	20	< 0.5	< 0.73	< 0.63	< 0.69	< 0.78	< 0.94	< 1.1	< 0.76	< 0.71
Biochemical Oxygen Demand	µg/L		< 2000	< 2000	< 2000	< 2000	< 2000	< 2000	< 2000	< 2000	< 2000
Chemical Oxygen Demand	µg/L		36000	21000	26000	27000	15000	15000	19000	16000	18000
Chloride	µg/L		17000	18000	16000	18000	2200	14000	7500	26000	22000
Conductivity	µS/cm		466	478	467	478	524	492	326	574	530
Hardness	µg/L		230000	240000	240000	240000	290000	240000	170000	280000	260000
Nitrate	µg/L		< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Nitrite	µg/L		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nitrate + Nitrite	µg/L		< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Phenols	µg/L	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Phosphorus (total)	µg/L	30	26	15	18	18	19	*33*	20	11	19
Sulphate	µg/L		< 1000	< 1000	< 1000	< 1000	3100	14000	4100	9900	4200
Total Dissolved Solids	µg/L		266000	244000	256000	270000	286000	258000	184000	310000	284000
Total Suspended Solids	µg/L		< 1000	< 1000	2000	1000	< 1000	2000	1000	3000	2000
Metals											
Boron	µg/L	200	< 20	27	< 20	< 20	< 20	27	< 20	44	31
Cadmium	µg/L		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Calcium	µg/L		73000	72000	74000	73000	83000	71000	59000	87000	83000
Chromium (III)	µg/L	8.9	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chromium (VI)	µg/L	1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium (Total)	µg/L		< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Cobalt	µg/L	0.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Copper	µg/L	5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Iron	µg/L	300	160	< 100	< 100	< 100	< 100	190	140	< 100	130
Lead	µg/L	5	< 0.5	< 0.5	< 0.5	2.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Magnesium	µg/L		9400	10000	10000	10000	16000	14000	4400	10000	9700
Nickel	µg/L	25	< 1	< 1	< 1	< 1	< 1	1	< 1	< 1	< 1
Potassium	µg/L		2100	1900	1800	1800	1700	2600	2300	2600	2000
Sodium	µg/L		12000	12000	11000	11000	5200	15000	5100	19000	15000
Zinc	µg/L	20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
VOCs											
1,4-dioxane	µg/L	20	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Naphthalene	µg/L	7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Field Measurements											
pH (Field)	unitless	6.5-8.5	7.21	7.47	7.4	7.44	7.51	7.58	7.54	7.44	7.38
Conductivity (Field)	µS/cm		470	479	463	469	479	471	361	585	560
Dissoved Oxygen (Field)	µg/L		7.67	9.65	9.17	8.59	10.52	9.5	8.27	8	10.52
Temperature (Field)	°C		9.3	8.5	8.8	8.7	8.3	8.6	11.6	10.0	10.9

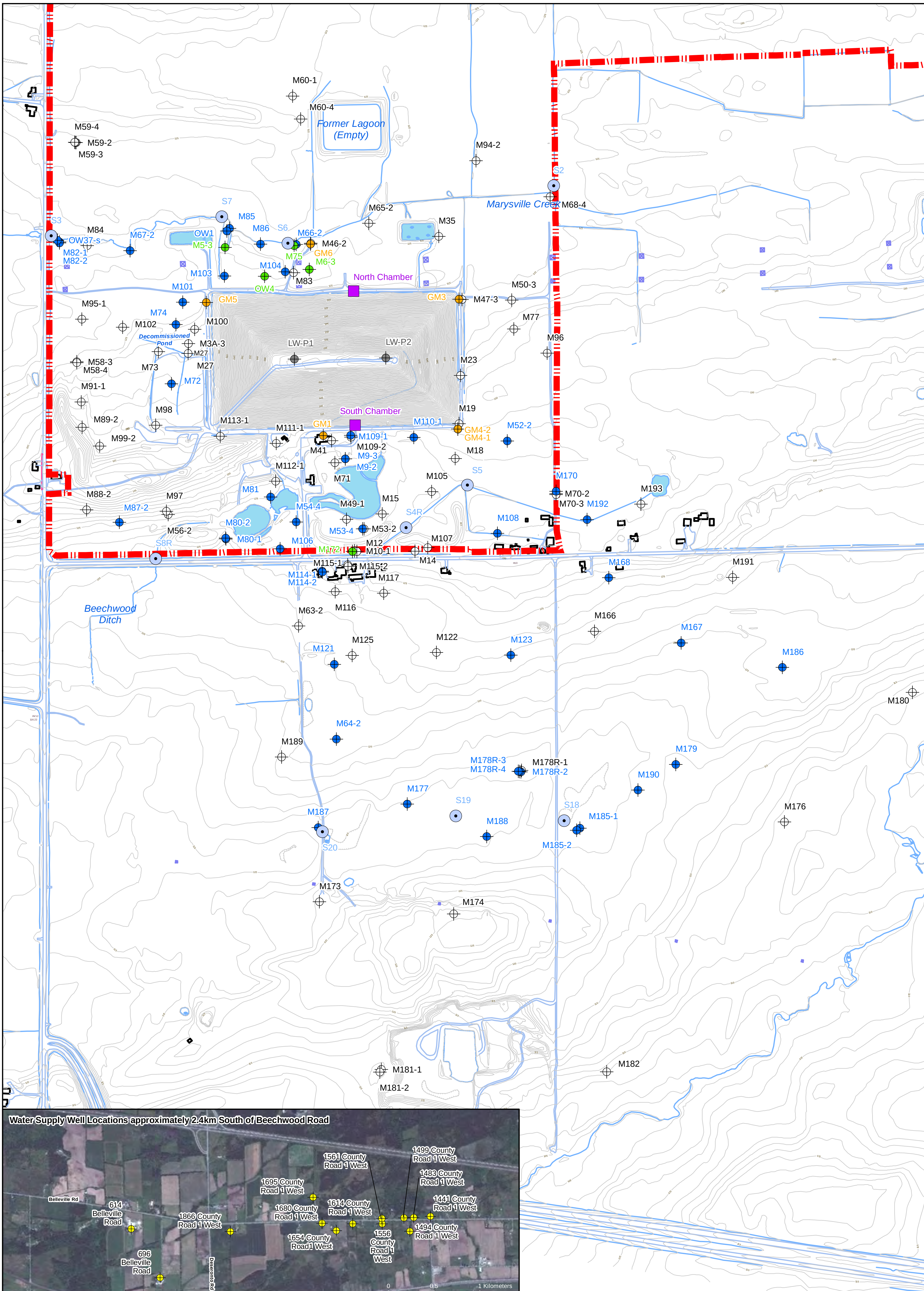
Exceeds PWQO

* Location S4R not sampled - dry

Table 9: Subsurface Gas Monitoring Results - May 5, 2016

Gas Monitor	Location	Reading (ppm)
GM1	North of garage area, south of waste mound	25
GM3	Northeast corner of waste mound	20
GM4-1	Southeast corner of waste mound	0
GM4-2		5
GM5	Northwest corner of waste mound	5
GM6	North of waste mound	30

FIGURES



LEGEND

- Topographic Contour Lines
- Surface Water
- Property Boundary
- M35 — Monitoring Well Used to Measure Water Level (Not Sampled)
- M53-4 — Monitoring Well Used to Measure Water Level and Sampled for Chemistry
- M5-3 — Monitoring Well Sampled for Chemistry (Not used for Water Levels)
- 1097 Beechwood — Domestic Water Supply Well Sampled for Chemistry
- GM1 — Gas Monitoring Well
- Lechate Chambers
- Lechate Monitoring Well
- S2 — Surface Water Monitoring Location

