WESA™

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REPORT

Spring 2014
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:

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

July 2014
WESA Project No.: K-B12321-00-02

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WASTE MANAGEMENT OF CANADA
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1. INTRODUCTION

The purpose of this document is to present results and to provide an interpretation of the data that were collected during the spring 2014 semi-annual 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. MONITORING PROGRAM

2.1 PROGRAM METHODOLOGY

The spring 2014 semi-annual monitoring event was conducted in accordance with Environmental Compliance Approval (ECA) number A371203, issued by MOE January 9, 2012 and amended May 3, 2013. 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 May 5 and 8, 2014. The activities completed included:

- Water levels were recorded at groundwater monitoring wells on May 5, 2014, except from groundwater monitors OW57 (damaged), and M60-1 and M60-4 (missed)[1];
- Pond water levels were measured on May 5, 2014 at the three ponds on the south side of the landfill;
- Leachate samples were collected from the North Chamber, South Chamber, and leachate monitoring wells LW-P1 and LW-P2 on May 5, 2014, and analyzed for the suite of leachate inorganic and general parameters and VOCs;
- Seven off-site domestic water supply wells were sampled on May 8, 2014[2]. Water samples from private supply wells were analyzed for groundwater inorganic and general parameters, and VOCs;
- A total of 44 groundwater monitors were sampled between May 6 and 8, 2014. Monitoring well M75 was sampled despite integrity concerns due to the presence of bentonite fines in the purge water. Three groundwater monitoring wells could not be

[1] For future monitoring events, the list of wells requiring water level measurements will be printed and provided to the field team in order to sign off that all water level measurements have been collected.
[2] 1121 Beechwood Road was not sampled as it is now on whole-house supplied water, and the well head (sampling point) is no longer accessible.

sampled because they (a) had insufficient recovery for sampling after purging (M29 and M39), or (b) were damaged (the standpipe in M58-4 was broken below the ground surface and contained bentonite). Samples were analyzed for the suite of groundwater inorganic and general parameters, and a subset of wells were analyzed for VOCs (Table 1);

- Surface water sampling was conducted on May 5, 2014 from locations S2, S3, S5, S6, S7 and S8R. No sample was collected from location S4R because it was dry. Surface water samples were analyzed for the surface water inorganic and general parameters;
- Landfill gas migration monitoring was conducted on May 6, 2014. Field measurements were made with a RKI Eagle probe calibrated to methane gas response at seven gas monitors (GM1, GM2, GM3, GM4-1, GM4-2, GM5 and GM6); and,
- Additionally, six field duplicate samples, three field blanks, and six trip blanks were collected during the spring sampling event, for a total of 15 Quality Assurance/Quality Control (QA/QC) samples. Deionised water for analysis of blank samples was supplied by the laboratory.

2.2 Water/Leachate 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 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.

Leachate samples were collected from the North Chamber and South Chamber collection sumps, as well as leachate monitoring wells LW-P1 and LW-P2. The North Chamber sample was collected by lowering a 20L bucket into the vault allowing it to fill and then lifting it to surface. The sample was placed in laboratory supplied preserved bottles by filling one of the non-preserved bottles and carefully decanting into the smaller sampling bottles. The South Chamber sample was collected from the pump out valve system at surface. The flow valve was partially opened to fill one of the non-preserved bottles provided by the laboratory, and used to decant into the other sampling bottles. Samples were collected from leachate monitoring wells LW-P1 and LW-P2 according to the groundwater sampling procedures described above.

All water/leachate 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

Prior to collecting groundwater samples, water levels were recorded to the nearest 0.01 m using an electronic water level meter. Table 3 presents groundwater elevation monitoring locations.

3. MONITORING RESULTS AND DISCUSSION

Background information concerning the site geology and hydrogeology was described in detail in the Site Conceptual Model (SCM) report[3], and is summarized here. The SCM report describes the 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 metres below the top of bedrock;

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

- 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 metres below top of bedrock;
- groundwater flows through a well-connected network of fractures in the upper 30 metres 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 connection 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 generally flows to the west from the western edge of the landfill, to the south-southeast from the southern edge of the landfill, to the southwest from the southwest corner of the landfill and north to northwest from the northwest portion 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 south, southeast and west of the landfill; and,
- flow directions in the intermediate bedrock zone are variable with season.

3.1 LEACHATE RESULTS

3.1.1 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 June 2014 was 10,957 m^3.

3.1.2 Liquid Levels in Leachate Wells

Liquid levels were measured in the two landfill leachate wells on May 5, 2014:

- The liquid level at LW-P1 was 148.60 metres above sea level (masl); and,
- The liquid level at LW-P2 was 155.76 masl.

3.1.3 Leachate Chemistry

The leachate chemistry results for May 5, 2014 are summarized in Table 4. 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. In general, the general and inorganic 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 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.

3.2 GROUNDWATER RESULTS

3.2.1 Groundwater Elevations

Groundwater elevations from program monitoring wells were measured on May 5, 2014 and are presented in Table 5. An inventory of monitoring well locations is provided in Appendix A. Groundwater elevation contours within the shallow and intermediate bedrock groundwater flow zones are shown on Figures 2 and 3, respectively. Groundwater flow directions were inferred by interpolating the hydraulically responsive wells screened within the corresponding groundwater flow zone, and are consistent with historical results.

The spring 2014 shallow groundwater contours (Figure 2) are consistent with historical results and shows 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. The northerly flowing groundwater is oriented toward Marysville Creek, while shallow groundwater to the south flows towards Beechwood Ditch. Shallow groundwater south of Beechwood Road flows locally to the north-northwest, towards an area of lower hydraulic head that may be influenced by the pond system in the south part of the site (see Figure 2). 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 while groundwater south of M96 flows to the south-southeast.

The spring 2014 intermediate bedrock zone contours are presented on Figure 3. Water levels from one intermediate bedrock monitor, M70-1, identified as "responsive" in the 2009 SCM report was not used to prepare the spring 2014 groundwater contours. The well was excluded from the interpolation on the basis that water levels were not static, believed to be recovering from past sampling events. The following non-responsive wells were also not included in the

contouring: M49-2 and M52-1. On the landfill property, groundwater in the intermediate bedrock flow zone generally flows to the north, west, and south relative to the landfill. Further to the south (i.e., south of Beechwood Road), the direction of groundwater flow within the intermediate flow zone is consistent with the regional direction of groundwater flow, towards the south.

3.2.2 Groundwater Analytical Results

Results from the groundwater monitoring wells sampled in spring 2014 are presented in Table 6a. Groundwater quality data for the spring 2014 monitoring event are similar to historical results, and discussed in this section.

Slightly elevated concentrations of a number of water quality parameters (e.g., alkalinity, chloride, conductivity, DOC, iron, manganese, sodium and/or TDS) were observed in some shallow groundwater zone monitoring wells located in close proximity to the landfill footprint (M41 to the south; M101 and M103 to the northwest). All VOCs were below the laboratory reporting limit, with the exception of the following low but detectable concentrations:

- 1,1-dichloroethane and chloroethane at M101;
- 1,1,1-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethylene, carbon tetrachloride, cis-1,2-dichloroethylene, tetrachloroethylene, toluene, trichloroethylene and vinyl chloride at M54-4; and,
- Toluene at M53-4.

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 impacts are identified at the property boundary in the shallow flow zone.

Analytical results from intermediate bedrock groundwater monitors sampled in spring 2014 are generally consistent with historical results. North of the landfill, elevated concentrations of water quality parameters are noted 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, further north of the footprint and along Marysville Creek (e.g., at M5-3, M75, M82-1, M82-2 and OW1), as well as north of the creek at M59-2, M59-3 and M59-4, the concentrations are lower and impacts from the landfill are not evident.

South of the landfill, slightly elevated concentrations of alkalinity, DOC, chloride and TDS at M71, M10-1 and M105 indicate impacts from the landfill. Other locations south and southeast of

the landfill with elevated concentrations (e.g., M49-1, M49-2 and M70-1) represent areas where the deeper saline groundwater is affecting the water quality. These pockets of more saline groundwater are isolated and do not reflect any widespread or significant upwelling of saline groundwater.

Elsewhere to the west (M58-3, M72, M74, M91-1 and M95-1), southwest (M56-2 and M80-1) and east (M52-1) of the landfill, the concentrations of water quality parameters are relatively low and continue to reflect background conditions.

VOCs were below the laboratory reporting limit at most intermediate bedrock monitors, with the exception of select VOCs such as 1,1-dichloroethane, 1,1-dichloroethylene, chlorobenzene, chloroethane, cis-1,2-dichloroethylene, styrene, vinyl chloride and/or BTEX, which were detected at the following locations: M6-3, M10-1, M49-2, M52-1, M70-1, M80-1, M91-1, M105, M107, OW1 and OW4.

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

3.2.3 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 6b). Proposed RULs for leachate indicator parameters and trigger monitors were presented in the EMP dated June 29, 2010. These will be re-examined as part of ongoing investigations, but are used here on an interim basis.

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

Slightly elevated concentrations of a number of water quality parameters (e.g boron, chloride, DOC, iron, manganese, sodium, TDS and/or benzene) were observed in some intermediate groundwater zone monitoring wells (M10-1, M49-1, M56-2, M70-1, M82-1, M82-2 and M107). All VOCs were below the respective RULs, with the exception of benzene for monitoring well M70-1.

3.2.4 Status of Monitoring Wells and Compliance with Ontario Regulation 903

During the spring 2014 monitoring event, the conditions of monitoring wells were inspected. Any repairs, such as new locks, labels or well caps, etc. were made as necessary. Watertight casings and seals remain in place at all monitors to ensure that surface water or foreign materials do not infiltrate the wells. The monitoring wells comply with the applicable sections of Ontario Regulation 903 relevant to "test holes" as defined in the regulation, as well as the overall intent of the regulation to protect groundwater supplies. With the exception of monitors M19, M58-4 and OW57 (damaged) as well as M75 (integrity of the bentonite seals in monitors suspect due to the presence of bentonite in purge water), all of the monitoring wells included in the EMP are currently active. It is recommended that these wells are decommissioned when a revised EMP is approved as they cannot be repaired.

3.2.5 Off-Site Domestic Water Supply Well Results

Results from off-site private water supply wells sampled in spring 2014 are presented in Table 7.

Comparison with Ontario Drinking Water Quality Objectives and Guidelines (ODWSOG, 2006) revealed all parameters were below their respective maximum acceptable concentrations (MAC) or interim maximum acceptable concentrations (IMAC) as specified in Table 2 of the ODWSOG, with the exception of lead at 1181 Beechwood Road and 1206 Beechwood Road and nitrate at 1144 Beechwood Road. The supply wells at these residences are not in use, and the groundwater is not being consumed. The elevated lead concentrations may be related to a lack of water flushing through the systems since the groundwater supplies are no longer in use. The elevated nitrate result at 1144 Beechwood Road appears anomalous since nitrate has not detected at this well previously, and may reflect possible surface-borne infiltration at the well. Some inorganic parameters (chloride, copper, DOC, hardness, iron, manganese, sodium and TDS) were measured at concentrations exceeding their respective aesthetic objective (AO) or operational guideline (OG) from Table 4 of the ODWSOG, at all locations except 1097 Beechwood Road. Figure 6 shows the alkalinity and ammonia results from the domestic well sampling program.

As was the case in previous sampling events, most volatile organic compounds (VOCs) in off-site supply wells were reported below the laboratory reporting limit (RL) at all locations, with the exception of some VOCs that were detected in measurable quantities above the RL at 1097, 1144, 1206, 1250, 1252 and 1264 Beechwood Road. In all cases, VOC concentrations were below the MAC or AO.

The moderate mineralization observed at the private water supply wells sampled (elevated hardness, TDS and sodium) is consistent with the local hydrogeological setting (carbonate aquifer

with documented saline groundwater at depth). The origin of the elevated concentration of some dissolved metals (iron, manganese) and DOC at some locations is currently under investigation.

The detected concentrations of VOCs, as well as the general and inorganic parameters, indicate potential impacts from contaminant source(s) at the following locations: 1144, 1181, 1206, 1250, 1252 and 1264 Beechwood. The sources may include one or more of the following: the landfill, the former abattoir, surface water infiltration, sewage systems, livestock and agricultural activities and the deep saline groundwater. In particular, the elevated chloride and sodium at 1144 Beechwood Road indicate interaction with deeper saline groundwater, and the elevated nitrate suggests impact from a nearby septic system and/or surface water infiltration.

3.2.6 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, submitted to the laboratory without identifying the location they were collected from. 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 three exceptions as summarized in Appendix B. All parameters that had RPD greater than 20% were measured at low concentrations (less than 5 times the RDL) and are therefore within acceptable margin of error. All parameters were near or below the RDL in equipment and field blanks.

3.3 Surface Water Results

3.3.1 Pond Elevations

Staff gauges were installed in the three ponds on the south side of the landfill labeled SG1, SG2 and SG3. Staff gauge locations and pond elevations measured May 5, 2014 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 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.

All surface water monitoring locations are shown on Figure 1. Sampling location S4R was not sampled in spring 2014 because it was dry.

3.3.3 Surface Water Flow Rates

Visual observations of surface water flow and general water characteristics for the spring sampling program are summarized in Table 8. In general, surface water flow rates were variable, ranging from 0.08 m^3/s (at S5) to 1.67 m^3/s (at S3).

3.3.4 Surface Water Analytical Results

The results from the surface water locations sampled in spring 2014 are presented in Table 9, and are similar to historical results.

Surface water quality from samples collected in spring 2014 was compared to the Provincial Water Quality Objectives (PWQO) (see Table 9). Background surface water quality was monitored from upstream station S2 for Marysville Creek, while background surface water quality for Beechwood Ditch was monitored at station S5. 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. The retention pond located south of the landfill was reconstructed in 2008 and now has an increased storage volume and, as a result, an increased retention time.

All constituents analysed in surface water samples were below their respective PWQO, with the exception of phosphorous and iron at upstream location S5 in Beechwood Ditch. It is noted that there were no exceedances of any PWQOs in the samples collected along Marysville Creek.

Results from spring 2014 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 potassium which was measured at low concentrations (less than 5 times the RDL) and is therefore within acceptable margin of error.

3.4 SUBSURFACE GAS SAMPLING

On May 6, 2014, WESA 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 10. Measurements ranged from 0 to 25 ppm, well below the LEL for methane of 5% by volume in air, or 50,000 ppm.

4. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The spring 2014 monitoring program included the collection of groundwater, leachate and surface water samples, as well as landfill gas monitoring, in accordance with the site groundwater monitoring requirements outlined in the revised EMP dated June 29, 2010, as specified in the Environmental Compliance Approval (ECA) issued on January 9, 2012 and amended May 3, 2013. Per the settlement agreement with CCCTE and the ERT Order issued April 26, 2013, the EMP is to be revised upon completion of the investigation that is currently underway at the site.

The following were completed between May 5 and 8, 2014:

- Water levels were measured from 71 groundwater monitoring wells: 39 in the shallow groundwater flow zone and 32 in the intermediate bedrock flow zone.
- Forty-four groundwater monitors (17 completed in the shallow zone and 27 in the intermediate bedrock) were sampled for analytical testing.
- Seven off-site domestic water supply wells located along Beechwood Road were sampled for analytical testing.
- Six surface water locations were sampled for analytical testing.

- A total of 15 Quality Assurance/Quality Control (QA/QC) samples were collected (six field duplicates, three field blanks and six trip blanks).
- Subsurface gas concentrations were recorded from seven on-site gas monitoring wells.

4.1 GROUNDWATER

- Groundwater flow directions interpreted from monitors known to be hydraulically active were consistent with historical flownets:
  - Shallow groundwater flow 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).
  - Groundwater in the intermediate bedrock flow zone generally flows to the north, west, and south relative to the landfill.
- Groundwater quality data from spring 2014 are generally consistent with historical results.
- Slightly elevated concentrations of a number of water quality parameters are seen in the shallow groundwater zone northwest and north of the Phase 1 landfill footprint. In other areas of the site, 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 south and immediately north of the landfill relative to the concentrations west and east of the landfill. The higher concentrations are downgradient from the landfill footprint and occur in monitoring wells that are known to be hydraulically connected to each other.
- Further investigation of the groundwater conditions south of the landfill is underway in order to better define and delineate impacts from the landfill and to define the extent of a contaminant attenuation zone.
- 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.
- It is recommended that the following groundwater monitoring wells be replaced, upgraded or removed from the monitoring program for the reasons stated below, as these wells have become unreliable for water level and/or quality monitoring as a result of these issues:
  - M29 and M39: low recovery small diameter (2.54 cm) overburden monitors that are often dry and/or cannot be sampled after being purged dry;
  - M75: integrity concerns with the bentonite seal (presence of bentonite in purge water); and

- M19, M58-4 and OW57: damaged monitors.

Repair, upgrade or replacement of these wells will be subject to the outcome from the ongoing investigation, and will be documented in the revised EMP (as per Condition 8.5(b) of the Amended ECA.

4.2 SURFACE WATER

- The concentrations observed are within the range of historical monitoring results.
- The concentrations of total phosphorus and iron were above PWQO at upstream location S5 in Beechwood Ditch.
- The results indicate that surface water runoff from the site or discharge of contaminated groundwater is not affecting Marysville Creek or Beechwood Ditch.

4.3 SUBSURFACE GAS

- Measurements for methane gas ranged from 0 to 25 ppm, well below the LEL of 5% by volume in air, or 50,000 ppm.

5. LIMITING CONDITIONS

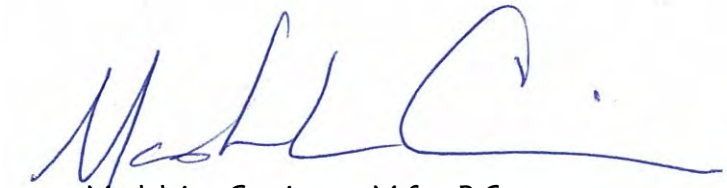
The spring 2014 monitoring program involved the collection of leachate, groundwater (from on-site monitoring wells and off-site domestic supply wells) and surface water for analyses at the site monitoring locations. The data collected during this investigation represent the conditions at the sampled 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.

WESA provides no assurances regarding changes to conditions subsequent to the time of the assessment. WESA 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.

This report has been prepared for Waste Management of Canada. Any use a third party makes of this report, any reliance on the report, or decisions based upon the report, are the responsibility of those third parties unless authorization is received from WESA in writing. WESA accepts no responsibility for any loss or damages suffered by any unauthorized third party as a result of decisions made or actions taken based on this report.

Respectfully submitted,
WESA, a division of BluMetric Environmental Inc.



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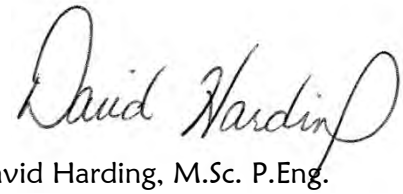

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TABLES

Table 1: Summary of Environmental Monitoring Program

Monitoring Locations		Parameter Suite	Monitoring Frequency
Shallow Groundwater Flow Zone Monitors			
M12, M14, M15, M16, M18, M19, M23, M27, M28, M29, M30, M31, M35, M38, M39, M41, M47-3, M53-4, M54-4, M58-4, M60-4, M66-2, M67-2, M68-4, M70-3, M77, M80-2, M81, M87-2, M88-2, M89-2, M96, M97, M98, M99-2, M100, M101, M102, M103, OW37-s, OW57		Groundwater Elevations	Spring, Summer and Fall
M29, M39, M41, M53-4, M54-4, M58-4, M66-2, M67-2, M68-4, M70-3, M80-2, M81, M87-2, M96, M97, M99-2, M101, M102, M103, OW37-s		Groundwater Inorganic & General	Semi-annual: Spring and Fall
M41, M58-4, M96, M97, M53-4, M54-4, M66-2, M67-2, M70-3, M80-2, M87-2, M101, M102, M103, OW37-s		VOCs	Annual: Spring
Intermediate Bedrock Groundwater Flow Zone Monitors			
M3A-3, M9-3, M10-1, M49-1, M49-2, M50-3, M52-1, M56-2, M58-3, M59-2, M59-3, M59-4, M60-1, M63-2, M64-2, M70-1, M71, M72, M73, M74, M80-1, M82-1, M82-2, M91-1, M95-1, M105, M106, M107*, M108, OW1, OW4, OW54-i, OW54-d		Groundwater Elevations	Spring, Summer and Fall
M5-3, M6-3, M9-3, M10-1, M49-1, M49-2, M52-1, M56-2, M58-3, M59-2, M59-3, M59-4, M70-1, M71, M72, M74, M75, M80-1, M82-1, M82-2, M91-1, M95-1, M105, M107*, OW1, OW4, OW54-d		Groundwater Inorganic & General	Semi-annual: Spring and Fall
M5-3, M6-3, M9-3, M10-1, M49-1, M49-2, M52-1, M56-2, M59-3, M70-1, M74, M75, M80-1, M82-1, M82-2, M91-1, M95-1, OW1, OW4		VOCs	Annual: Spring
Surface Water Sampling Locations			
Beechwood Ditch	S4R, S5 and S8R	Surface Water Inorganic and General	Semi-annual: Spring and Fall
Marysville Creek	S2, S3, S6 and S7	Surface Water Inorganic and General	Semi-annual: Spring and Fall
Leachate Monitoring Locations			
North Chamber, South Chamber, LW-P1 and LW-P2		Leachate Inorganic & General VOCs, NDMA	Annual: Spring
Landfill Gas Monitoring Wells			
GM1, GM3, GM4-1, GM4-2, GM5, GM6		% methane by volume	Semi-annual: Spring and Fall
Off-site Domestic Water Supply Wells			
1097 Beechwood Road 1121 Beechwood Road 1144 Beechwood Road 1181 Beechwood Road	1206 Beechwood Road 1250 Beechwood Road 1252 Beechwood Road 1264 Beechwood Road	Groundwater Inorganic & General, VOCs	Semi-annual: Spring and Fall

* M107: Originally labelled as M106 in EMP dated June 29, 2010

Table 2. Analytical Parameters for Water and Leachate Samples

Groundwater Inorganic and General Parameters		
Alkalinity	Conductivity	Nitrite
Ammonia (total)	Copper	pH
Arsenic	Dissolved organic carbon	Phenols
Barium	Hardness	Phosphorus (total)
Biological oxygen demand	Iron	Potassium
Boron	Lead	Sodium
Cadmium	Magnesium	Sulphate
Calcium	Manganese	Total dissolved solids
Chemical oxygen demand	Mercury	Total Kjeldahl Nitrogen
Chloride	Naphthalene	Zinc
Chromium (total)	Nitrate	
Surface Water Inorganic and General Parameters		
Alkalinity	Copper	Total dissolved solids
Ammonia (total)	Cyanide (free)	Total Kjeldahl nitrogen
Arsenic	Hardness	Total phosphorus
Barium	Iron	Total suspended solids
Biological oxygen demand	Lead	Un-ionized ammonia
Boron	Magnesium	Zinc
Cadmium	Mercury	
Calcium	Naphthalene	
Chemical oxygen demand	Nickel	*Field measured:*
Chloride	Nitrate	conductivity
Chromium (total)	Nitrite	dissolved oxygen
Chromium (III)	Phenols	estimated flow rate
Chromium (VI)	Potassium	pH
Cobalt	Sodium	temperature
Conductivity	Sulphate	
Leachate Inorganic and General Parameters		
Alkalinity	Conductivity	Nitrite
Ammonia (total)	Copper	pH
Arsenic	Dissolved organic carbon	Phenols
Barium	Hardness	Phosphorus (total)
Biological oxygen demand	Iron	Potassium
Boron	Lead	Sodium
Cadmium	Magnesium	Sulphate
Calcium	Manganese	Total dissolved solids
Chemical oxygen demand	Mercury	Total Kjeldahl Nitrogen
Chloride	Naphthalene	Zinc
Chromium (total)	Nickel	
Cobalt	Nitrate	
Volatile Organic Compounds (VOCs)		
1,1,1,2-Tetrachloroethane	Benzene	Ethylbenzene
1,1,1-Trichloroethane	Bromodichloromethane	m&p-Xylene
1,1,2,2-Tetrachloroethane	Bromoform	o-Xylene
1,1,2-Trichloroethane	Bromomethane	Styrene
1,1-Dichloroethane	Carbon tetrachloride	Toluene
1,1-Dichloroethylene	Chlorobenzene	Trans-1,2-Dichloroethylene
1,2-Dibromoethane	Chloroethane	Trans-1,3-Dichloropropylene
1,2-Dichlorobenzene	Chloroform	Tetrachloroethylene
1,2-Dichloroethane	Chloromethane	Trichloroethylene
1,2-Dichloropropane	Cis-1,2-Dichloroethylene	Trichlorofluoromethane
1,3,5-Trimethylbenzene	Cis-1,3-Dichloropropylene	Vinyl chloride
1,3-Dichlorobenzene	Dibromochloromethane	
1,4-Dichlorobenzene	Dichloromethane (methylene chloride)	

Table 3. Groundwater Elevation Monitoring Locations

Location	Shallow Groundwater Flow Zone			Intermediate Groundwater Flow Zone		
West of landfill footprint	M27	M58-4	M98	M3A-3	M59-4	M82-1
	M28	M67-2	M99-2	M56-2	M72	M82-2
	M29	M87-2	M100	M58-3	M73	M91-1
	M30	M88-2	M101	M59-2	M74	M95-1
	M31	M89-2	M102	M59-3		
	M38	M97	OW37-s			
North of landfill footprint	M35	M66-2		M60-1		
	M39	M103		OW1		
	M60-4			OW4		
South of landfill footprint	M12	M18	M80-2	M9-3	M64-2	M105
	M14	M41	M81	M10-1	M71	M106
	M15	M53-4	OW57	M49-1	M80-1	M107*
	M16	M54-4		M49-2	OW54-i	M108
				M63-2	OW54-d	
East of landfill footprint	M19	M68-4	M96	M50-3		
	M23	M70-3		M52-1		
	M47-3	M77		M70-1		

* M107: Originally labelled as M106 in EMP dated June 29, 2010

Table 4: Leachate Chemistry Results - May 5, 2014

		North Chamber 2014-05-05	South Chamber 2014-05-05	LW-P1 2014-05-05	LW-P2 2014-05-05
General and Inorganic Parameters					
Alkalinity	mg/L	1900	2600	5500	7100
Ammonia	mg/L	212	428	973	1380
Arsenic	mg/L	0.004	0.0053	0.079	0.041
Barium	mg/L	0.3	0.33	1.9	0.7
Biochemical Oxygen Demand	mg/L	10	8	140	630
Boron	mg/L	2.1	3.6	16	20
Cadmium	mg/L	< 0.0001	< 0.0001	< 0.0005	< 0.0005
Calcium	mg/L	220	160	82	58
Chemical Oxygen Demand	mg/L	340	390	3300	4500
Chloride	mg/L	470	920	2700	3100
Chromium	mg/L	0.019	0.031	0.13	0.21
Cobalt	mg/L	0.0092	0.014	0.076	0.085
Conductivity	µS/cm	4830	7050	17000	21900
Copper	mg/L	0.0048	0.0052	< 0.01	< 0.01
Dissolved Organic Carbon	mg/L	110	130	1100	1000
Hardness	mg/L	870	790	550	720
Iron	mg/L	17	3.9	3.2	2.9
Lead	mg/L	0.0017	0.00088	0.026	0.014
Magnesium	mg/L	100	120	88	140
Manganese	mg/L	1.1	0.43	0.066	0.068
Mercury	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Naphthalene	mg/L	0.011	< 0.0025	< 0.25	0.1
Nickel	mg/L	0.043	0.089	0.27	0.37
Nitrate	mg/L	< 0.5	< 0.5	< 2	< 2
Nitrite	mg/L	< 0.05	< 0.05	< 0.2	< 0.2
pH (Lab)	unitless	7.05	7.36	7.86	7.78
Phenols	mg/L	0.11	0.21	0.37	0.35
Phosphorus (total)	mg/L	0.83	1.8	5.8	6.9
Potassium	mg/L	140	210	520	900
Sodium	mg/L	460	770	2100	2700
Sulphate	mg/L	1	1	< 20	< 20
Total Dissolved Solids	mg/L	2120	2960	7610	9180
Total Kjeldahl Nitrogen	mg/L	220	360	1100	1400
Zinc	mg/L	0.021	0.01	0.15	0.12