REFERENCES

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-PROJECTION: UTM NAD83 ZONE 18
-DATA SOURCE: WM CANADA, BLUMETRIC, MNRO, NRCAN

0 25 50 100 150 200
Meters
1:8,000

BluMetric Environmental

The Tower - The Woolen Mill,
4 Cataraqui St.,
Kingston, Ontario K7K 1Z7
TEL: (613) 531-2725
FAX: (613) 531-1852
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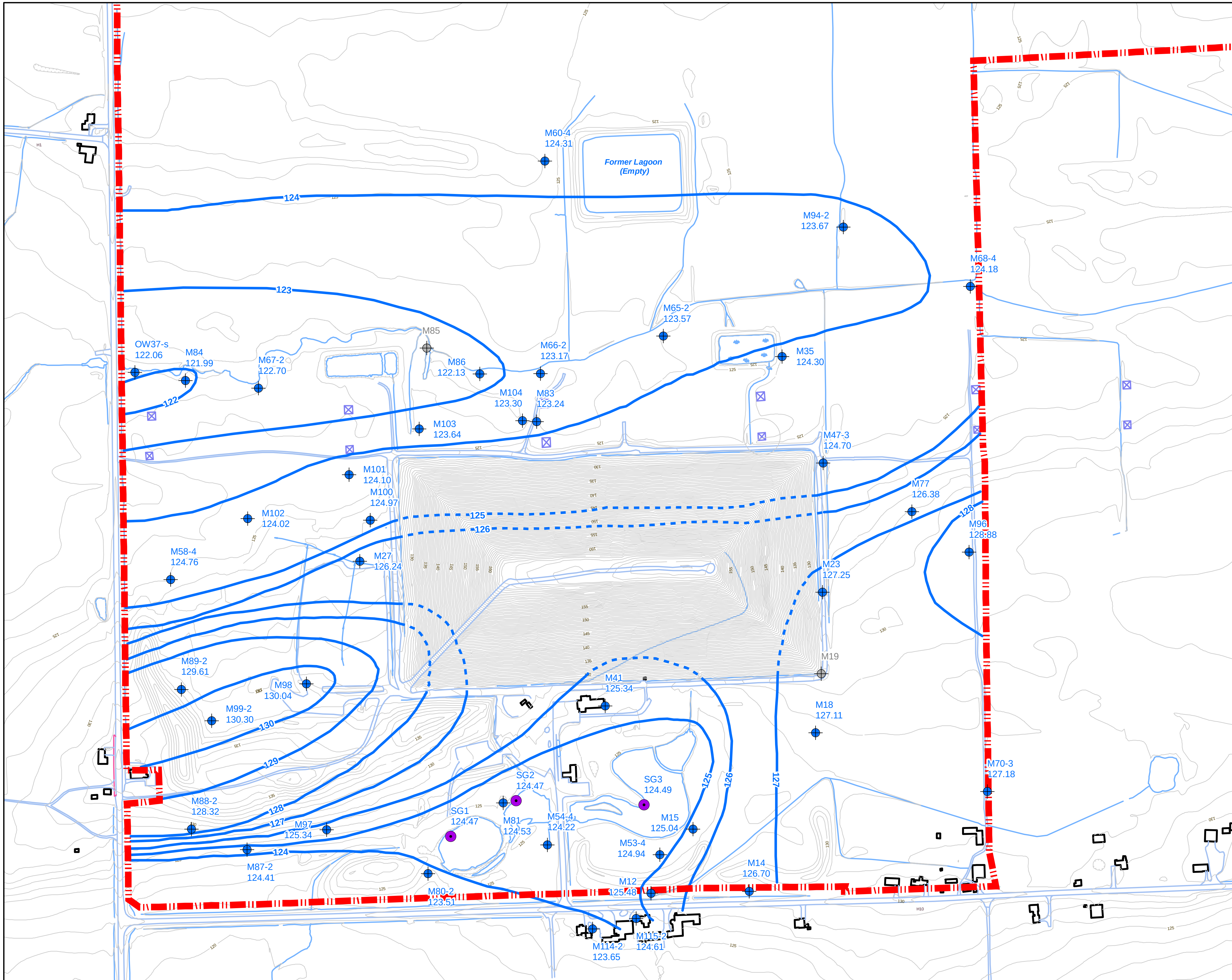
PROJECT

WASTE MANAGEMENT RICHMOND LANDFILL
SPRING 2016 SEMI-ANNUAL REPORT

TITLE

Site Plan and Monitoring Locations

PROJECT #		DATE	
160061-00-02		June 29, 2016	
DRAWN	CHECKED	FIG NO.	REV
WC	FR	01	0



LEGEND

- Potentiometric Surface (masl)
- Topographic Contour Lines
- Surface Water
- Property Boundary
- M53-4 Shallow Groundwater Zone Elevation Monitor
- M5-3 Monitor Not Used in Contouring
- M35 Staff Gauge Location

REV.	DESCRIPTION	YY/MM/DD	BY	CHK
1				

REFERENCES

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0 50 100 Meters

N E S W

CLIENT

WM WASTE MANAGEMENT

PROJECT

WASTE MANAGEMENT RICHMOND LANDFILL SPRING 2016 SEMI-ANNUAL REPORT

TITLE

Shallow Groundwater Flow Zone Potentiometric Surface – April 29, 2016

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4 Cataraqui St.,
Kingston, Ontario K7K 1Z7
TEL: (613) 531-2725
FAX: (613) 531-1852
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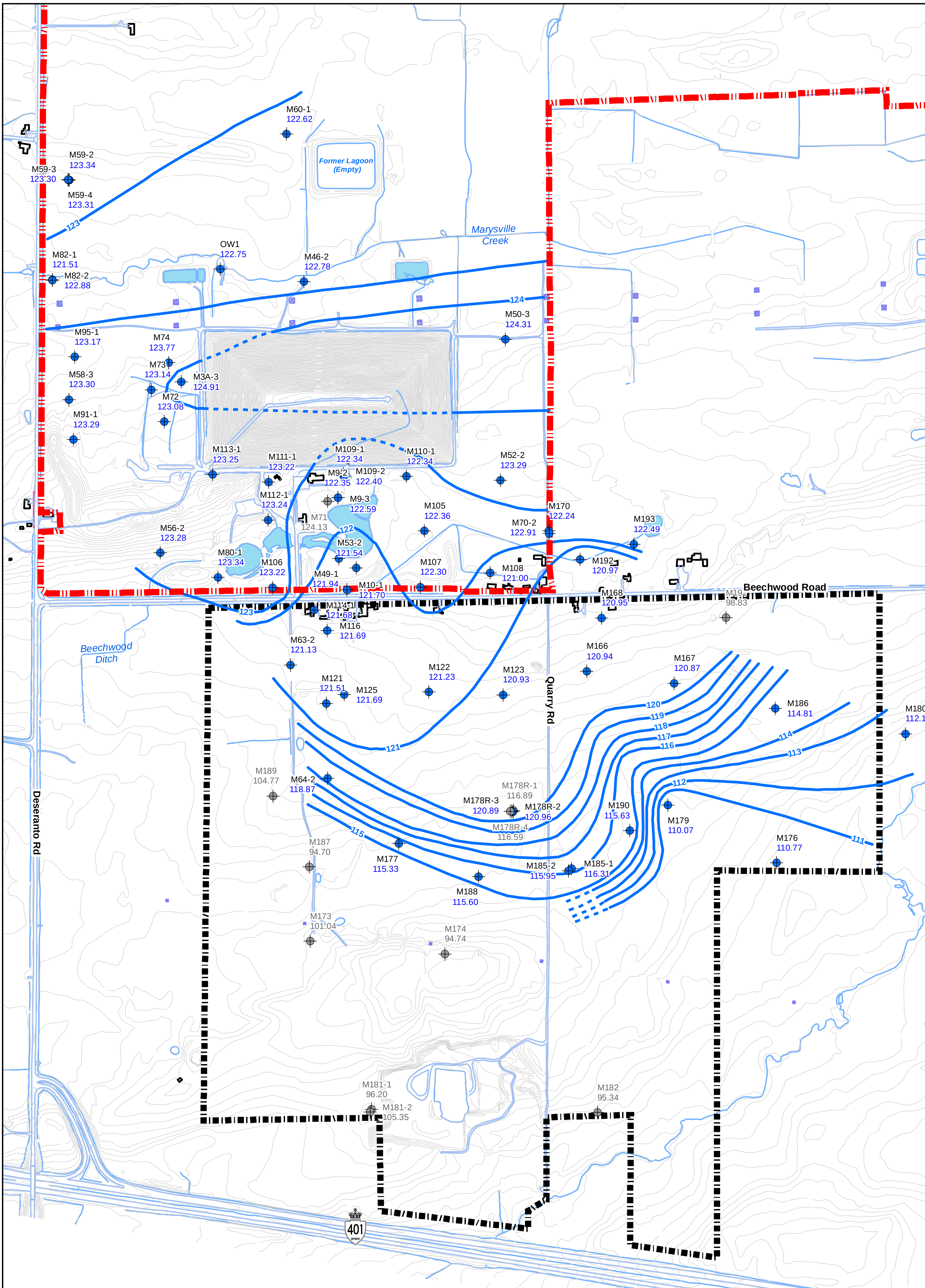
PROJECT #	DATE
160061-00-02	June 29, 2016