Table 4: Leachate Chemistry Results - May 5, 2014

		North Chamber 2014-05-05	South Chamber 2014-05-05	LW-P1 2014-05-05	LW-P2 2014-05-05
Volatile Organic Compounds (VOCs)					
1,1,1,2-Tetrachloroethane	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
1,1,1-Trichloroethane	mg/L	< 0.001	< 0.0005	< 0.05	< 0.005
1,1,2,2-Tetrachloroethane	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
1,1,2-Trichloroethane	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
1,1-Dichloroethane	mg/L	0.0022	0.00095	< 0.05	< 0.005
1,1-Dichloroethylene	mg/L	< 0.001	< 0.0005	< 0.05	< 0.005
1,2-Dibromoethane	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
1,2-Dichlorobenzene (o)	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
1,2-Dichloroethane	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
1,2-Dichloropropane	mg/L	< 0.001	< 0.0005	< 0.05	< 0.005
1,3,5-Trimethylbenzene	mg/L	0.0043	0.0031	< 0.1	0.012
1,3-Dichlorobenzene (m)	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
1,4-Dichlorobenzene (p)	mg/L	0.0069	0.006	< 0.1	0.011
Benzene	mg/L	0.0061	0.0023	< 0.05	< 0.005
Bromodichloromethane	mg/L	< 0.001	< 0.0005	< 0.05	< 0.005
Bromoform	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
Bromomethane	mg/L	< 0.005	< 0.0025	< 0.25	< 0.025
Carbon Tetrachloride	mg/L	< 0.001	< 0.0005	< 0.05	< 0.005
Chlorobenzene	mg/L	0.004	0.00063	< 0.05	< 0.005
Chloroethane	mg/L	0.0038	0.0013	< 0.1	< 0.01
Chloroform	mg/L	< 0.001	< 0.0005	< 0.05	< 0.005
Chloromethane	mg/L	< 0.005	< 0.0025	< 0.25	< 0.025
Cis-1,2-Dichloroethylene	mg/L	< 0.001	< 0.0005	< 0.05	0.0058
Cis-1,3-Dichloropropylene	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
Dibromochloromethane	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
Dichloromethane	mg/L	0.021	0.02	< 0.25	< 0.025
Ethylbenzene	mg/L	0.027	< 0.0005	< 0.05	0.052
m+p-Xylene	mg/L	0.066	0.015	< 0.05	0.1
N-nitrosodimethylamine (NDMA)	mg/L	0.000016	0.000008	0.000017	< 0.00008
o-Xylene	mg/L	0.021	0.014	< 0.05	0.046
Styrene	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
Tetrachloroethylene	mg/L	< 0.001	< 0.0005	< 0.05	< 0.005
Toluene	mg/L	0.029	0.0029	< 0.1	0.25
Trans-1,2-dichloroethylene	mg/L	< 0.001	< 0.0005	< 0.05	< 0.005
Trans-1,3-dichloropropylene	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
Trichloroethylene	mg/L	< 0.001	< 0.0005	< 0.05	< 0.005
Trichlorofluoromethane	mg/L	< 0.002	< 0.001	< 0.1	< 0.01
Vinyl Chloride	mg/L	< 0.002	< 0.001	< 0.1	< 0.01

Table 5: Groundwater Elevations - May 5, 2014

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	125.65	M31	124.23	M67-2	122.84	M98	129.89
M14	127.24	M35	124.37	M68-4	124.30	M99-2	130.66
M15	125.56	M38	125.89	M70-3	127.31	M100	125.45
M16	124.43	M39	123.81	M77	126.85	M101	124.12
M18	127.53	M41	125.61	M80-2	123.65	M102	124.28
M19	129.22	M47-3	124.80	M81	124.59	M103	123.95
M23	127.48	M53-4	125.54	M87-2	124.65	OW37-s	121.81
M27	126.47	M54-4	124.43	M88-2	128.72	OW57	damaged
M28	126.54	M58-4	125.22	M89-2	129.87		
M29	124.00	M60-4	missed	M96	129.19		
M30	124.29	M66-2	123.37	M97	125.72		
Intermediate Bedrock Groundwater Flow Zone							
M3A-3	124.93	M58-3	123.53	M72	123.30	M105	124.36
M9-3	124.65	M59-2	123.59	M73	123.36	M106	123.45
M10-1	122.52	M59-3	123.55	M74	123.84	M107	124.20
M49-1	123.60	M59-4	123.55	M80-1	123.56	M108	121.18
M49-2	120.79	M60-1	missed	M82-1	122.86	OW1	122.84
M50-3	124.43	M63-2	121.48	M82-2	123.19	OW4	123.80
M52-1	111.82	M64-2	119.01	M91-1	123.45	OW54-d	124.02
M56-2	123.50	M70-1	120.50	M95-1	123.39	OW54-i	124.05
		M71	124.17				

Table 6a: Groundwater Quality Results - May 6 - 8, 2014

Name	Date	Alkalinity	Ammonia	Arsenic	Barium	Biochemical Oxygen Demand	Boron	Cadmium	Calcium	Chemical Oxygen Demand	Chloride	Chromium	Cobalt	Conductivity	Copper	Dissolved Organic Carbon	Hardness	Iron	Lead	Magnesium	Manganese	Mercury	Naphthalene	Nickel	Nitrate	Nitrite	pH (Lab)	Phenols	Phosphorus (total)	Potassium	Sodium	Sulphate	Total Dissolved Solids	Total Kjeldahl Nitrogen	Zinc
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µS/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	unitless	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Shallow Groundwater Flow Zone [1]																																			
M41	06/05/2014	450	< 0.15	< 0.001	0.078	< 2	0.06	< 0.0001	170	< 4	190	< 0.005	0.00086	1570	0.0013	4.2	750	0.55	< 0.0005	82	0.073	< 0.0002	< 0.0005	0.0052	< 0.1	< 0.01	7.67	< 0.001	< 0.06	12	43	90	864	< 0.7	< 0.005
M53-4	06/05/2014	420	0.44	< 0.001	0.06	< 2	< 0.01	< 0.0001	140	15	3	< 0.005	0.0012	897	< 0.001	5	450	0.77	< 0.0005	22	0.63	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	7.79	0.011	0.14	0.41	28	66	518	1.6	< 0.005
M54-4	06/05/2014	410	< 0.15	< 0.001	0.19	< 2	0.041	< 0.0001	150	< 4	86	0.0083	< 0.0005	1080	< 0.001	2.4	480	< 0.1	< 0.0005	28	0.012	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	7.71	< 0.001	0.42	1.4	61	53	602	< 0.7	0.031
M66-2	07/05/2014	310	< 0.15	< 0.001	0.02	< 2	0.44	< 0.0001	140	9.6	120	0.0085	< 0.0005	1420	< 0.001	2.5	540	< 0.1	< 0.0005	49	0.0094	< 0.0002	< 0.0005	< 0.001	0.11	< 0.01	7.99	< 0.001	0.1	5	120	280	958	< 0.7	< 0.005
M67-2	07/05/2014	360	0.73	< 0.001	0.23	< 2	0.75	< 0.0001	48	< 4	6	< 0.005	< 0.0005	658	< 0.001	1.7	230	0.41	< 0.0005	26	0.039	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	8.2	0.0013	0.08	7.4	61	5	378	1.1	< 0.005
M68-4	07/05/2014	350	< 0.15	< 0.001	0.073	< 2	< 0.01	< 0.0001	130	27	13	0.02	< 0.0005	731	< 0.001	2.8	390	0.31	< 0.0005	18	0.086	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	7.82	< 0.001	1.8	0.21	16	32	434	2	< 0.005
M70-3	08/05/2014	410	< 0.15	0.0021	0.03	< 2	0.011	< 0.0001	150	15	70	< 0.005	0.0036	1110	< 0.001	5.5	570	4.6	< 0.0005	47	0.27	< 0.0002	< 0.0005	0.0035	< 0.1	< 0.01	7.86	< 0.001	0.07	0.56	25	100	636	< 0.7	< 0.005
M80-2	07/05/2014	320	< 0.15	< 0.001	0.11	< 2	0.053	< 0.0001	96	< 4	75	0.005	< 0.0005	870	< 0.001	2.2	450	< 0.1	< 0.0005	52	< 0.002	< 0.0002	< 0.0005	0.0016	< 0.1	< 0.01	8.04	< 0.001	0.18	3.9	16	38	558	< 0.7	< 0.005
M81	07/05/2014	360	< 0.15	< 0.001	0.22	< 2	0.028	< 0.0001	110	< 4	73	< 0.005	< 0.0005	932	< 0.001	1.4	510	< 0.1	< 0.0005	55	0.015	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	7.99	< 0.001	0.06	2.2	11	39	570	< 0.7	< 0.005
M87-2	08/05/2014	220	< 0.15	0.0011	0.052	< 2	0.024	< 0.0001	55	10	30	0.0081	< 0.0005	588	< 0.001	1.9	270	< 0.1	< 0.0005	34	0.0046	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	8.13	< 0.001	0.53	1.8	13	49	348	0.9	0.0067
M96	08/05/2014	320	< 0.15	< 0.001	0.095	< 2	0.062	< 0.0001	68	4.3	5	< 0.005	< 0.0005	670	< 0.001	3.6	300	< 0.1	< 0.0005	32	< 0.002	< 0.0002	< 0.0005	< 0.001	1.75	< 0.01	8.09	< 0.001	0.08	4.5	32	37	370	< 0.7	< 0.005
M97	08/05/2014	220	< 0.15	0.001	0.073	< 2	0.052	0.00011	32	< 4	6	< 0.005	< 0.0005	532	< 0.001	3.7	200	< 0.1	< 0.0005	29	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	8.25	< 0.001	0.11	1.9	36	52	300	< 0.7	< 0.005
M99-2	07/05/2014	300	0.23	0.0015	0.043	< 2	0.077	< 0.0001	70	11	27	0.012	< 0.0005	848	< 0.001	2.7	440	0.52	< 0.0005	65	0.018	< 0.0002	< 0.0005	< 0.001	< 0.1	0.012	8.11	< 0.001	2.4	2.5	18	120	524	2	< 0.005
M101	07/05/2014	420	< 0.15	< 0.001	0.15	< 2	0.037	< 0.0001	170	< 4	83	< 0.005	< 0.0005	1120	< 0.001	3.3	640	< 0.1	< 0.0005	52	0.015	< 0.0002	< 0.0005	0.0014	< 0.1	0.022	7.93	< 0.001	0.06	2.7	16	77	710	< 0.7	< 0.005
M102	08/05/2014	440	< 0.15	< 0.001	0.12	< 2	0.013	< 0.0001	160	12	31	< 0.005	0.0025	962	< 0.001	1.1	510	0.8	< 0.0005	27	0.28	< 0.0002	< 0.0005	0.002	< 0.1	< 0.01	7.82	< 0.001	0.06	1.8	23	48	576	< 0.7	0.0051
M103	07/05/2014	710	< 0.15	< 0.001	0.13	< 2	0.11	< 0.0001	120	9.4	130	< 0.005	< 0.0005	1690	0.0014	3.4	610	< 0.1	< 0.0005	73	0.0062	< 0.0002	< 0.0005	0.0087	0.36	< 0.01	7.95	< 0.001	0.05	2.5	110	39	1030	< 0.7	0.016
OW37-s	06/05/2014	46	< 0.15	< 0.001	0.018	< 2	0.013	< 0.0001	9.7	< 4	6	< 0.005	< 0.0005	110	< 0.001	17	35	< 0.1	< 0.0005	2.7	0.037	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	7.74	< 0.001	< 0.06	2.4	7.3	1	30	< 0.7	< 0.005
Intermediate BedrockGroundwater Flow Zone																																			
M5-3	06/05/2014	430	1.31	< 0.001	0.16	10	1.1	< 0.0001	37	24	40	< 0.005	< 0.0005	958	< 0.001	1.3	190	< 0.1	< 0.0005	25	0.0021	< 0.0002	< 0.0025	< 0.001	< 0.1	< 0.01	8.01	0.044	0.08	13	140	12	510	1.2	< 0.005
M6-3	07/05/2014	1600	5.84	< 0.002	1.7	< 2	0.021	< 0.0001	1100	140	1300	0.022	< 0.0025	10100	0.0022	39	2700	< 0.1	0.0013	< 0.05	< 0.002	< 0.0002	< 0.0013	0.0068	< 0.1	< 0.01	12.3	0.018	0.07	59	550	36	5000	8	< 0.005
M9-3	06/05/2014	270	1.18	< 0.001	0.043	2	0.84	< 0.0001	35	< 4	69	< 0.005	< 0.0005	731	< 0.001	1.5	180	0.27	< 0.0005	23	0.024	< 0.0002	< 0.0013	< 0.001	< 0.1	< 0.01	8.13	< 0.001	0.05	14	77	5	358	1.2	< 0.005
M10-1	08/05/2014	360	0.63	0.0012	0.14	< 2	0.23	< 0.0001	86	8.6	45	< 0.005	< 0.0005	814	< 0.001	5.1	300	11	< 0.0005	21	0.4	< 0.0002	< 0.0005	0.0024	< 0.1	< 0.01	7.85	< 0.001	0.06	4.4	54	8	406	1	< 0.005
M49-1	08/05/2014	400	0.9	< 0.001	0.054	3	0.95	< 0.0001	12	9.1	340	< 0.005	< 0.0005	1940	< 0.002	4.2	53	< 0.1	< 0.0005	5.4	0.01	< 0.0002	< 0.0005	0.0012	< 0.1	< 0.01	8.49	< 0.001	0.06	7.4	400	32	1030	1.1	< 0.005
M49-2	07/05/2014	760	1.36	< 0.001	0.041	64	2.2	< 0.0001	11	84	270	< 0.005	< 0.0005	2320	< 0.002	2	61	< 0.1	< 0.0005	7.9	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	8.73	0.13	0.06	11	490	38	1320	4	< 0.005
M52-1	08/05/2014	400	1.41	< 0.001	0.29	10	1.4	< 0.0001	25	< 4	200	< 0.005	< 0.0005	1450	< 0.001	4.6	130	0.77	< 0.0005	16	0.0067	< 0.0002	< 0.001	< 0.001	< 0.1	< 0.01	8.15	< 0.001	< 0.03	12	260	1	778	1.7	0.0081
M56-2	08/05/2014	290	0.17	< 0.001	0.19	< 2	0.077	< 0.0001	82	< 4	20	< 0.005	< 0.0005	758	< 0.001	1.5	390	< 0.1	< 0.0005	46	0.055	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	8.16	< 0.001	0.04	3	12	90	424	< 0.7	0.012
M58-3	06/05/2014	310	< 0.15	< 0.001	0.17	< 2	0.013	< 0.0001	89	< 4	4	< 0.005	< 0.0005	642	< 0.001	1	360	< 0.1	< 0.0005	33	< 0.002	< 0.0002	< 0.0005	< 0.001	0.18	< 0.01	7.9	< 0.001	< 0.03	1.7	5.4	39	312	< 0.7	< 0.005
M59-2	07/05/2014	420	0.59	< 0.001	0.21	2	0.22	< 0.0001	130	23	63	< 0.005	< 0.0005	1010	< 0.001	7.5	480	< 0.1	< 0.0005	35	0.014	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	7.97	0.0076	< 0.03	5.1	34	35	624	10	< 0.005
M59-3	07/05/2014	260	< 0.15	< 0.001	0.1	< 2	0.04	< 0.0001	110	8.8	36	< 0.005	< 0.0005	700	< 0.001	3.2	330	< 0.1	< 0.0005	13	0.022	< 0.0002	< 0.0005	< 0.001	0.63	< 0.01	7.93	< 0.001	< 0.03	2.2	22	48	422	< 0.7	< 0.005
M59-4	07/05/2014	290	0.39	0.0033	0.11	< 2	0.43	< 0.0001	76	5.6	8	< 0.005	< 0.0005	720	< 0.001	2.4	330	2.5	< 0.0005	33	0.023	< 0.0002	< 0.0005	< 0.001	0.14	0.044	8.03	< 0.001	0.11	5.9	27	86	400	1.3	< 0.005
M70-1	08/05/2014	330	4.82	< 0.01	0.063	8	1.8	< 0.001	120	150	13000	< 0.05	< 0.005	34700	< 0.01	4.6	680	2.4	< 0.005	92	0.069	< 0.0002	< 0.005	< 0.01	< 0.1	< 0.01	7.49	0.0083	0.74	18	1100	490	15700	7	< 0.05
M71	06/05/2014	610	1.38	< 0.001	0.044	9	0.45	< 0.0001	160	26	180	< 0.005	< 0.0005	1700	< 0.001	8.1	620	0.33	< 0.0005	50	0.027	< 0.0002	< 0.0005	0.0079	< 0.1	< 0.01	7.53	0.0046	0.08	11	130	7	896	2	< 0.005
M72	07/05/2014	270	0.57	< 0.001	0.16	12	0.38	< 0.0001	60	20	34	< 0.005	< 0.0005	633	< 0.001	2.8	280	< 0.1	< 0.0005	33	0.0026	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	8.16	0.038	< 0.03	7.4	18	29	354	0.9	< 0.005
M74	07/05/2014	300	1.27	< 0.001	0.11	2	0.97	< 0.0001	39	10	39	< 0.005	< 0.0005	826	< 0.001	3.1	190	< 0.1	< 0.0005	23	0.019	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	8.23	0.0015	0.21	13	97	68	482	1.8	< 0.005
M75	07/05/2014	460	2.08	< 0.001	0.071	18	1.2	0.00044	37	97	76	0.009	< 0.0005	1130	< 0.001	5.1	180	< 0.1	< 0.0005	22	0.022	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	8.25	0.038	1.8	16	180	34	664	3	< 0.005
M80-1	07/05/2014	140	0.47	< 0.001	0.039	14	0.36	< 0.0001	23	17	21	< 0.005	< 0.0005	362	< 0.001	1	110	< 0.1	< 0.0005	12	0.005	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	7.92	0.046	< 0.03	4.3	34	11	208	1.4	< 0.005
M82-1	07/05/2014	330	1.04	< 0.001	0.17	2	1	< 0.0001	51	26	46	< 0.005	< 0.0005	883	< 0.001	4	230	< 0.1	< 0.0005	25	0.0024	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	7.97	0.044	0.05	10	99	59	514	< 1	< 0.005
M82-2	07/05/2014	330	0.31	< 0.001	0.13	< 2	0.14	< 0.0001	110	< 4	25	< 0.005	< 0.0005	800	< 0.001	2.9	400	< 0.1	< 0.0005	29	0.019	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	7.96	0.0025	0.04	3.7	19	69	496	< 0.7	< 0.005
M91-1	07/05/2014	290	0.75	< 0.001	0.082	5	0.81	< 0.0001	46	< 4	13	< 0.005	< 0.0005	666	< 0.001	1.3	200	< 0.1	< 0.0005	22	0.0053	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	8.1	< 0.001	< 0.03	7	64	48	388	4	< 0.005
M95-1	06/05/2014	320	< 0.15	< 0.001	0.14	< 2	0.024	< 0.0001	110	< 4	7	< 0.005	< 0.0005	719	< 0.001	1.6	380	< 0.1	< 0.0005	25	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	7.79	< 0.001	< 0.03	2.1	7.1	56	386	< 0.7	< 0.005
M105	06/05/2014	630	0.7	< 0.001	0.22	2	0.41	< 0.0001	180	26	200	< 0.005	< 0.0005	1790	< 0.001	9.4	720	< 0.1	< 0.0005	66	0.01	< 0.0002	< 0.0013	0.0099	< 0.1	< 0.01	7.46	0.0069	< 0.06	7.2	110	8	954	1.4	< 0.005
M107	06/05/2014	370	0.24	< 0.001	0.089	< 2	0.14	< 0.0001	98	11	48	< 0.005	< 0.0005	862	< 0.001	4.8	340	5	< 0.0005	24	0.28	< 0.0002	< 0.0005	0.0023	< 0.1	< 0.01	7.57	< 0.001	< 0.03	3.1	53	8	456	< 0.7	< 0.005
OW1	07/05/2014	440	2.75	< 0.001	0.091	15	1.1	< 0.0001	43	28	47	< 0.005	< 0.0005	1040	< 0.001	2	220	< 0.1	< 0.0005	28	0.008	< 0.0002	< 0.0005	< 0.001	< 0.1	< 0.01	8.06	0.027	0.28	13	140	38	570	3.4	< 0.005
OW4	07/05/2014	1100	1.41	0.0017	0.17	< 2	1.1	< 0.0001	150	120	470	< 0.005	0.00085	3370	< 0.001	44	790	11	< 0.0005	99	0.17	< 0.0002	< 0.001	0.051	< 0.1	< 0.01	7.8	0.0052	0.05	13	450	22	1950	3.7	< 0.005
OW54-d	06/05/2014	260	1.17	< 0.001	0.041	4	0.57	< 0.0001	42	< 4	82	< 0.005	< 0.0005	789	< 0.001	1	210	< 0.1	< 0.0005	25	0.022	< 0.0002	< 0.0013	< 0.001	< 0.1	< 0.01	8.12	0.0048	< 0.03	13	70	23	382	1.5	< 0.005

[1] Shallow groundwater monitoring wells not sampled: M29, M39, M58-4 (see text for details)

[2] M107: Originally labelled as M106 in EMP dated June 29, 2010

Table 6a: Groundwater Quality Results - May 6 - 8, 2014

Name	Date	1,1,1,2-Tetrachloroethane mg/L	1,1,1-Trichloroethane mg/L	1,1,2,2-Tetrachloroethane mg/L	1,1,2-Trichloroethane mg/L	1,1-Dichloroethane mg/L	1,1-Dichloroethylene mg/L	1,2-Dibromoethane mg/L	1,2-Dichlorobenzene mg/L	1,2-Dichloroethane mg/L	1,2-Dichloropropane mg/L	1,3,5-Trimethylbenzene mg/L	1,3-Dichlorobenzene mg/L	1,4-Dichlorobenzene mg/L	Benzene mg/L	Bromodichloromethane mg/L	Bromoform mg/L	Bromomethane mg/L	Carbon Tetrachloride mg/L	Chlorobenzene mg/L	Chloroethane mg/L	Chloroform mg/L	Chloromethane mg/L	Cis-1,2-Dichloroethylene mg/L	Cis-1,3-Dichloropropylene mg/L	Dibromochloromethane mg/L	Dichloromethane mg/L	Ethylbenzene mg/L	m&p-Xylene mg/L	o-Xylene mg/L	Styrene mg/L	Tetrachloroethylene mg/L	Toluene mg/L	Trans-1,2-dichloroethylene mg/L	Trans-1,3-dichloropropylene mg/L	Trichloroethylene mg/L	Trichlorofluoromethane mg/L	Vinyl Chloride mg/L
Shallow Groundwater Flow Zone [1]																																						
M41	06/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M53-4	06/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
M54-4	06/05/2014	< 0.0002	0.0034	< 0.0002	< 0.0002	0.0009	0.00011	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	0.00054	< 0.0001	< 0.0002	< 0.0001	< 0.0005	0.0015	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	0.0054	0.00036	< 0.0001	< 0.0002	0.00046	< 0.0002	0.00046
M66-2	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M67-2	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M68-4	07/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M70-3	08/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M80-2	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M81	07/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M87-2	08/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M96	08/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M97	08/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M99-2	07/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M101	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.00046	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	0.00028	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M102	08/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M103	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
OW37-s	06/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Intermediate BedrockGroundwater Flow Zone																																						
M5-3	06/05/2014	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0025	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.0025	< 0.0005	< 0.001	< 0.001	< 0.0025	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.001	< 0.0005	< 0.001	< 0.0005	< 0.001	< 0.001
M6-3	07/05/2014	< 0.0005	< 0.00025	< 0.0005	< 0.0005	< 0.00025	< 0.00025	< 0.0005	< 0.0005	< 0.0005	< 0.00025	< 0.0005	< 0.0005	< 0.0005	0.00097	< 0.00025	< 0.0005	< 0.0013	< 0.00025	< 0.00025	< 0.0005	< 0.00025	< 0.0013	< 0.00025	< 0.0005	< 0.0005	< 0.0013	< 0.00025	0.0012	0.00039	< 0.0005	< 0.00025	0.013	< 0.00025	< 0.0005	< 0.00025	< 0.0005	< 0.0005
M9-3	06/05/2014	< 0.0005	< 0.00025	< 0.0005	< 0.0005	< 0.00025	< 0.00025	< 0.0005	< 0.0005	< 0.0005	< 0.00025	< 0.0005	< 0.0005	< 0.0005	< 0.00025	< 0.00025	< 0.0005	< 0.0013	< 0.00025	< 0.00025	< 0.0005	< 0.00025	< 0.0013	< 0.00025	< 0.0005	< 0.0005	< 0.0013	< 0.00025	< 0.00025	< 0.00025	< 0.0005	< 0.00025	< 0.0005	< 0.00025	< 0.0005	< 0.0005	< 0.0005	< 0.0005
M10-1	08/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.002	0.00018	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	0.00011	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	0.0075	< 0.0001	< 0.0005	0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	0.00023
M49-1	08/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
M49-2	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	0.00036	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	0.00012	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
M52-1	08/05/2014	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0004	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0004	0.011	< 0.0002	< 0.0004	< 0.001	< 0.0002	< 0.0002	< 0.0004	< 0.0002	< 0.001	< 0.0002	< 0.0004	< 0.0004	< 0.001	0.00039	0.00099	0.00056	< 0.0004	< 0.0002	< 0.0004	< 0.0002	< 0.0004	< 0.0002	< 0.0004	< 0.0004
M56-2	08/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
M58-3	06/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M59-2	07/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M59-3	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M59-4	07/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M70-1	08/05/2014	< 0.002	< 0.001	< 0.002	< 0.002	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.001	< 0.002	< 0.002	< 0.002	0.079	< 0.001	< 0.002	< 0.005	< 0.001	< 0.001	< 0.002	< 0.001	< 0.005	< 0.001	< 0.002	< 0.002	< 0.005	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.002	< 0.001	< 0.002	< 0.001	< 0.002	< 0.002
M71	06/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M72	07/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M74	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0002
M75	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
M80-1	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	0.00012	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	0.00012	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
M82-1	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
M82-2	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
M91-1	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	0.00054	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
M95-1	06/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
M105	06/05/2014	< 0.0005	< 0.00025	< 0.0005	< 0.0005	< 0.00025	< 0.00025	< 0.0005	< 0.0005	< 0.0005	< 0.00025	< 0.0005	< 0.0005	< 0.0005	< 0.00025	< 0.00025	< 0.0005	< 0.0013	< 0.00025	< 0.00025	0.0015	< 0.00025	< 0.0013	< 0.00025	< 0.0005	< 0.0005	< 0.0013	< 0.00025	< 0.00025	< 0.00025	< 0.0005	< 0.00025	< 0.0005	< 0.00025	< 0.0005	< 0.00025	< 0.0005	< 0.0005
M107	06/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	0.00099	0.00013	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	0.0044	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	0.00028
OW1	07/05/2014	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0002	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0002	< 0.0005	< 0.0001	< 0.0001	< 0.0002	< 0.0001	< 0.0005	< 0.0001	< 0.0002	< 0.0002	< 0.0005	0.0024	< 0.0001	0.00015	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0001	< 0.0002	< 0.0002
OW4	07/05/2014	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0002	< 0.0004	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0004	0.00034	< 0.0002	< 0.0004	< 0.001	< 0.0002	0.001	< 0.0004	< 0.0002	< 0.001	< 0.0002	< 0.0004	< 0.0004	< 0.001	0.0023	< 0.0002	< 0.0002	0.00043	< 0.0002	0.0009	< 0.0002	< 0.0004	< 0.0002	< 0.0004	< 0.0004
OW54-d	06/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*** Shallow groundwater monitoring wells not sampled: M29, M39, M58-4 (see text for details)**