DRAWN	CHECKED	FIG NO.	REV
WC	FR	02	0



LEGEND

- Potentiometric Surface (masl)
- Topographic Contour Lines
- Surface Water
- Property Boundary
- Proposed CAZ Boundary
- M166 Intermediate Groundwater Zone Elevation Monitor
- M189 Monitor Not Used in Contouring

REFERENCES

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0 50 100 200 300 400
Meters
1:8,000

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The Tower - The Woolen Mill,
4 Cataraqui St.,
Kingston, Ontario K7K 1Z7
TEL: (613) 531-2725
FAX: (613) 531-1852
Email: info@blumetric.ca
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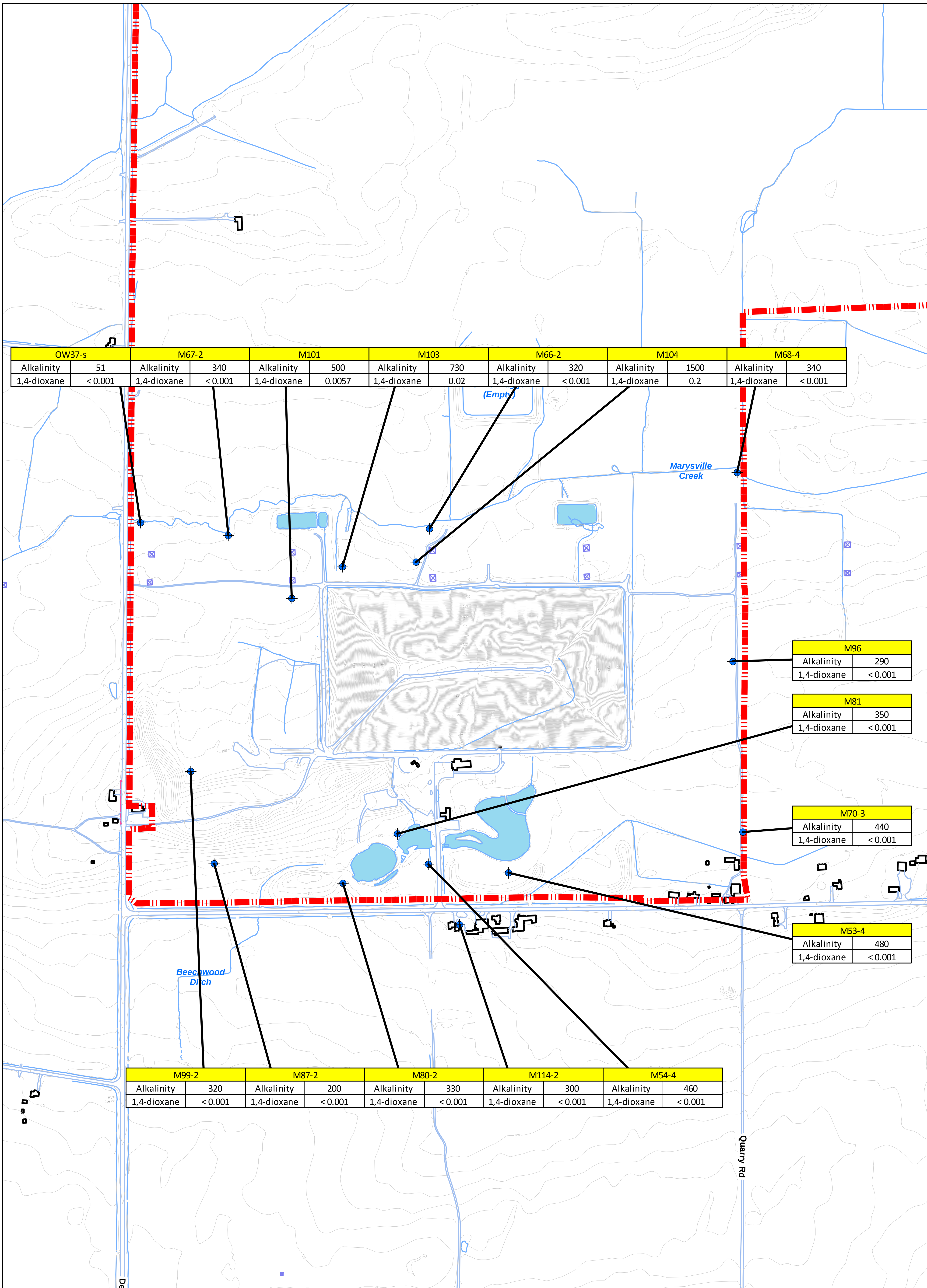
PROJECT
WASTE MANAGEMENT RICHMOND LANDFILL
SPRING 2016 SEMI-ANNUAL REPORT

TITLE
INTERMEDIATE BEDROCK GROUNDWATER FLOW ZONE POTENTIOMETRIC SURFACE - APRIL 29, 2016

PROJECT #		DATE	
160061-00-02		July 13, 2016	
DRAWN	CHECKED	FIG NO.	REV
WC	FR	03	0



LEGEND

Topographic Contour Lines

Surface Water

Property Boundary

M99-2 Shallow Monitoring Well Sampled for Chemistry

Parameter	Units
Alkalinity	mg/L CaCO3
1,4-dioxane	mg/L

REFERENCES

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0 25 50 100 150 200
Meters
1:6,640

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The Tower - The Woolen Mill,
4 Cataraqui St.,
Kingston, Ontario K7K 1Z7
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WASTE MANAGEMENT