**** M107: Originally labelled as M106 in EMP dated June 29, 2010**

Table 6b: Groundwater Quality Results and Reasonable Use Limits - May 6-8, 2014

Name	Date	Alkalinity	Boron	Chloride	Chromium	Dissolved Organic Carbon	Iron	Manganese	Sodium	Total Dissolved Solids	1,4-Dichlorobenzene	Benzene	Chlorobenzene	Ethylbenzene	m&p-Xylene	Tetrachloroethylene
		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 *																
RUL		*386*	*1.27*	*128*	*0.014*	*3.1*	*0.18*	*0.028*	*104*	*415*	*0.0013*	*0.0014*	*0.02*	*0.0013*	*0.15*	*0.0121*
M54-4	06/05/2014	*410*	0.041	86	0.0083	2.4	< 0.1	0.012	61	*602*	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0054
M66-2	07/05/2014	310	0.44	120	0.0085	2.5	< 0.1	0.0094	*120*	*958*	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
M67-2	07/05/2014	360	0.75	6.0	< 0.005	1.7	*0.41*	*0.039*	61	378	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
M80-2	07/05/2014	320	0.053	75	0.005	2.2	< 0.1	< 0.002	16	*558*	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
M87-2	08/05/2014	220	0.024	30	0.0081	1.9	< 0.1	0.0046	13	348	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
OW37-s	06/05/2014	46.0	0.013	6.0	< 0.005	17	< 0.1	*0.037*	7.3	30	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Intermediate BedrockGroundwater Flow Zone																
RUL		*403*	*1.3*	*130*	*0.014*	*3.4*	*0.18*	*0.037*	*106*	*478*	*0.0013*	*0.0014*	*-*	*0.0013*	*0.15*	*0.0121*
M10-1	08/05/2014	360	0.23	45	< 0.005	*5.1*	*11*	*0.4*	54	406	< 0.0002	0.00011	< 0.0001	< 0.0001	< 0.0001	< 0.0001
M49-1	08/05/2014	400	0.95	*340*	< 0.005	*4.2*	< 0.1	0.01	*400*	*1030*	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
M56-2	08/05/2014	290	0.077	20	< 0.005	1.5	< 0.1	*0.055*	12	424	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
M58-3	06/05/2014	310	0.013	4	< 0.005	1.0	< 0.1	< 0.002	5.4	312	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
M70-1	08/05/2014	330	*1.8*	*13000*	< 0.05	*4.6*	*2.4*	*0.069*	*1100*	*15700*	< 0.002	*0.079*	< 0.001	< 0.001	< 0.001	< 0.001
M80-1	07/05/2014	140	0.36	21	< 0.005	1.0	< 0.1	0.005	34	208	< 0.0002	0.00012	< 0.0001	< 0.0001	0.00012	< 0.0001
M82-1	07/05/2014	330	1.0	46	< 0.005	*4*	< 0.1	0.0024	99	514	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
M82-2	07/05/2014	330	0.14	25	< 0.005	2.9	< 0.1	0.019	19	*496*	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
M107	06/05/2014	370	0.14	48	< 0.005	*4.8*	*5*	*0.28*	53	456	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

* Shallow groundwater monitoring wells not sampled: M29, M39, M58-4 (see text for details)

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

Table 7: Water Quality Results from Off-Site Domestic Supply Wells - May 8, 2014

		ODWSOG		1097 Beechwood Rd	1144 Beechwood Rd	1181 Beechwood Rd	1206 Beechwood Rd	1250 Beechwood Rd	1252 Beechwood Rd	1264 Beechwood Rd
Inorganic and General Parameters										
Alkalinity (as CaCO3)	mg/L	30-500	OG	300	260	360	450	310	390	380
Ammonia	mg/L			< 0.15	0.21	1.26	0.84	0.41	0.37	0.45
Arsenic	mg/L	0.025	IMAC	< 0.001	< 0.001	< 0.001	0.0013	0.0019	0.0019	< 0.001
Barium	mg/L	1	MAC	0.09	0.028	0.072	0.24	0.12	0.23	0.07
Biochemical Oxygen Demand	mg/L			< 2	< 2	4	< 2	< 2	< 2	< 2
Boron	mg/L	5	IMAC	0.044	0.35	0.39	0.077	0.086	0.23	0.27
Cadmium	mg/L	0.005	IMAC	< 0.0001	< 0.0001	0.00011	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Calcium	mg/L			110	90	110	200	87	110	100
Chemical Oxygen Demand	mg/L			7.4	26	4.4	17	9.9	< 4	13
Chloride	mg/L	250	AO	2	***370***	190	200	26	37	85
Chromium	mg/L	0.05	MAC	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	mg/L			< 0.0005	< 0.0005	< 0.0005	0.0015	0.0008	< 0.0005	< 0.0005
Conductivity	µS/cm			605	1880	1350	1520	662	899	973
Copper	mg/L	1	AO	0.0097	0.0049	***2.7***	0.25	< 0.001	0.0022	0.0022
Dissolved Organic Carbon	mg/L	5	AO	3.2	***8.7***	3.9	***7.3***	4.6	3.4	4.7
Hardness (as CaCO3)	mg/L	80-100	OG	330	***380***	***390***	***580***	***300***	***390***	***330***
Iron	mg/L	0.3	AO	< 0.1	***0.46***	***2.9***	***25***	***11***	***31***	***7***
Lead	mg/L	0.01	MAC	0.0006	0.00079	***0.62***	***0.044***	< 0.0005	< 0.0005	< 0.0005
Magnesium	mg/L			14	37	26	33	17	29	27
Manganese	mg/L	0.05	AO	0.0023	0.017	0.017	***3.4***	***0.71***	***0.31***	***0.41***
Mercury	mg/L	0.001	MAC	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Naphthalene	mg/L	10	MAC	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Nickel	mg/L			< 0.001	< 0.001	0.0064	0.0021	0.0015	< 0.001	0.0011
Nitrate	mg/L	10	MAC	3.55	***12.7***	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nitrite	mg/L	1	MAC	< 0.01	0.075	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
pH (Lab)	unitless	6.5-8.5	OG	8.08	8.16	7.87	7.63	7.77	7.87	7.78
Phenols	mg/L			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phosphorus (total)	mg/L			0.04	0.22	0.05	0.69	< 0.03	< 0.03	< 0.03
Potassium	mg/L			7.5	21	10	9	3.2	4.7	5.9
Sodium	mg/L	200 20	AO (see note)	6	***240***	120	100	34	57	99
Sulphate	mg/L	500	AO	13	41	12	22	10	37	9
Total Dissolved Solids	mg/L	500	AO	340	***1030***	***864***	***920***	380	***526***	***592***
Total Kjeldahl Nitrogen	mg/L			< 0.7	1	1.6	1.6	< 0.7	< 0.7	0.9
Zinc	mg/L	5	AO	0.047	0.03	0.29	0.061	0.019	0.14	< 0.005

Exceeds ODWSOG

ODWSOG: Ontario Drinking Water Objective Standards and Guidelines
OG: Operational Guidelines
MAC: Maximum Acceptable Concentration
IMAC: Interim Maximum Acceptable Concentration
AO: Asthetic Objectives

Note: The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L

Table 7: Water Quality Results from Off-Site Domestic Supply Wells - May 8, 2014

		ODWSOG		1097 Beechwood Rd	1144 Beechwood Rd	1181 Beechwood Rd	1206 Beechwood Rd	1250 Beechwood Rd	1252 Beechwood Rd	1264 Beechwood Rd
Volatile Organic Compounds (VOC)										
1,1,1,2-Tetrachloroethane	mg/L			< 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	0.004	< 0.0001
1,1,2,2-Tetrachloroethane	mg/L			< 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
1,1-Dichloroethane	mg/L			< 0.0001	< 0.0001	< 0.0001	0.00049	0.0024	0.016	0.00085
1,1-Dichloroethylene	mg/L	0.014	MAC	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.00011	0.0017	0.00027
1,2-Dibromoethane	mg/L			< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,2-Dichlorobenzene (o)	mg/L	0.2 0.003	MAC AO	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,2-Dichloroethane	mg/L	0.005	IMAC	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,2-Dichloropropane	mg/L			< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
1,3,5-Trimethylbenzene	mg/L			< 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
1,4-Dichlorobenzene (p)	mg/L	0.005 0.001	MAC AO	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Benzene	mg/L	0.005	MAC	< 0.0001	< 0.0001	< 0.0001	0.00012	< 0.0001	< 0.0001	0.00016
Bromodichloromethane	mg/L			< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Bromoform	mg/L			< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Bromomethane	mg/L			< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon Tetrachloride	mg/L	0.005	MAC	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Chlorobenzene	mg/L			< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Chloroethane	mg/L			< 0.0002	< 0.0002	< 0.0002	0.00082	0.00065	0.0036	0.011
Chloroform	mg/L			0.00014	0.00014	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Chloromethane	mg/L			< 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
Cis-1,3-Dichloropropylene	mg/L			< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Dichloromethane	mg/L	0.05	MAC	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethylbenzene	mg/L	0.002	AO	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
m+p-Xylene	mg/L			< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
o-Xylene	mg/L			< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Styrene	mg/L			< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Tetrachloroethylene	mg/L	0.03	MAC	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.00012	< 0.0001
Toluene	mg/L	0.024	AO	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Trans-1,2-dichloroethylene	mg/L			< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Trans-1,3-dichloropropene	mg/L			< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Trichloroethylene	mg/L	0.005	MAC	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Trichlorofluoromethane	mg/L			< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Vinyl Chloride	mg/L	0.002	MAC	< 0.0002	< 0.0002	< 0.0002	0.00022	< 0.0002	< 0.0002	0.00024

Exceeds ODWSOG

ODWSOG: Ontario Drinking Water Objective Standards and Guidelines
OG: Operational Guidelines
MAC: Maximum Acceptable Concentration
IMAC: Interim Maximum Acceptable Concentration
AO: Asthetic Objectives

Note: The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L

Table 8: Surface Water Characteristics - May 5, 2014

Date	Parameter		Surface Water Station					
			S2	S3	S5	S6	S7	S8R
05-May-14	Velocity:	m/s	0.40	0.33	0.10	0.40	0.25	0.50
	Depth:	m	0.60	1.00	0.30	0.60	0.40	0.20
	Width:	m	4.50	5.00	2.50	4.00	6.00	1.00
	Estimated Flow Rate:	m^3/s	1.08	1.67	0.08	0.96	0.60	0.10

Note: Monitor location S4R was dry; no flow present.

Table 9: Surface Water Quality Results - May 5, 2014

			Marysville Creek				Beechwood Ditch	
			S2	S3	S6	S7	S5	S8R
			(upstream)	(downstream)	(downstream)	(downstream)	(upstream)	(downstream)
		Date	05/05/2014	05/05/2014	05/05/2014	05/05/2014	05/05/2014	05/05/2014
Reading Name	Units	PWQO						
Inorganic and General Parameters								
Alkalinity	mg/L		160	180	180	180	240	190
Ammonia	mg/L		0.51	1.2	1.26	0.52	0.64	0.7
Ammonia (unionized)	mg/L	0.02	0.000343	0.000555	0.00011	0.000144	0.000613	0.006838
Arsenic	mg/L	0.1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Barium	mg/L		0.048	0.044	0.046	0.046	0.047	0.052
Biochemical Oxygen Demand	mg/L		< 2	< 2	< 2	< 2	2	< 2
Boron	mg/L	0.2	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.026
Cadmium	mg/L	0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Calcium	mg/L		65	71	69	71	79	66
Chemical Oxygen Demand	mg/L		27	20	23	17	32	12
Chloride	mg/L		29	26	26	26	3	30
Chromium (III)	mg/L	0.0089	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (VI)	mg/L	0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chromium (Total)	mg/L		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	mg/L	0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Conductivity	µS/cm		422	435	431	434	460	502
Copper	mg/L	0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Cyanide (free)	mg/L	0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Hardness	mg/L		180	200	200	200	250	210
Iron	mg/L	0.3	0.05	0.02	0.05	0.02	*0.37*	0.21
Lead	mg/L	0.025	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Magnesium	mg/L		8.3	9.4	9.1	9.5	14	13
Mercury	mg/L	0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Nickel	mg/L	0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
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
Phenols	mg/L	0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phosphorus (total)	mg/L	0.03	0.019	0.015	0.016	0.022	*0.13*	0.03
Potassium	mg/L		4	3	3	3	2	4
Sodium	mg/L		17	16	16	16	5	25
Sulphate	mg/L		< 1	4	2	2	8	21
Total Dissolved Solids	mg/L		246	244	234	246	252	276
Total Kjeldahl Nitrogen	mg/L		1.2	1.6	1.8	1.2	1.7	1.2
Total Suspended Solids	mg/L		< 1	1	2	2	18	14
Zinc	mg/L	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Field Measured								
Conductivity (Field)	µS/cm		306	320	320	309	347	412
Dissoved Oxygen (Field)	mg/L		10.53	9.91	10.34	12.1	10.23	10.16
pH (Field)	unitless	6.5-8.5	6.66	6.48	5.74	6.24	6.74	7.66
Temperature (Field)	℃		7.04	7.52	8.04	8.03	9.17	11.89

Exceeds PWQO

Table 10: Subsurface Gas Monitoring Results - May 6, 2014

Gas Monitor	Location	Reading (ppm)
GM1	North of garage area, south of waste mound	0
GM2	Southwest corner of waste mound	0
GM3	Northeast corner of waste mound	0
GM4-1	Southeast corner of waste mound	5
GM4-2		0
GM5	Northwest corner of waste mound	0
GM6	North of waste mound	25