PROJECT

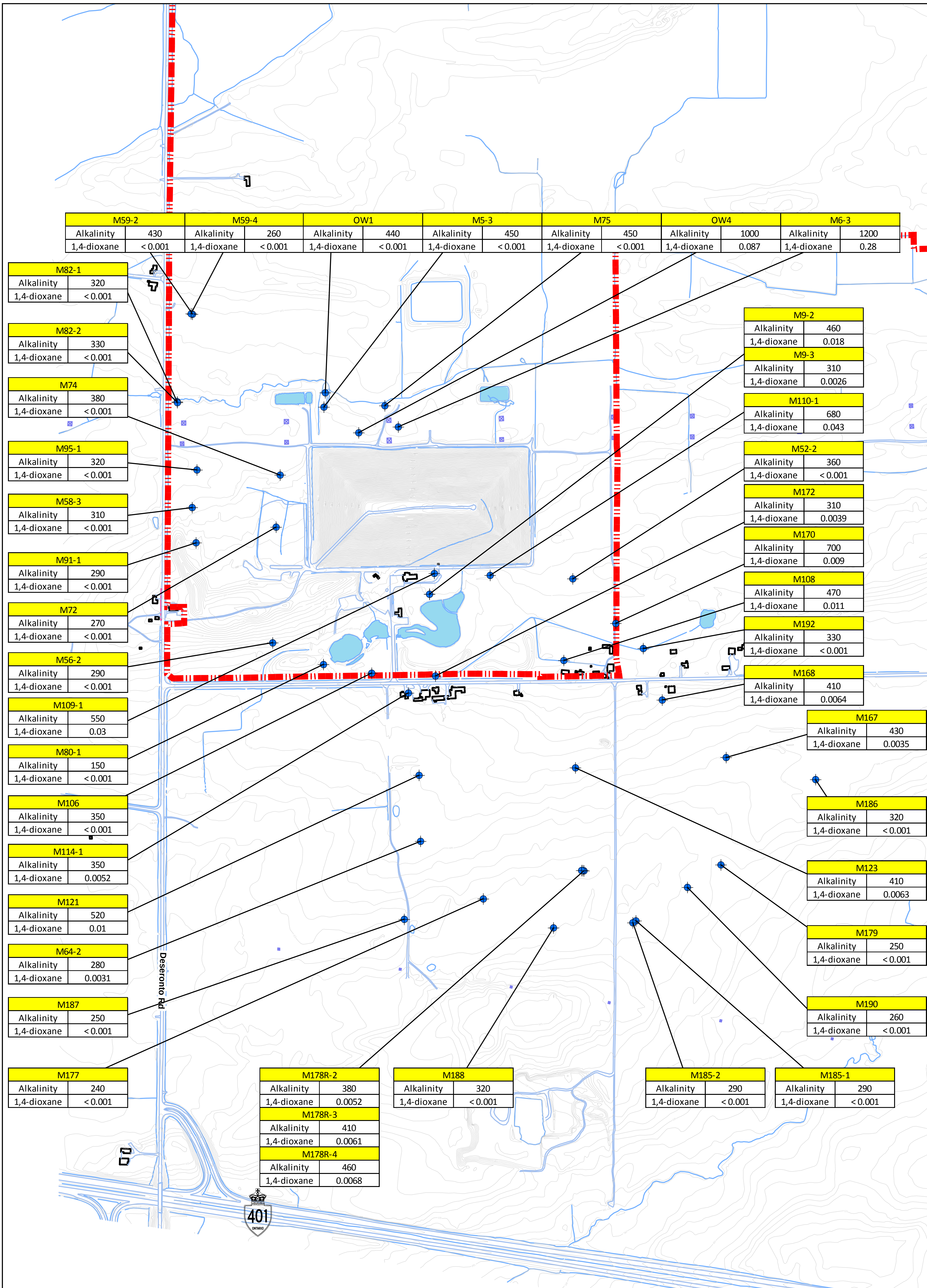
WASTE MANAGEMENT RICHMOND LANDFILL SPRING 2016 SEMI-ANNUAL REPORT

TITLE

Shallow Flow Zone Concentrations

PROJECT #	DATE
160061-00-02	June 24, 2016

DRAWN	CHECKED	FIG NO.	REV
WC	MC	04	0



LEGEND

- Topographic Contour Lines
- Surface Water
- Property Boundary
- M9-2 Intermediate Monitoring Well Sampled for Chemistry

Parameter	Units
Alkalinity	mg/L CaCO3
1,4-dioxane	mg/L

REFERENCES

DO NOT SCALE DRAWING.
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-DATA SOURCE: WM CANADA, BLUMETRIC, MNRO, NRCAN

0 25 50 100 150 200
Meters
1:9,084

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4 Cataraqui St.,
Kingston, Ontario K7K 1Z7
TEL: (613) 531-2725
FAX: (613) 531-1852
Email: info@blumetric.ca
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WM WASTE MANAGEMENT

PROJECT

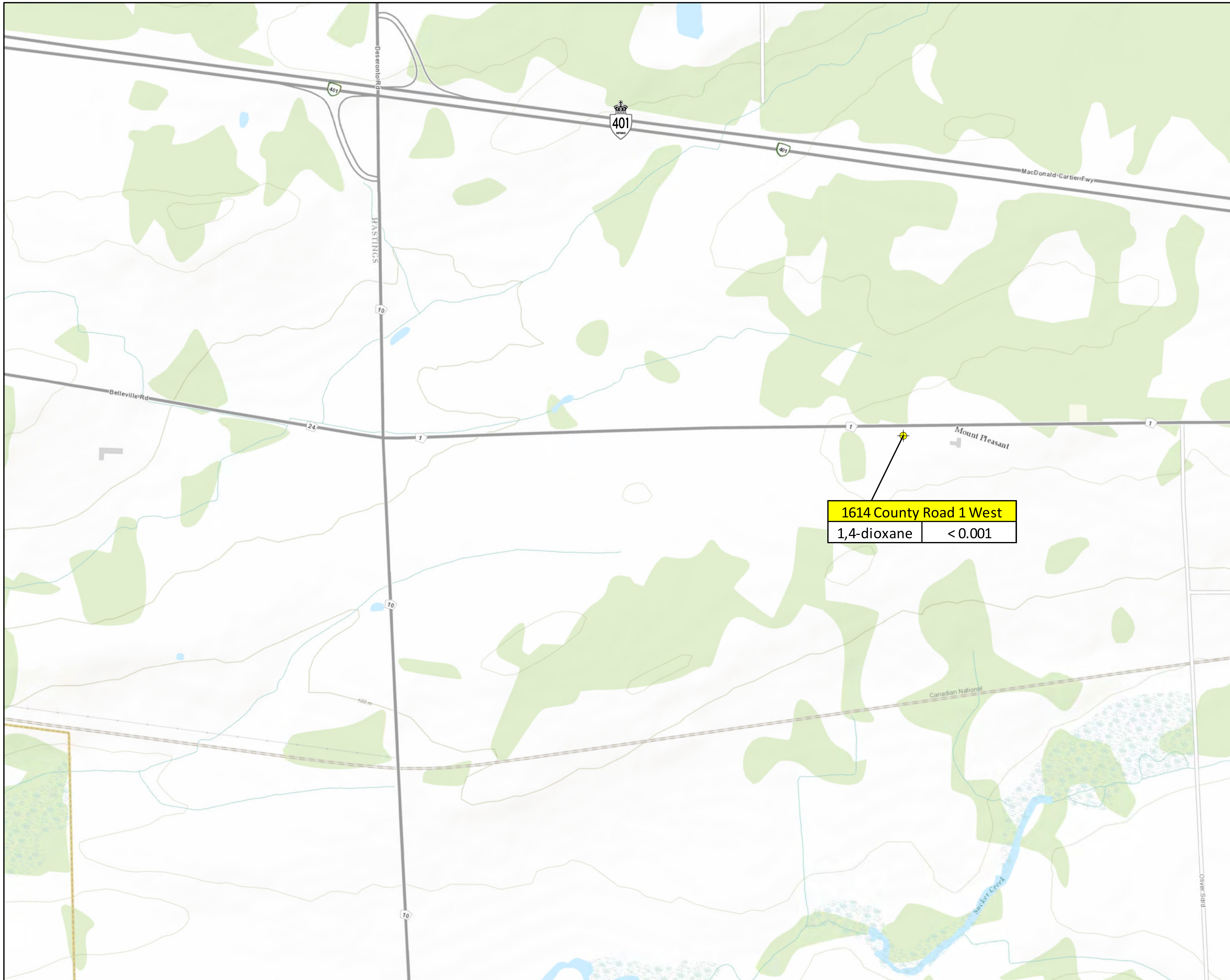
WASTE MANAGEMENT RICHMOND LANDFILL SPRING 2016 SEMI-ANNUAL REPORT

TITLE

Intermediate Flow Zone Concentrations

PROJECT #	DATE
160061-00-02	June 24, 2016

DRAWN	CHECKED	FIG NO.	REV
WC	MC	05	0



LEGEND

- Topographic Contour Lines
- Surface Water
- Property Boundary
- Domestic Water Supply Well Sampled for Chemistry