FIGURES

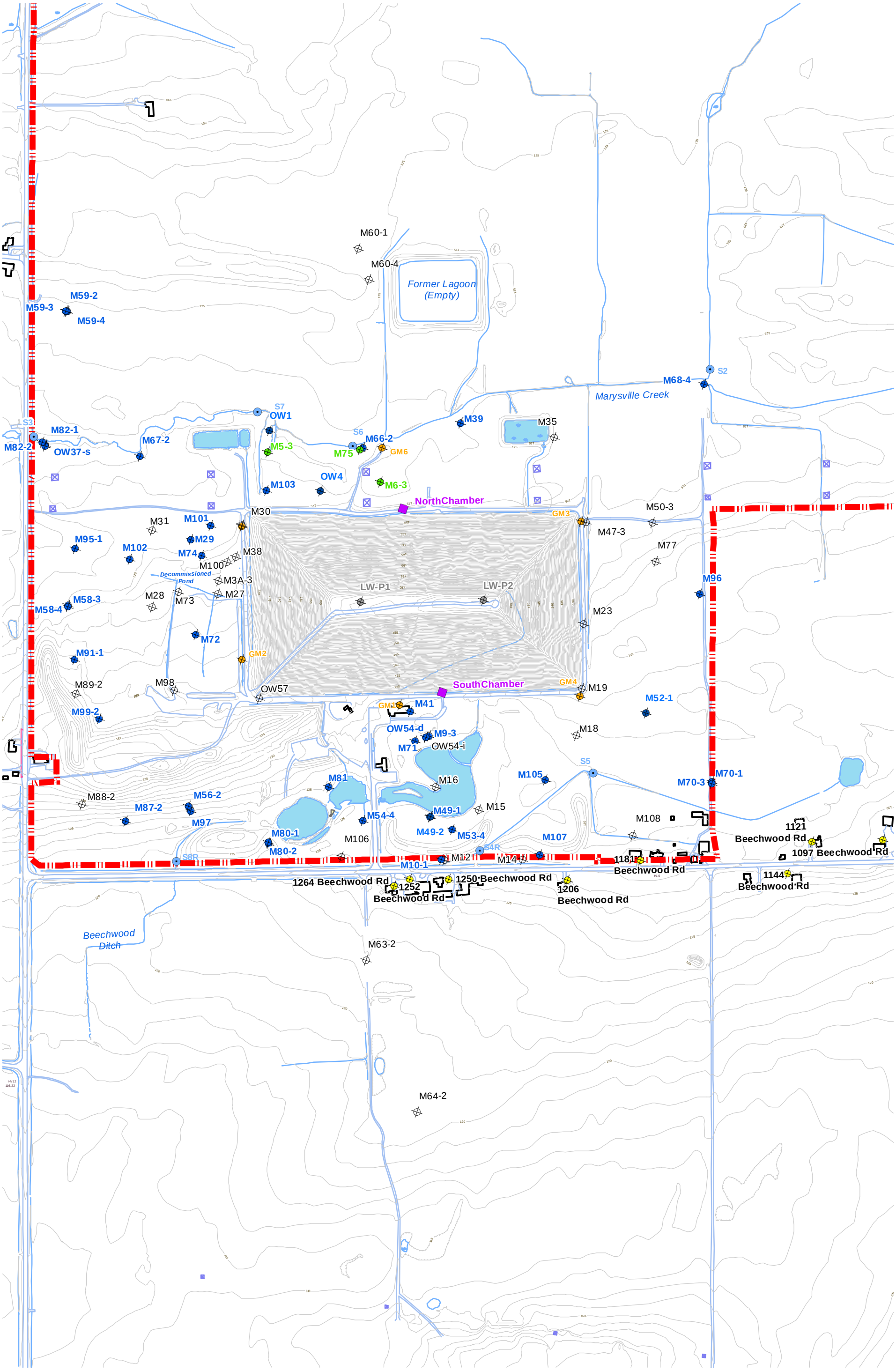

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Figure 1:
Site Plan and Monitoring Locations

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
LW-P1 — Lechate Monitoring Well
S2 — Surface Water Monitoring Location
Property Boundary
Chambers

Project : K-B12321-00-02
Data Source: WM Canada, WESA, HPA Ltd. Base Mapping 2009
Date: May 2014

0 12.525 50 75 100
Metres

Prepared by:
WESA Geomatics

Units:
UTM NAD 83 Zone 18

Scale: 1:6000

WESA
a BluMetric company
WM WASTE MANAGEMENT

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Figure 2:
Shallow Groundwater Flow Zone Potentiometric Surface - May 5, 2014

M58-4 Shallow Groundwater Zone Elevation Monitor
Topographic Contour Lines
Surface Water
Hydro Tower
Potentiometric Surface (masl)
Property Boundary
Note: M77: Not used in contouring
SG-1 Pond Elevation
Leachate Monitoring Wells

Project : K-B12321-00-02
Data Source: WM Canada, WESA, HPA Ltd. Base Mapping 2009
Date: May 2014

Prepared by:
WESA Geomatics

Units:
UTM NAD 83 Zone 18

Scale: 1:5000

0 12.5 25 50 75 100
Meters

WESA
a BluMetric company

WM
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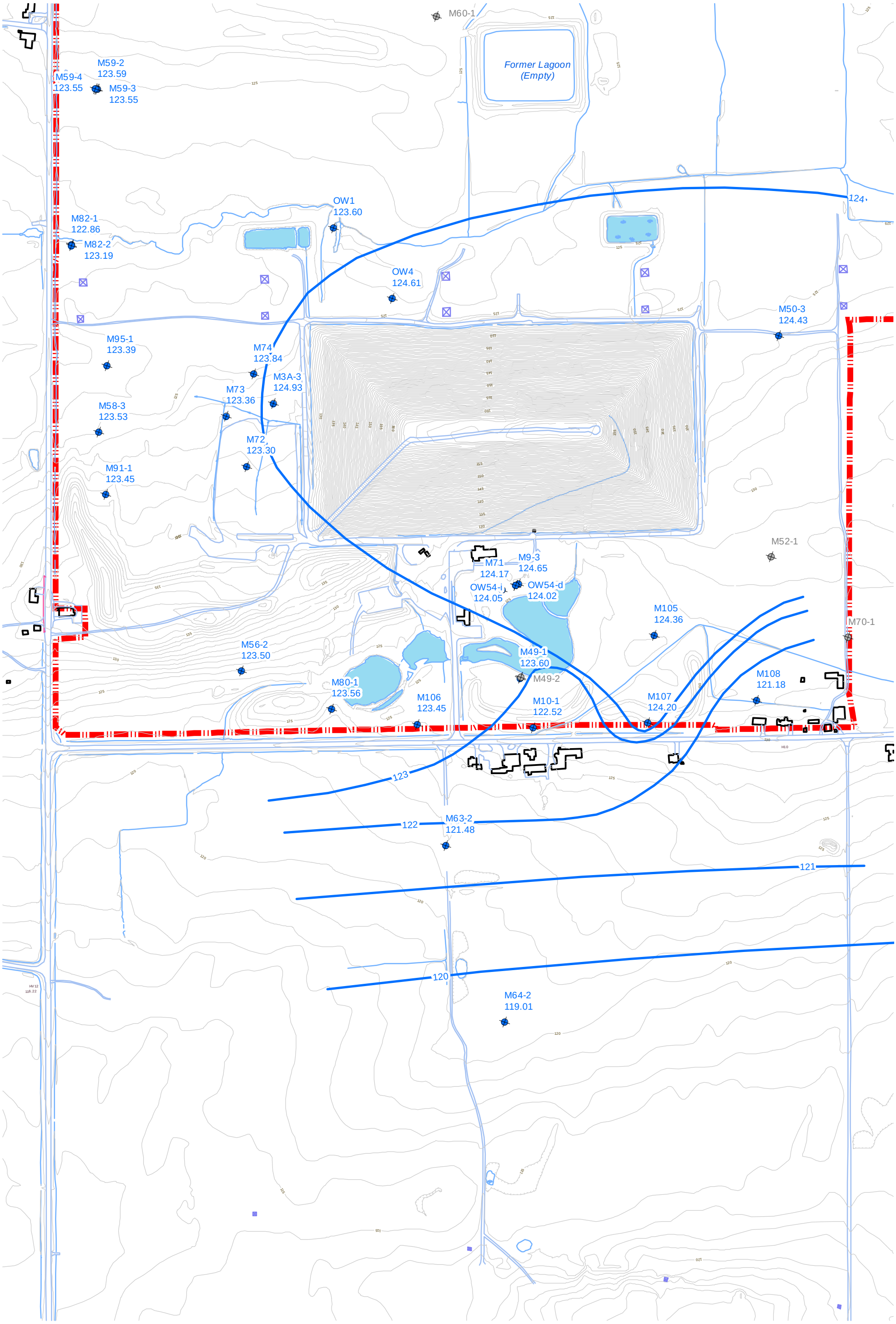

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M58-3 Intermediate Groundwater Zone Elevation Monitor
Topographic Contour Lines
Potentiometric Surface (masl)
Hydro Tower
Surface Water
Property Boundary

Note: M49-2, M52-1, M60-1, M70-1 :
Not used in contouring
(see text for details)

Project : K-B12321-00-02
Data Source: WM Canada, WESA,
HPA Ltd. Base Mapping 2009
Date: May 2014

50 25 0 50 100
Meters

Prepared by:
WESA Geomatics

Units:
UTM NAD 83 Zone 18

Scale: 1:5000

Figure 3:
Intermediate Bedrock Groundwater Flow Zone Potentiometric Surface - May 5, 2014

OW37-s	
Alkalinity	46
Ammonia	< 0.15

M67-2	
Alkalinity	360
Ammonia	0.73

M101	
Alkalinity	420
Ammonia	< 0.15

M103	
Alkalinity	710
Ammonia	< 0.15

M66-2	
Alkalinity	310
Ammonia	< 0.15

M68-4	
Alkalinity	350
Ammonia	< 0.15

M102	
Alkalinity	440
Ammonia	< 0.15

M96	
Alkalinity	320
Ammonia	< 0.15

M41	
Alkalinity	450
Ammonia	< 0.15

M99-2	
Alkalinity	300
Ammonia	0.23

M70-3	
Alkalinity	410
Ammonia	< 0.15

M87-2	
Alkalinity	220
Ammonia	< 0.15

M97	
Alkalinity	220
Ammonia	< 0.15

M80-2	
Alkalinity	320
Ammonia	< 0.15

M81	
Alkalinity	360
Ammonia	< 0.15

M54-4	
Alkalinity	410
Ammonia	< 0.15

M53-4	
Alkalinity	420
Ammonia	0.44

Former Lagoon (Empty)

Marysville Creek

OW37-s M67-2 M101 M103 M66-2 M68-4 M102 M96 M41 M99-2 M81 M97 M87-2 M54-4 M53-4 M80-2 M70-3

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Figure 4:
Shallow Flow Zone Concentrations

Groundwater samples were collected as part of the Spring 2014 monitoring event, during the period from May 6 – May 8, 2014

Legend

M53-4 Shallow Monitoring Well Sampled for Chemistry

Property Boundary

Parameter	Units
Alkalinity	mg/L CaCO3
Ammonia	mg/L

Project : K-B12321-00-02
Data Source: WM Canada, WESA, HPA Ltd. Base Mapping 2009
Date: May 2014

Prepared by:
WESA Geomatics

Units:
UTM NAD 83 Zone 18

Scale: 1:6000

0 12.5 25 50 75 100
Metres

WESA a BluMetric company

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M59-2	
Alkalinity	420
Ammonia	0.59

M59-3	
Alkalinity	260
Ammonia	< 0.15

M59-4	
Alkalinity	290
Ammonia	0.39

M82-1	
Alkalinity	330
Ammonia	1.04

M95-1	
Alkalinity	320
Ammonia	< 0.15

OW1	
Alkalinity	440
Ammonia	2.75

M5-3	
Alkalinity	430
Ammonia	1.31

M75	
Alkalinity	460
Ammonia	2.08

M6-3	
Alkalinity	1600
Ammonia	5.84

M82-2	
Alkalinity	330
Ammonia	0.31

M74	
Alkalinity	300
Ammonia	1.27

OW4	
Alkalinity	1100
Ammonia	1.41

M58-3	
Alkalinity	310
Ammonia	< 0.15

M72	
Alkalinity	270
Ammonia	0.57

M91-1	
Alkalinity	290
Ammonia	0.75

M56-2	
Alkalinity	290
Ammonia	0.17

M80-1	
Alkalinity	140
Ammonia	0.47

M71	
Alkalinity	610
Ammonia	1.38

M10-1	
Alkalinity	360
Ammonia	0.63

M07	
Alkalinity	370
Ammonia	0.24

M9-3	
Alkalinity	270
Ammonia	1.18

OW54-d	
Alkalinity	260
Ammonia	1.17

M52-1	
Alkalinity	400
Ammonia	1.41

M105	
Alkalinity	630
Ammonia	0.7

M70-1	
Alkalinity	330
Ammonia	4.82

M49-1	
Alkalinity	400
Ammonia	0.9

M49-2	
Alkalinity	760
Ammonia	1.36

M60-1
Former Lagoon (Empty)
M59-4
M59-3
M59-2
M82-1
M82-2
OW1
M5-3
M75
M6-3
OW4
M95-1
M74
M58-3
M72
M91-1
M56-2
M80-1
M71
M9-3
OW54-d
M52-1
M105
M70-1
M49-2
M10-1
M107

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Figure 5:
Intermediate Flow Zone Concentrations
Groundwater samples were collected as part of the
Spring 2014 monitoring event, during the period from May 6 – May 8, 2014

Legend

M53-4 Intermediate Monitoring Well Sampled for Chemistry

Property Boundary

Parameter	Units
Alkalinity	mg/L CaCO3
Ammonia	mg/L

Project : K-B12321-00-02
Data Source: WM Canada, WESA, HPA Ltd. Base Mapping 2009
Date: May 2014

Prepared by:
WESA Geomatics

Units:
UTM NAD 83 Zone 18

Scale: 1:6000

0 12.5 25 50 75 100
Metres

WESA a BluMetric company

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Former Lagoon (empty)

Marysville Creek

1264 Beechwood Rd	
Alkalinity	380
Ammonia	0.45

1206 Beechwood Rd	
Alkalinity	450
Ammonia	0.84

1181 Beechwood Rd	
Alkalinity	360
Ammonia	1.26

1097 Beechwood Rd	
Alkalinity	300
Ammonia	< 0.15

1252 Beechwood Rd	
Alkalinity	390
Ammonia	0.37

1250 Beechwood Rd	
Alkalinity	310
Ammonia	0.41

1144 Beechwood Rd	
Alkalinity	260
Ammonia	0.21

1252 Beechwood Rd
1250 Beechwood Rd
1206 Beechwood Rd
1264 Beechwood Rd
1181 Beechwood Rd
1121 Beechwood Rd
1097 Beechwood Rd
1144 Beechwood Rd

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Figure 6:
Domestic Well Concentrations

Groundwater samples were collected as part of the Spring 2014 monitoring event, during the period from May 6 – May 8, 2014

Legend

M53-4 Domestic Well Sampled for Chemistry

Property Boundary

Parameter	Units
Alkalinity	mg/L CaCO3
Ammonia	mg/L

Project : K-B12321-00-02
Data Source: WM Canada, WESA, HPA Ltd. Base Mapping 2009
Date: May 2014

0 12.5 25 50 75 100
Metres

Prepared by:
WESA Geomatics

Units:
UTM NAD 83 Zone 18

Scale: 1:6000

WESA a BluMetric company

WM WASTE MANAGEMENT

* Tritium is reported in Tritium Units

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

APPENDIX A - Monitoring Well Inventory

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

APPENDIX A - Monitoring Well Inventory

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
M172	335490	4902593
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
S3	Potassium	mg/L	3	2	**40.00**	1	Less than ~5 x MDL
M105	Biochemical Oxygen Demand	mg/L	2	3	**40.00**	2	Less than ~5 x MDL
M105	Chloroethane	mg/L	0.0015	0.002	**28.57**	0.0005	Less than ~5 x MDL
M58-3	Boron	mg/L	0.013	0.01	**26.09**	0.01	Less than ~5 x 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 - Spring 2014

Reading Name	Units	S3 2014-05-05 Regular Sample	S3 2014-05-05 Field Duplicate	RPD (%)
Alkalinity	mg/L	180	180	0.00
Aluminum	mg/L	0.023	0.028	19.61
Ammonia	mg/L	1.2	1.14	5.13
Antimony	mg/L	< 0.001	< 0.001	0.00
Arsenic	mg/L	< 0.001	< 0.001	0.00
Barium	mg/L	0.044	0.04	9.52
Beryllium	mg/L	< 0.0006	< 0.0006	0.00
Biochemical Oxygen Demand	mg/L	< 2	< 2	0.00
Boron	mg/L	< 0.02	< 0.02	0.00
Cadmium	mg/L	< 0.0001	< 0.0001	0.00
Calcium	mg/L	71	67	5.80
Chemical Oxygen Demand	mg/L	20	22	9.52
Chloride	mg/L	26	26	0.00
Chromium	mg/L	< 0.005	< 0.005	0.00
Chromium (III)	mg/L	< 0.005	< 0.005	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	µS/cm	435	435	0.00
Copper	mg/L	< 0.002	< 0.002	0.00
Cyanide (free)	mg/L	< 0.002	< 0.002	0.00
Hardness	mg/L	200	200	0.00
Iron	mg/L	0.02	< 0.02	0.00
Lead	mg/L	< 0.0005	< 0.0005	0.00
Magnesium	mg/L	9.4	9.1	3.24
Manganese	mg/L	0.011	0.011	0.00
Mercury	mg/L	< 0.0002	< 0.0002	0.00
Molybdenum	mg/L	< 0.002	< 0.002	0.00
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
Phenols	mg/L	0.001	< 0.001	0.00
Phosphorus (total)	mg/L	0.015	0.017	12.50
Potassium	mg/L	3	2	**40.00**
Selenium	mg/L	< 0.005	< 0.005	0.00
Silver	mg/L	< 0.0004	< 0.0004	0.00
Sodium	mg/L	16	15	6.45
Strontium	mg/L	0.17	0.16	6.06
Sulphate	mg/L	4	4	0.00
Thallium	mg/L	< 0.0002	< 0.0002	0.00
Tin	mg/L	< 0.002	< 0.002	0.00
Titanium	mg/L	< 0.005	< 0.005	0.00
Total Dissolved Solids	mg/L	244	246	0.82
Total Kjeldahl Nitrogen	mg/L	1.6	1.7	6.06
Total Suspended Solids	mg/L	1	< 1	0.00
Uranium	mg/L	0.0009	0.0008	11.76
Vanadium	mg/L	< 0.001	< 0.001	0.00
Zinc	mg/L	< 0.01	< 0.01	0.00

Detailed Results from Field Duplicate vs. Regular Samples - Spring 2014 (continued)

Reading Name	Units	M105 2014-05-06 Regular Sample	M105 2014-05-06 Field Duplicate	RPD (%)
1,1,1,2-Tetrachloroethane	mg/L	< 0.0005	< 0.0005	0.00
1,1,1-Trichloroethane	mg/L	< 0.00025	< 0.00025	0.00
1,1,2,2-Tetrachloroethane	mg/L	< 0.0005	< 0.0005	0.00
1,1,2-Trichloroethane	mg/L	< 0.0005	< 0.0005	0.00
1,1-Dichloroethane	mg/L	< 0.00025	< 0.00025	0.00
1,1-Dichloroethylene	mg/L	< 0.00025	< 0.00025	0.00
1,2-Dibromoethane	mg/L	< 0.0005	< 0.0005	0.00
1,2-Dichlorobenzene (o)	mg/L	< 0.0005	< 0.0005	0.00
1,2-Dichloroethane	mg/L	< 0.0005	< 0.0005	0.00
1,2-Dichloropropane	mg/L	< 0.00025	< 0.00025	0.00
1,3,5-Trimethylbenzene	mg/L	< 0.0005	< 0.0005	0.00
1,3-Dichlorobenzene (m)	mg/L	< 0.0005	< 0.0005	0.00
1,4-Dichlorobenzene (p)	mg/L	< 0.0005	< 0.0005	0.00
Acetone	mg/L	< 0.025	< 0.025	0.00
Alkalinity	mg/L	630	630	0.00
Ammonia	mg/L	0.7	0.7	0.00
Arsenic	mg/L	< 0.001	< 0.001	0.00
Barium	mg/L	0.22	0.22	0.00
Benzene	mg/L	< 0.00025	< 0.00025	0.00
Biochemical Oxygen Demand	mg/L	2	3	40.00
Boron	mg/L	0.41	0.4	2.47
Bromodichloromethane	mg/L	< 0.00025	< 0.00025	0.00
Bromoform	mg/L	< 0.0005	< 0.0005	0.00
Bromomethane	mg/L	< 0.0013	< 0.0013	0.00
Cadmium	mg/L	< 0.0001	< 0.0001	0.00
Calcium	mg/L	180	180	0.00
Carbon Tetrachloride	mg/L	< 0.00025	< 0.00025	0.00
Chemical Oxygen Demand	mg/L	26	27	3.77
Chloride	mg/L	200	200	0.00
Chlorobenzene	mg/L	< 0.00025	< 0.00025	0.00
Chloroethane	mg/L	0.0015	0.002	28.57
Chloroform	mg/L	< 0.00025	< 0.00025	0.00
Chloromethane	mg/L	< 0.0013	< 0.0013	0.00
Chromium (Total)	mg/L	< 0.005	< 0.005	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.00025	< 0.00025	0.00
Cis-1,3-Dichloropropylene	mg/L	< 0.0005	< 0.0005	0.00
Cobalt	mg/L	< 0.0005	< 0.0005	0.00
Conductivity	µS/cm	1790	1790	0.00
Copper	mg/L	< 0.001	< 0.001	0.00
Dibromochloromethane	mg/L	< 0.0005	< 0.0005	0.00
Dichloromethane	mg/L	< 0.0013	< 0.0013	0.00
Dissolved Organic Carbon	mg/L	9.4	9.3	1.07
Ethylbenzene	mg/L	< 0.00025	< 0.00025	0.00
Hardness	mg/L	720	720	0.00
Iron	mg/L	< 0.1	< 0.1	0.00
Lead	mg/L	< 0.0005	< 0.0005	0.00
m+p-Xylene	mg/L	< 0.00025	< 0.00025	0.00
Magnesium	mg/L	66	66	0.00
Manganese	mg/L	0.01	0.011	9.52
Mercury	mg/L	< 0.0002	< 0.0002	0.00
Methyl Ethyl Ketone	mg/L	< 0.013	< 0.013	0.00
Methyl Tert Butyl Ether	mg/L	< 0.0005	< 0.0005	0.00
Naphthalene	mg/L	< 0.0013	< 0.0013	0.00
Nickel	mg/L	0.0099	0.0098	1.02
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
o-Xylene	mg/L	< 0.00025	< 0.00025	0.00
pH (Lab)	unitless	7.46	7.46	0.00
Phenols	mg/L	0.0069	0.0078	12.24
Phosphorus (total)	mg/L	< 0.06	< 0.06	0.00
Potassium	mg/L	7.2	7.2	0.00
Sodium	mg/L	110	110	0.00
Styrene	mg/L	< 0.0005	< 0.0005	0.00
Sulphate	mg/L	8	7	13.33
Tetrachloroethylene	mg/L	< 0.00025	< 0.00025	0.00
Toluene	mg/L	< 0.0005	< 0.0005	0.00
Total Dissolved Solids	mg/L	954	942	1.27
Total Kjeldahl Nitrogen	mg/L	1.4	1.6	13.33
Total Xylenes	mg/L	< 0.00025	< 0.00025	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.00025	< 0.00025	0.00
Trans-1,3-dichloropropylene	mg/L	< 0.0005	< 0.0005	0.00
Trichloroethylene	mg/L	< 0.00025	< 0.00025	0.00
Trichlorofluoromethane	mg/L	< 0.0005	< 0.0005	0.00
Vinyl Chloride	mg/L	< 0.0005	< 0.0005	0.00
Zinc	mg/L	< 0.005	< 0.005	0.00

Detailed Results from Field Duplicate vs. Regular Samples - Spring 2014 (continued)

Reading Name	Units	M56-2 2014-05-08 Regular Sample	M56-2 2014-05-08 Field Duplicate	RPD (%)
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-Dibromoethane	mg/L	< 0.0002	< 0.0002	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
1,2-Dichloropropane	mg/L	< 0.0001	< 0.0001	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
Acetone	mg/L	< 0.01	< 0.01	0.00
Alkalinity	mg/L	290	290	0.00
Ammonia	mg/L	0.17	0.17	0.00
Arsenic	mg/L	< 0.001	< 0.001	0.00
Barium	mg/L	0.19	0.19	0.00
Benzene	mg/L	< 0.0001	< 0.0001	0.00
Biochemical Oxygen Demand	mg/L	< 2	< 2	0.00
Boron	mg/L	0.077	0.071	8.11
Bromodichloromethane	mg/L	< 0.0001	< 0.0001	0.00
Bromoform	mg/L	< 0.0002	< 0.0002	0.00
Bromomethane	mg/L	< 0.0005	< 0.0005	0.00
Cadmium	mg/L	< 0.0001	< 0.0001	0.00
Calcium	mg/L	82	82	0.00
Carbon Tetrachloride	mg/L	< 0.0001	< 0.0001	0.00
Chemical Oxygen Demand	mg/L	< 4	< 4	0.00
Chloride	mg/L	20	20	0.00
Chlorobenzene	mg/L	< 0.0001	< 0.0001	0.00
Chloroethane	mg/L	< 0.0002	< 0.0002	0.00
Chloroform	mg/L	< 0.0001	< 0.0001	0.00
Chloromethane	mg/L	< 0.0005	< 0.0005	0.00
Chromium (Total)	mg/L	< 0.005	< 0.005	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Cis-1,3-Dichloropropylene	mg/L	< 0.0002	< 0.0002	0.00
Cobalt	mg/L	< 0.0005	< 0.0005	0.00
Conductivity	µS/cm	758	759	0.13
Copper	mg/L	< 0.001	< 0.001	0.00
Dibromochloromethane	mg/L	< 0.0002	< 0.0002	0.00
Dichloromethane	mg/L	< 0.0005	< 0.0005	0.00
Dissolved Organic Carbon	mg/L	1.5	1.5	0.00
Ethylbenzene	mg/L	< 0.0001	< 0.0001	0.00
Hardness	mg/L	390	390	0.00
Iron	mg/L	< 0.1	< 0.1	0.00
Lead	mg/L	< 0.0005	< 0.0005	0.00
m+p-Xylene	mg/L	< 0.0001	< 0.0001	0.00
Magnesium	mg/L	46	46	0.00
Manganese	mg/L	0.055	0.055	0.00
Mercury	mg/L	< 0.0002	< 0.0002	0.00
Methyl Ethyl Ketone	mg/L	< 0.005	< 0.005	0.00
Methyl Tert Butyl Ether	mg/L	< 0.0002	< 0.0002	0.00
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
o-Xylene	mg/L	< 0.0001	< 0.0001	0.00
pH (Lab)	unitless	8.16	8.14	0.25
Phenols	mg/L	< 0.001	< 0.001	0.00
Phosphorus (total)	mg/L	0.04	0.05	22.22
Potassium	mg/L	3	3	0.00
Sodium	mg/L	12	12	0.00
Styrene	mg/L	< 0.0002	< 0.0002	0.00
Sulphate	mg/L	90	93	3.28
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Toluene	mg/L	< 0.0002	< 0.0002	0.00
Total Dissolved Solids	mg/L	424	426	0.47
Total Kjeldahl Nitrogen	mg/L	< 0.7	< 0.7	0.00
Total Xylenes	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,3-dichloropropylene	mg/L	< 0.0002	< 0.0002	0.00
Trichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trichlorofluoromethane	mg/L	< 0.0002	< 0.0002	0.00
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	0.00
Zinc	mg/L	0.012	< 0.005	0.00

Detailed Results from Field Duplicate vs. Regular Samples - Spring 2014 (continued)