Parameter	Units
Alkalinity	mg/L CaCO3
1,4-dioxane	mg/L

REV.	DESCRIPTION	YY/MM/DD	BY	CHK
1				

REFERENCES

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0 100 200 Meters

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WASTE MANAGEMENT

PROJECT

WASTE MANAGEMENT RICHMOND LANDFILL SPRING 2016 SEMI-ANNUAL REPORT

TITLE

Domestic Well Concentrations

BluMetric™ Environmental

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4 Cataraqui St.,
Kingston, Ontario K7K 1Z7
TEL: (613) 531-2725
FAX: (613) 531-1852
Email: info@blumetric.ca
Web: http://www.blumetric.ca

PROJECT #	DATE
160061-00-02	June 24, 2016

DRAWN	CHECKED	FIG NO.	REV
IB	FR	06	0

APPENDIX A

Monitoring Well Inventory

Appendix A: Monitoring Well Inventory

Monitoring Well	Easting	Northing
2054	335293	4902797
2055	335402	4902782
M3A-1	334990	4902928
M3A-2	334990	4902930
M3A-3	334990	4902930
M4-1	335006	4903036
M4-2	335006	4903038
M4-3	335006	4903038
M5-1	335003	4903162
M5-2	335003	4903163
M5-3	335003	4903163
M6-1	335200	4903172
M6-2	335201	4903174
M6-3	335201	4903174
M9-1	335410	4902787
M9-2	335410	4902789
M9-3	335410	4902789
M9R-1	335400	4902787
M10-1	335494	4902596
M10-2	335494	4902596
M10-3	335494	4902594
M12	335500	4902596
M14	335625	4902637
M15	335528	4902695
M16	335447	4902710
M18	335648	4902866
M19	335632	4902944
M23	335602	4903049
M27	334997	4902908
M28	334897	4902853
M29	334924	4902983
M30	334999	4903033
M31	334857	4902977
M35	335458	4903336
M38	335006	4902978
M39	335299	4903310
M41	335368	4902818
M42-1	335006	4903006
M42-2	335007	4903008
M42-3	335007	4903008
M43-1	335475	4902588
M43-2	335476	4902590
M43-3	335476	4902590
M45-1	334790	4904582
M45-2	334790	4904582
M45-3	334790	4904582
M46-1	335185	4903230
M46-2	335185	4903232
M47-1	335552	4903214
M47-2	335552	4903215
M47-3	335552	4903215
M48-1	334838	4902564
M48-2	334839	4902565
M48-3	334839	4902565

Monitoring Well	Easting	Northing
M49-1	335454	4902658
M49-2	335455	4902660
M49-3	335455	4902660
M50-1	335660	4903247
M50-2	335660	4903248
M50-3	335660	4903248
M51-1	335714	4903073
M51-2	335714	4903075
M51-3	335714	4903075
M52-1	335748	4902939
M52-2	335748	4902940
M52-3	335748	4902940
M53-1	335501	4902651
M53-2	335499	4902650
M53-3	335498	4902650
M53-4	335496	4902649
M54-1	335346	4902623
M54-2	335347	4902622
M54-3	335347	4902620
M54-4	335348	4902618
M55-1	334961	4903151
M55-2	334962	4903149
M55-3	334962	4903148
M55-4	334963	4903146
M56-1	335066	4902508
M56-2	335065	4902545
M57	335418	4902623
M58-1	334760	4902816
M58-2	334760	4902814
M58-3	334761	4902812
M58-4	334761	4902811
M59-1	334609	4903287
M59-2	334607	4903287
M59-3	334606	4903287
M59-4	334604	4903287
M60-1	335044	4903538
M60-3	335079	4903494
M60-4	335077	4903494
M61-1	334457	4903750
M61-2	334456	4903749
M61-3	334455	4903748
M61-4	334454	4903747
M62-1	335166	4904438
M62-2	335168	4904441
M62-3	335166	4904441
M62-4	335165	4904440
M63-1	335424	4902393
M63-2	335425	4902394
M64-1	335585	4902174
M64-2	335585	4902176
M65-1	335297	4903314
M65-2	335298	4903316
M66-1	335154	4903218
M66-2	335155	4903219

Monitoring Well	Easting	Northing
M67-1	334799	4903089
M67-2	334799	4903090
M68-1	335670	4903504
M68-2	335671	4903502
M68-3	335671	4903500
M68-4	335672	4903499
M69-1	335062	4904299
M69-2	335063	4904298
M69-3	335063	4904296
M69-4	335064	4904295
M70-1	335890	4902862
M70-2	335891	4902860
M70-3	335891	4902858
M71	335390	4902773
M72	334981	4902831
M73	334931	4902891
M74	334950	4902962
M75	335151	4903215
M76	335675	4903217
M77	335685	4903188
M78	335391	4902776
M79	335673	4903215
M80-1	335207	4902532
M80-2	335206	4902534
M81	335275	4902654
M82-1	334640	4903060
M82-2	334641	4903058
M83	335169	4903156
M84	334702	4903072
M85	334999	4903208
M86	335077	4903195
M87-1	334959	4902493
M87-2	334965	4902495
M88-1	334883	4902497
M88-2	334885	4902499
M89-1	334815	4902673
M89-2	334818	4902674
M90-1	334520	4903845
M90-2	334522	4903843
M91-1	334798	4902729
M91-2	334792	4902734
M93	335006	4903908
M94-1	335497	4903519
M94-2	335486	4903526
M95-1	334743	4902908
M95-2	334740	4902917
M96	335774	4903158
M97	335059	4902551
M98	334976	4902730
M99-1	334869	4902646
M99-2	334869	4902646
M100	334994	4902965
M101	334949	4903015
M102	334836	4902919

Appendix A: Monitoring Well Inventory

Monitoring Well	Easting	Northing
M103	335021	4903101
M104	335150	4903152
M105	335620	4902778
M106	335331	4902549
M107	335650	4902654
M108	335791	4902733
M109-1	335405	4902844
M109-2	335407	4902840
M110-1	335543	4902883
M110-2	335546	4902884
M111-1	335250	4902774
M111-2	335254	4902774
M112-1	335274	4902692
M112-2	335277	4902693
M113-1	335123	4902751
M113-2	335119	4902750
M114-1	335437	4902530
M114-2	335439	4902528
M115-1	335489	4902561
M115-2	335490	4902558
M116	335480	4902494
M117	335586	4902525
M121	335529	4902337
M122	335742	4902433
M123	335905	4902479
M125	335561	4902368
M166	336069	4902589
M167	336266	4902624
M168	336063	4902714
M170	335889	4902865
M171	335759	4903206
M172	335490	4902593
M173	335661	4901812
M174	335961	4901879
M176	336613	4902308
M177	335784	4902084
M178-1	336032	4902203
M178-2	336032	4902206
M178-3	336035	4902209
M178R-1	336008	4902236
M178R-2	336008	4902233
M178R-3	336005	4902233
M178R-4	336002	4902232
M179	336338	4902357
M180	336801	4902677
M181-1	335912	4901492
M181-2	335912	4901492
M182	336402	4901643
M183	336953	4901770
M184	336176	4901998
M185-1	336170	4902151
M185-2	336170	4902151
M186	336509	4902627
M187	335607	4901972

Monitoring Well	Easting	Northing
M188	335979	4902069
M189	335479	4902099
M190	336274	4902275
M191	336332	4902802
M192	335976	4902826
M193	336082	4902896
OW1	334995	4903200
OW4	335108	4903128
OW5	335113	4903134
OW36	334799	4903100
OW37-d	334630	4903063
OW37-s	334634	4903062
OW54-d	335406	4902785
OW54-i	335406	4902785
OW54-s	335406	4902785
OW55-d	335376	4903186
OW55-i	335376	4903186
OW55-s	335376	4903184
OW56-d	335106	4903131
OW56-i	335106	4903131
OW56-s	335106	4903129
OW57	335117	4902762
PW1	335465	4902639
PW2	334988	4903095
PW3	335620	4902778
PW4	335626	4902775
PW5	335066	4902547

APPENDIX B

Results from Analytical Quality Assurance / Quality Control (QA/QC) Program

Summary of Results with Relative Percent Difference (RPD [1]) greater than 20%

Location	Parameter	Unit	Regular Sample	Field Duplicate	RPD (%)	MDL[2]	Comment
M82-2	Total Dissolved Solids	mg/L	428	232	59.39	10	
M168	Total Dissolved Solids	mg/L	950	752	23.27	10	
S3	Boron	mg/L	0.021	0.027	25.00	0.01	Less than 5x MDL

Note 1: RPD (%) = 100 * ABS (Regular Sample - Duplicate Sample) / ([Regular Sample + Duplicate Sample] / 2)
Note 2: MDL = Laboratory Method Detection Limit

Detailed Results from Field Duplicate vs. Regular Samples

Reading Name	Units	M123 2016-05-05 Regular Sample	M123 2016-05-05 Field Duplicate	RPD (%)
Alkalinity	mg/L	410	400	2.47
Ammonia	mg/L	0.33	0.33	0.00
Boron	mg/L	0.18	0.18	0.00
Calcium	mg/L	110	110	0.00
Chloride	mg/L	42	42	0.00
Conductivity	µS/cm	887	890	0.34
Dissolved Organic Carbon	mg/L	4.2	4.2	0.00
Iron	mg/L	< 0.1	< 0.1	0.00
Magnesium	mg/L	24	23	4.26
Manganese	mg/L	0.012	0.012	0.00
Nitrate	mg/L	< 0.1	< 0.1	0.00
Nitrite	mg/L	< 0.01	< 0.01	0.00
Nitrite + Nitrate	mg/L	< 0.1	< 0.1	0.00
Potassium	mg/L	4	3.9	2.53
Sodium	mg/L	56	55	1.80
Sulphate	mg/L	7.9	8.1	2.50
Total Dissolved Solids	mg/L	512	492	3.98
1,1,1,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1,1-Trichloroethane	mg/L	< 0.0001	< 0.0001	0.00
1,1,2,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1,2-Trichloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1-Dichloroethane	mg/L	< 0.0001	< 0.0001	0.00
1,1-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
1,2-Dichlorobenzene (o)	mg/L	< 0.0002	< 0.0002	0.00
1,2-Dichloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,3,5-Trimethylbenzene	mg/L	< 0.0002	< 0.0002	0.00
1,3-Dichlorobenzene (m)	mg/L	< 0.0002	< 0.0002	0.00
1,4-Dichlorobenzene (p)	mg/L	< 0.0002	< 0.0002	0.00
1,4-Dioxane	mg/L	0.0063	0.0063	0.00
Benzene	mg/L	< 0.0001	< 0.0001	0.00
Chlorobenzene	mg/L	< 0.0001	< 0.0001	0.00
Chloroethane	mg/L	0.0036	0.0038	5.41
Chloromethane	mg/L	< 0.0005	< 0.0005	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Dichloromethane	mg/L	< 0.0005	< 0.0005	0.00
Ethylbenzene	mg/L	< 0.0001	< 0.0001	0.00
m+p-Xylene	mg/L	< 0.0001	< 0.0001	0.00
o-Xylene	mg/L	< 0.0001	< 0.0001	0.00
Styrene	mg/L	< 0.0002	< 0.0002	0.00
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Toluene	mg/L	< 0.0002	< 0.0002	0.00
Total Xylenes		< 0.0001	< 0.0001	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	0.00

Detailed Results from Field Duplicate vs. Regular Samples

Reading Name	Units	M168 2016-05-05 Regular Sample	M168 2016-05-05 Field Duplicate	RPD (%)
Alkalinity	mg/L	410	410	0.00
Ammonia	mg/L	1.29	1.32	2.30
Boron	mg/L	0.39	0.4	2.53
Calcium	mg/L	150	150	0.00
Chloride	mg/L	290	290	0.00
Conductivity	μS/cm	1660	1750	5.28
Dissolved Organic Carbon	mg/L	4.6	4.6	0.00
Iron	mg/L	< 0.1	< 0.1	0.00
Magnesium	mg/L	50	50	0.00
Manganese	mg/L	0.0034	0.0031	9.23
Nitrate	mg/L	< 0.1	< 0.1	0.00
Nitrite	mg/L	< 0.01	< 0.01	0.00
Nitrite + Nitrate	mg/L	< 0.1	< 0.1	0.00
Potassium	mg/L	14	14	0.00
Sodium	mg/L	120	120	0.00
Sulphate	mg/L	15	15	0.00
Total Dissolved Solids	mg/L	950	752	23.27
1,1,1,2-Tetrachloroethane	mg/L	< 0.0002	< 0.001	0.00
1,1,1-Trichloroethane	mg/L	< 0.0001	< 0.0005	0.00
1,1,2,2-Tetrachloroethane	mg/L	< 0.0002	< 0.001	0.00
1,1,2-Trichloroethane	mg/L	< 0.0002	< 0.001	0.00
1,1-Dichloroethane	mg/L	< 0.0001	< 0.0005	0.00
1,1-Dichloroethylene	mg/L	< 0.0001	< 0.0005	0.00
1,2-Dichlorobenzene (o)	mg/L	< 0.0002	< 0.001	0.00
1,2-Dichloroethane	mg/L	< 0.0002	< 0.001	0.00
1,3,5-Trimethylbenzene	mg/L	< 0.0002	< 0.001	0.00
1,3-Dichlorobenzene (m)	mg/L	< 0.0002	< 0.001	0.00
1,4-Dichlorobenzene (p)	mg/L	< 0.0002	< 0.001	0.00
1,4-Dioxane	mg/L	0.0064	0.0061	4.80
Benzene	mg/L	< 0.0001	< 0.0005	0.00
Chlorobenzene	mg/L	< 0.0001	< 0.0005	0.00
Chloroethane	mg/L	0.0002	< 0.001	0.00
Chloromethane	mg/L	< 0.0005	< 0.0025	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0005	0.00
Dichloromethane	mg/L	< 0.0005	< 0.0025	0.00
Ethylbenzene	mg/L	< 0.0001	< 0.0005	0.00
m+p-Xylene	mg/L	< 0.0001	< 0.0005	0.00
o-Xylene	mg/L	< 0.0001	< 0.0005	0.00
Styrene	mg/L	< 0.0002	< 0.001	0.00
Tetrachloroethylene	mg/L	< 0.0001	< 0.0005	0.00
Toluene	mg/L	0.001	< 0.001	0.00
Total Xylenes	mg/L	< 0.0001	< 0.0005	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0005	0.00
Trichloroethylene	mg/L	< 0.0001	< 0.0005	0.00
Vinyl Chloride	mg/L	< 0.0002	< 0.001	0.00

Detailed Results from Field Duplicate vs. Regular Samples

Reading Name	Units	M56-2 2016-05-05 Regular Sample	M56-2 2016-05-05 Field Duplicate	RPD (%)
Alkalinity	mg/L	290	290	0.00
Ammonia	mg/L	< 0.15	< 0.15	0.00
Boron	mg/L	0.059	0.062	4.96
Calcium	mg/L	75	78	3.92
Chloride	mg/L	18	17	5.71
Conductivity	µS/cm	743	736	0.95
Dissolved Organic Carbon	mg/L	1.7	1.7	0.00
Iron	mg/L	< 0.1	< 0.1	0.00
Magnesium	mg/L	46	46	0.00
Manganese	mg/L	0.063	0.065	3.13
Nitrate	mg/L	< 0.1	< 0.1	0.00
Nitrite	mg/L	< 0.01	< 0.01	0.00
Nitrite + Nitrate	mg/L	< 0.1	< 0.1	0.00
Potassium	mg/L	2.8	2.9	3.51
Sodium	mg/L	12	12	0.00
Sulphate	mg/L	84	84	0.00
Total Dissolved Solids	mg/L	378	368	2.68
1,1,1,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1,1-Trichloroethane	mg/L	< 0.0001	< 0.0001	0.00
1,1,2,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1,2-Trichloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1-Dichloroethane	mg/L	< 0.0001	< 0.0001	0.00
1,1-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
1,2-Dichlorobenzene (o)	mg/L	< 0.0002	< 0.0002	0.00
1,2-Dichloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,3,5-Trimethylbenzene	mg/L	< 0.0002	< 0.0002	0.00
1,3-Dichlorobenzene (m)	mg/L	< 0.0002	< 0.0002	0.00
1,4-Dichlorobenzene (p)	mg/L	< 0.0002	< 0.0002	0.00
1,4-Dioxane	mg/L	< 0.001	< 0.001	0.00
Benzene	mg/L	< 0.0001	< 0.0001	0.00
Chlorobenzene	mg/L	< 0.0001	< 0.0001	0.00
Chloroethane	mg/L	< 0.0002	< 0.0002	0.00
Chloromethane	mg/L	< 0.0005	< 0.0005	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Dichloromethane	mg/L	< 0.0005	< 0.0005	0.00
Ethylbenzene	mg/L	< 0.0001	< 0.0001	0.00
m+p-Xylene	mg/L	< 0.0001	< 0.0001	0.00
o-Xylene	mg/L	< 0.0001	< 0.0001	0.00
Styrene	mg/L	< 0.0002	< 0.0002	0.00
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Toluene	mg/L	< 0.0002	< 0.0002	0.00
Total Xylenes	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	0.00

Detailed Results from Field Duplicate vs. Regular Samples

Reading Name	Units	M58-3 2016-05-05 Regular Sample	M58-3 2016-05-05 Field Duplicate	RPD (%)
Alkalinity	mg/L	310	310	0.00
Ammonia	mg/L	< 0.15	< 0.15	0.00
Boron	mg/L	0.012	< 0.01	0.00
Calcium	mg/L	84	84	0.00
Chloride	mg/L	4	3.8	5.13
Conductivity	µS/cm	632	634	0.32
Dissolved Organic Carbon	mg/L	1.1	1.1	0.00
Iron	mg/L	< 0.1	< 0.1	0.00
Magnesium	mg/L	31	32	3.17
Manganese	mg/L	< 0.002	< 0.002	0.00
Nitrate	mg/L	0.18	0.17	5.71
Nitrite	mg/L	< 0.01	< 0.01	0.00
Nitrite + Nitrate	mg/L	0.18	0.17	5.71
Potassium	mg/L	1.5	1.5	0.00
Sodium	mg/L	5.1	5	1.98
Sulphate	mg/L	38	38	0.00
Total Dissolved Solids	mg/L	276	284	2.86
1,1,1,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1,1-Trichloroethane	mg/L	< 0.0001	< 0.0001	0.00
1,1,2,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1,2-Trichloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1-Dichloroethane	mg/L	< 0.0001	< 0.0001	0.00
1,1-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
1,2-Dichlorobenzene (o)	mg/L	< 0.0002	< 0.0002	0.00
1,2-Dichloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,3,5-Trimethylbenzene	mg/L	< 0.0002	< 0.0002	0.00
1,3-Dichlorobenzene (m)	mg/L	< 0.0002	< 0.0002	0.00
1,4-Dichlorobenzene (p)	mg/L	< 0.0002	< 0.0002	0.00
1,4-Dioxane	mg/L	< 0.001	< 0.001	0.00
Benzene	mg/L	< 0.0001	< 0.0001	0.00
Chlorobenzene	mg/L	< 0.0001	< 0.0001	0.00
Chloroethane	mg/L	< 0.0002	< 0.0002	0.00
Chloromethane	mg/L	< 0.0005	< 0.0005	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Dichloromethane	mg/L	< 0.0005	< 0.0005	0.00
Ethylbenzene	mg/L	< 0.0001	< 0.0001	0.00
m+p-Xylene	mg/L	< 0.0001	< 0.0001	0.00
o-Xylene	mg/L	< 0.0001	< 0.0001	0.00
Styrene	mg/L	< 0.0002	< 0.0002	0.00
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Toluene	mg/L	< 0.0002	< 0.0002	0.00
Total Xylenes	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	0.00

Detailed Results from Field Duplicate vs. Regular Samples

Reading Name	Units	M82-2 2016-05-05 Regular Sample	M82-2 2016-05-05 Field Duplicate	RPD (%)
Alkalinity	mg/L	330	320	3.08
Ammonia	mg/L	0.24	0.25	4.08
Boron	mg/L	0.15	0.13	14.29
Calcium	mg/L	100	100	0.00
Chloride	mg/L	21	21	0.00
Conductivity	µS/cm	765	766	0.13
Dissolved Organic Carbon	mg/L	2.6	2.5	3.92
Iron	mg/L	< 0.1	< 0.1	0.00
Magnesium	mg/L	29	31	6.67
Manganese	mg/L	0.019	0.019	0.00
Nitrate	mg/L	< 0.1	< 0.1	0.00
Nitrite	mg/L	< 0.01	< 0.01	0.00
Nitrite + Nitrate	mg/L	< 0.1	< 0.1	0.00
Potassium	mg/L	3.8	3.7	2.67
Sodium	mg/L	18	17	5.71
Sulphate	mg/L	58	58	0.00
Total Dissolved Solids	mg/L	428	232	59.39
1,1,1,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1,1-Trichloroethane	mg/L	< 0.0001	< 0.0001	0.00
1,1,2,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1,2-Trichloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1-Dichloroethane	mg/L	< 0.0001	< 0.0001	0.00
1,1-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
1,2-Dichlorobenzene (o)	mg/L	< 0.0002	< 0.0002	0.00
1,2-Dichloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,3,5-Trimethylbenzene	mg/L	< 0.0002	< 0.0002	0.00
1,3-Dichlorobenzene (m)	mg/L	< 0.0002	< 0.0002	0.00
1,4-Dichlorobenzene (p)	mg/L	< 0.0002	< 0.0002	0.00
1,4-Dioxane	mg/L	< 0.001	< 0.001	0.00
Benzene	mg/L	< 0.0001	< 0.0001	0.00
Chlorobenzene	mg/L	< 0.0001	< 0.0001	0.00
Chloroethane	mg/L	< 0.0002	< 0.0002	0.00
Chloromethane	mg/L	< 0.0005	< 0.0005	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Dichloromethane	mg/L	< 0.0005	< 0.0005	0.00
Ethylbenzene	mg/L	< 0.0001	< 0.0001	0.00
m+p-Xylene	mg/L	< 0.0001	< 0.0001	0.00
o-Xylene	mg/L	< 0.0001	< 0.0001	0.00
Styrene	mg/L	< 0.0002	< 0.0002	0.00
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Toluene	mg/L	< 0.0002	< 0.0002	0.00
Total Xylenes	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	0.00

Detailed Results from Field Duplicate vs. Regular Samples

Reading Name	Units	M108 2016-05-05 Regular Sample	M108 2016-05-05 Field Duplicate	RPD (%)
Alkalinity	mg/L	470	470	0.00
Ammonia	mg/L	0.84	0.84	0.00
Boron	mg/L	0.26	0.27	3.77
Calcium	mg/L	100	110	9.52
Chloride	mg/L	66	66	0.00
Conductivity	µS/cm	1040	1030	0.97
Dissolved Organic Carbon	mg/L	5.5	5.5	0.00
Iron	mg/L	0.73	0.74	1.36
Magnesium	mg/L	33	35	5.88
Manganese	mg/L	0.072	0.073	1.38
Nitrate	mg/L	< 0.1	< 0.1	0.00
Nitrite	mg/L	< 0.01	< 0.01	0.00
Nitrite + Nitrate	mg/L	< 0.1	< 0.1	0.00
Potassium	mg/L	7.2	7.3	1.38
Sodium	mg/L	73	76	4.03
Sulphate	mg/L	3.7	4.1	10.26
Total Dissolved Solids	mg/L	604	594	1.67
1,1,1,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1,1-Trichloroethane	mg/L	< 0.0001	< 0.0001	0.00
1,1,2,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1,2-Trichloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,1-Dichloroethane	mg/L	0.00032	0.00034	6.06
1,1-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
1,2-Dichlorobenzene (o)	mg/L	< 0.0002	< 0.0002	0.00
1,2-Dichloroethane	mg/L	< 0.0002	< 0.0002	0.00
1,3,5-Trimethylbenzene	mg/L	< 0.0002	< 0.0002	0.00
1,3-Dichlorobenzene (m)	mg/L	< 0.0002	< 0.0002	0.00
1,4-Dichlorobenzene (p)	mg/L	< 0.0002	< 0.0002	0.00
1,4-Dioxane	mg/L	0.011	0.01	9.52
Benzene	mg/L	< 0.0001	< 0.0001	0.00
Chlorobenzene	mg/L	< 0.0001	< 0.0001	0.00
Chloroethane	mg/L	0.0047	0.005	6.19
Chloromethane	mg/L	< 0.0005	< 0.0005	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Dichloromethane	mg/L	< 0.0005	< 0.0005	0.00
Ethylbenzene	mg/L	< 0.0001	< 0.0001	0.00
m+p-Xylene	mg/L	< 0.0001	< 0.0001	0.00
o-Xylene	mg/L	< 0.0001	< 0.0001	0.00
Styrene	mg/L	< 0.0002	< 0.0002	0.00
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Toluene	mg/L	< 0.0002	< 0.0002	0.00
Total Xylenes	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Vinyl Chloride	mg/L	< 0.0002	0.0002	0.00

Detailed Results from Field Duplicate vs. Regular Samples

Reading Name	Units	S3 2016-05-02 Regular Sample	S3 2016-05-02 Field Duplicate	RPD (%)
1,4-Dioxane	mg/L	< 0.001	< 0.001	0.00
Alkalinity	mg/L	230	230	0.00
Ammonia	mg/L	< 0.15	< 0.15	0.00
Ammonia (unionized)	mg/L	< 0.00073	< 0.00073	0.00
Biochemical Oxygen Demand	mg/L	< 2	< 2	0.00
Boron	µS/cm	0.021	0.027	25.00
Cadmium	mg/L	< 0.0001	< 0.0001	0.00
Calcium	mg/L	76	72	5.41
Chemical Oxygen Demand	mg/L	23	21	9.09
Chloride	mg/L	18	18	0.00
Chromium (III)	mg/L	< 0.01	< 0.01	0.00
Chromium (Total)	mg/L	< 0.005	< 0.005	0.00
Chromium (VI)	mg/L	< 0.0005	< 0.0005	0.00
Cobalt	mg/L	< 0.0005	< 0.0005	0.00
Conductivity	mg/L	484	478	1.25
Copper	mg/L	< 0.002	< 0.002	0.00
Dissolved Oxygen	mg/L	9.65	9.65	0.00
Field Conductivity	mg/L	480	480	0.00
Field Temperature	mg/L	8.53	8.53	0.00
Hardness	mg/L	240	240	0.00
Iron	mg/L	< 0.1	< 0.1	0.00
Lead	mg/L	< 0.0005	< 0.0005	0.00
Magnesium	mg/L	11	10	9.52
Naphthalene	mg/L	< 0.0005	< 0.0005	0.00
Nickel	mg/L	< 0.001	< 0.001	0.00
Nitrate	mg/L	< 0.1	< 0.1	0.00
Nitrite	mg/L	< 0.01	< 0.01	0.00
Nitrite + Nitrate	mg/L	< 0.1	< 0.1	0.00
pH (Field)	mg/L	7.47	7.47	0.00
Phenols	mg/L	< 0.001	< 0.001	0.00
Phosphorus	mg/L	0.017	0.015	12.50
Potassium	mg/L	1.9	1.9	0.00
Sodium	mg/L	12	12	0.00
Sulphate	mg/L	< 1	< 1	0.00
Total Dissolved Solids	mg/L	270	244	10.12
Total Suspended Solids	mg/L	1	< 1	0.00
Zinc	mg/L	< 0.01	< 0.01	0.00

Detailed Results from Field Blank Samples - Spring 2016

Reading Name	Units	2016-05-05 Equipment Blank	2016-05-04 Field Blank (1)	2016-05-04 Field Blank (2)	2016-05-05 Field Blank (1)	2016-05-05 Field Blank (2)	2016-05-06 Field Blank	2016-05-02 Trip Blank	2016-05-03 Trip Blank	2016-05-04 Trip Blank	2016-05-05 Trip Blank	2016-05-06 Trip Blank
1,1,1,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,1,1-Trichloroethane	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
1,1,2,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,1,2-Trichloroethane	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,1-Dichloroethane	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
1,1-Dichloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
1,2-Dichlorobenzene (o)	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,2-Dichloroethane	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,3,5-Trimethylbenzene	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,3-Dichlorobenzene (m)	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,4-Dichlorobenzene (p)	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,4-Dioxane	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001					
Alkalinity	mg/L	< 1	2.2	< 1	< 1	< 1	1.5					
Ammonia	mg/L	< 0.15	< 0.15	< 0.15	0.41	< 0.15	< 0.15					
Benzene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Boron	mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01					
Calcium	mg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2					
Chloride	mg/L	< 1	< 1	< 1	< 1	< 1	< 1					
Chlorobenzene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Chloroethane	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chloromethane	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Conductivity	μS/cm	< 1	3	< 1	1	1	1					
Dichloromethane	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Dissolved Organic Carbon	mg/L	0.9	0.5	0.3	0.5	0.8	0.8					
Ethylbenzene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Iron	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1					
m+p-Xylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Magnesium	mg/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05					
Manganese	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002					
Nitrate	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1					
Nitrite	mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01					
Nitrite + Nitrate	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1					
o-Xylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Potassium	mg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2					
Sodium	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1					
Styrene	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Sulphate	mg/L	< 1	< 1	< 1	< 1	< 1	< 1					
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Toluene	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Total Dissolved Solids	mg/L	< 10	< 10	< 10	< 10	< 10	< 10					
Total Xylenes	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Trichloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002