Reading Name	Units	M58-3 2014-05-06 Regular Sample	M58-3 2014-05-06 Field Duplicate	RPD (%)
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-Dibromoethane	mg/L	< 0.0002	< 0.0002	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
1,2-Dichloropropane	mg/L	< 0.0001	< 0.0001	0.00
1,3,5-Trimethylbenzene	mg/L			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
Acetone	mg/L	< 0.01	< 0.01	0.00
Alkalinity	mg/L	310	310	0.00
Ammonia	mg/L	< 0.15	< 0.15	0.00
Arsenic	mg/L	< 0.001	< 0.001	0.00
Barium	mg/L	0.17	0.17	0.00
Benzene	mg/L	< 0.0001	< 0.0001	0.00
Biochemical Oxygen Demand	mg/L	< 2	< 2	0.00
Boron	mg/L	0.013	0.01	26.09
Bromodichloromethane	mg/L	< 0.0001	< 0.0001	0.00
Bromoform	mg/L	< 0.0002	< 0.0002	0.00
Bromomethane	mg/L	< 0.0005	< 0.0005	0.00
Cadmium	mg/L	< 0.0001	< 0.0001	0.00
Calcium	mg/L	89	91	2.22
Carbon Tetrachloride	mg/L	< 0.0001	< 0.0001	0.00
Chemical Oxygen Demand	mg/L	< 4	< 4	0.00
Chloride	mg/L	4	4	0.00
Chlorobenzene	mg/L	< 0.0001	< 0.0001	0.00
Chloroethane	mg/L	< 0.0002	< 0.0002	0.00
Chloroform	mg/L	< 0.0001	< 0.0001	0.00
Chloromethane	mg/L	< 0.0005	< 0.0005	0.00
Chromium (Total)	mg/L	< 0.005	< 0.005	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Cis-1,3-Dichloropropylene	mg/L	< 0.0002	< 0.0002	0.00
Cobalt	mg/L	< 0.0005	< 0.0005	0.00
Conductivity	µS/cm	642	643	0.16
Copper	mg/L	< 0.001	< 0.001	0.00
Dibromochloromethane	mg/L	< 0.0002	< 0.0002	0.00
Dichloromethane	mg/L	< 0.0005	< 0.0005	0.00
Dissolved Organic Carbon	mg/L	1	0.9	10.53
Ethylbenzene	mg/L	< 0.0001	< 0.0001	0.00
Hardness	mg/L	360	360	0.00
Iron	mg/L	< 0.1	< 0.1	0.00
Lead	mg/L	< 0.0005	< 0.0005	0.00
m+p-Xylene	mg/L	< 0.0001	< 0.0001	0.00
Magnesium	mg/L	33	33	0.00
Manganese	mg/L	< 0.002	< 0.002	0.00
Mercury	mg/L	< 0.0002	< 0.0002	0.00
Methyl Ethyl Ketone	mg/L	< 0.005	< 0.005	0.00
Methyl Tert Butyl Ether	mg/L	< 0.0002	< 0.0002	0.00
Naphthalene	mg/L	< 0.0005	< 0.0005	0.00
Nickel	mg/L	< 0.001	< 0.001	0.00
Nitrate	mg/L	0.18	0.19	5.41
Nitrite	mg/L	< 0.01	< 0.01	0.00
Nitrite + Nitrate	mg/L	0.18	0.19	5.41
o-Xylene	mg/L	< 0.0001	< 0.0001	0.00
pH (Lab)	unitless	7.9	7.87	0.38
Phenols	mg/L	< 0.001	< 0.001	0.00
Phosphorus (total)	mg/L	< 0.03	< 0.03	0.00
Potassium	mg/L	1.7	1.7	0.00
Sodium	mg/L	5.4	5.3	1.87
Styrene	mg/L	< 0.0002	< 0.0002	0.00
Sulphate	mg/L	39	39	0.00
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Toluene	mg/L	< 0.0002	< 0.0002	0.00
Total Dissolved Solids	mg/L	312	328	5.00
Total Kjeldahl Nitrogen	mg/L	< 0.7	< 0.7	0.00
Total Xylenes	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,3-dichloropropylene	mg/L	< 0.0002	< 0.0002	0.00
Trichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trichlorofluoromethane	mg/L	< 0.0002	< 0.0002	0.00
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	0.00
Zinc	mg/L	< 0.005	< 0.005	0.00

Detailed Results from Field Duplicate vs. Regular Samples - Spring 2014 (continued)

Reading Name	Units	M81 2014-05-07 Regular Sample	M81 2014-05-07 Field Duplicate	RPD (%)
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-Dibromoethane	mg/L			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
1,2-Dichloropropane	mg/L	< 0.0001	< 0.0001	0.00
1,3,5-Trimethylbenzene	mg/L			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
Acetone	mg/L	< 0.01	< 0.01	0.00
Alkalinity	mg/L	360	360	0.00
Ammonia	mg/L	< 0.15	< 0.15	0.00
Arsenic	mg/L	< 0.001	< 0.001	0.00
Barium	mg/L	0.22	0.22	0.00
Benzene	mg/L	< 0.0001	< 0.0001	0.00
Biochemical Oxygen Demand	mg/L	< 2	< 2	0.00
Boron	mg/L	0.028	0.026	7.41
Bromodichloromethane	mg/L	< 0.0001	< 0.0001	0.00
Bromoform	mg/L	< 0.0002	< 0.0002	0.00
Bromomethane	mg/L	< 0.0005	< 0.0005	0.00
Cadmium	mg/L	< 0.0001	< 0.0001	0.00
Calcium	mg/L	110	110	0.00
Carbon Tetrachloride	mg/L	< 0.0001	< 0.0001	0.00
Chemical Oxygen Demand	mg/L	< 4	< 4	0.00
Chloride	mg/L	73	73	0.00
Chlorobenzene	mg/L	< 0.0001	< 0.0001	0.00
Chloroethane	mg/L	< 0.0002	< 0.0002	0.00
Chloroform	mg/L	< 0.0001	< 0.0001	0.00
Chloromethane	mg/L	< 0.0005	< 0.0005	0.00
Chromium (Total)	mg/L	< 0.005	< 0.005	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Cis-1,3-Dichloropropylene	mg/L	< 0.0002	< 0.0002	0.00
Cobalt	mg/L	< 0.0005	< 0.0005	0.00
Conductivity	µS/cm	932	932	0.00
Copper	mg/L	< 0.001	< 0.001	0.00
Dibromochloromethane	mg/L	< 0.0002	< 0.0002	0.00
Dichloromethane	mg/L	< 0.0005	< 0.0005	0.00
Dissolved Organic Carbon	mg/L	1.4	1.5	6.90
Ethylbenzene	mg/L	< 0.0001	< 0.0001	0.00
Hardness	mg/L	510	500	1.98
Iron	mg/L	< 0.1	< 0.1	0.00
Lead	mg/L	< 0.0005	< 0.0005	0.00
m+p-Xylene	mg/L	< 0.0001	< 0.0001	0.00
Magnesium	mg/L	55	55	0.00
Manganese	mg/L	0.015	0.015	0.00
Mercury	mg/L	< 0.0002	< 0.0002	0.00
Methyl Ethyl Ketone	mg/L	< 0.005	< 0.005	0.00
Methyl Tert Butyl Ether	mg/L	< 0.0002	< 0.0002	0.00
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
o-Xylene	mg/L	< 0.0001	< 0.0001	0.00
pH (Lab)	unitless	7.99	7.96	0.38
Phenols	mg/L	< 0.001	< 0.001	0.00
Phosphorus (total)	mg/L	0.06	0.05	18.18
Potassium	mg/L	2.2	2.1	4.65
Sodium	mg/L	11	10	9.52
Styrene	mg/L	< 0.0002	< 0.0002	0.00
Sulphate	mg/L	39	39	0.00
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Toluene	mg/L	< 0.0002	< 0.0002	0.00
Total Dissolved Solids	mg/L	570	528	7.65
Total Kjeldahl Nitrogen	mg/L	< 0.7	< 0.7	0.00
Total Xylenes	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,3-dichloropropylene	mg/L	< 0.0002	< 0.0002	0.00
Trichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trichlorofluoromethane	mg/L	< 0.0002	< 0.0002	0.00
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	0.00
Zinc	mg/L	< 0.005	< 0.005	0.00

Detailed Results from Field Duplicate vs. Regular Samples - Spring 2014 (continued)

Reading Name	Units	M82-2 2014-05-07 Regular Sample	M82-2 2014-05-07 Field Duplicate	RPD (%)
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-Dibromoethane	mg/L	< 0.0002		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
1,2-Dichloropropane	mg/L	< 0.0001	< 0.0001	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
Acetone	mg/L	< 0.01	< 0.01	0.00
Alkalinity	mg/L	330	330	0.00
Ammonia	mg/L	0.31	0.31	0.00
Arsenic	mg/L	< 0.001	< 0.001	0.00
Barium	mg/L	0.13	0.13	0.00
Benzene	mg/L	< 0.0001	< 0.0001	0.00
Biochemical Oxygen Demand	mg/L	< 2	< 2	0.00
Boron	mg/L	0.14	0.14	0.00
Bromodichloromethane	mg/L	< 0.0001	< 0.0001	0.00
Bromoform	mg/L	< 0.0002	< 0.0002	0.00
Bromomethane	mg/L	< 0.0005	< 0.0005	0.00
Cadmium	mg/L	< 0.0001	< 0.0001	0.00
Calcium	mg/L	110	110	0.00
Carbon Tetrachloride	mg/L	< 0.0001	< 0.0001	0.00
Chemical Oxygen Demand	mg/L	< 4	< 4	0.00
Chloride	mg/L	25	25	0.00
Chlorobenzene	mg/L	< 0.0001	< 0.0001	0.00
Chloroethane	mg/L	< 0.0002	< 0.0002	0.00
Chloroform	mg/L	< 0.0001	< 0.0001	0.00
Chloromethane	mg/L	< 0.0005	< 0.0005	0.00
Chromium (Total)	mg/L	< 0.005	< 0.005	0.00
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Cis-1,3-Dichloropropylene	mg/L	< 0.0002	< 0.0002	0.00
Cobalt	mg/L	< 0.0005	< 0.0005	0.00
Conductivity	µS/cm	800	798	0.25
Copper	mg/L	< 0.001	< 0.001	0.00
Dibromochloromethane	mg/L	< 0.0002	< 0.0002	0.00
Dichloromethane	mg/L	< 0.0005	< 0.0005	0.00
Dissolved Organic Carbon	mg/L	2.9	2.8	3.51
Ethylbenzene	mg/L	< 0.0001	< 0.0001	0.00
Hardness	mg/L	400	390	2.53
Iron	mg/L	< 0.1	< 0.1	0.00
Lead	mg/L	< 0.0005	< 0.0005	0.00
m+p-Xylene	mg/L	< 0.0001	< 0.0001	0.00
Magnesium	mg/L	29	28	3.51
Manganese	mg/L	0.019	0.018	5.41
Mercury	mg/L	< 0.0002	< 0.0002	0.00
Methyl Ethyl Ketone	mg/L	< 0.005	< 0.005	0.00
Methyl Tert Butyl Ether	mg/L	< 0.0002	< 0.0002	0.00
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
o-Xylene	mg/L	< 0.0001	< 0.0001	0.00
pH (Lab)	unitless	7.96	8.05	1.12
Phenols	mg/L	0.0025	0.0022	12.77
Phosphorus (total)	mg/L	0.04	< 0.03	0.00
Potassium	mg/L	3.7	3.6	2.74
Sodium	mg/L	19	18	5.41
Styrene	mg/L	< 0.0002	< 0.0002	0.00
Sulphate	mg/L	69	69	0.00
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Toluene	mg/L	< 0.0002	< 0.0002	0.00
Total Dissolved Solids	mg/L	496	476	4.12
Total Kjeldahl Nitrogen	mg/L	< 0.7	< 0.7	0.00
Total Xylenes	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trans-1,3-dichloropropylene	mg/L	< 0.0002	< 0.0002	0.00
Trichloroethylene	mg/L	< 0.0001	< 0.0001	0.00
Trichlorofluoromethane	mg/L	< 0.0002	< 0.0002	0.00
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	0.00
Zinc	mg/L	< 0.005	< 0.005	0.00

Detailed Results from Field Blank Samples - Spring 2014

Reading Name	Units	Blank - Field 2014-05-06	Blank - Field 2014-05-07	Blank - Field 2014-05-08
1,1,1,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	< 0.0002
1,1,1-Trichloroethane	mg/L	< 0.0001	< 0.0001	< 0.0001
1,1,2,2-Tetrachloroethane	mg/L	< 0.0002	< 0.0002	< 0.0002
1,1,2-Trichloroethane	mg/L	< 0.0002	< 0.0002	< 0.0002
1,1-Dichloroethane	mg/L	< 0.0001	< 0.0001	< 0.0001
1,1-Dichloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001
1,2-Dibromoethane	mg/L	< 0.0002		< 0.0002
1,2-Dichlorobenzene (o)	mg/L	< 0.0002	< 0.0002	< 0.0002
1,2-Dichloroethane	mg/L	< 0.0002	< 0.0002	< 0.0002
1,2-Dichloropropane	mg/L	< 0.0001	< 0.0001	< 0.0001
1,3,5-Trimethylbenzene	mg/L		< 0.0002	< 0.0002
1,3-Dichlorobenzene (m)	mg/L	< 0.0002	< 0.0002	< 0.0002
1,4-Dichlorobenzene (p)	mg/L	< 0.0002	< 0.0002	< 0.0002
Acetone	mg/L	< 0.01	< 0.01	< 0.01
Alkalinity	mg/L	1.5	1.6	1.2
Ammonia	mg/L	< 0.15	< 0.15	< 0.15
Arsenic	mg/L	< 0.001	< 0.001	< 0.001
Barium	mg/L	< 0.002	< 0.002	< 0.002
Benzene	mg/L	< 0.0001	< 0.0001	< 0.0001
Biochemical Oxygen Demand	mg/L	< 2	< 2	< 2
Boron	mg/L	< 0.01	< 0.01	< 0.01
Bromodichloromethane	mg/L	< 0.0001	< 0.0001	< 0.0001
Bromoform	mg/L	< 0.0002	< 0.0002	< 0.0002
Bromomethane	mg/L	< 0.0005	< 0.0005	< 0.0005
Cadmium	mg/L	< 0.0001	< 0.0001	< 0.0001
Calcium	mg/L	< 0.2	< 0.2	< 0.2
Carbon Tetrachloride	mg/L	< 0.0001	< 0.0001	< 0.0001
Chemical Oxygen Demand	mg/L	< 4	< 4	< 4
Chloride	mg/L	< 1	< 1	< 1
Chlorobenzene	mg/L	< 0.0001	< 0.0001	< 0.0001
Chloroethane	mg/L	< 0.0002	< 0.0002	< 0.0002
Chloroform	mg/L	< 0.0001	< 0.0001	< 0.0001
Chloromethane	mg/L	< 0.0005	< 0.0005	< 0.0005
Chromium (Total)	mg/L	< 0.005	< 0.005	< 0.005
Cis-1,2-Dichloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001
Cis-1,3-Dichloropropylene	mg/L	< 0.0002	< 0.0002	< 0.0002
Cobalt	mg/L	< 0.0005	< 0.0005	< 0.0005
Conductivity	µS/cm	1	1	1
Copper	mg/L	< 0.001	< 0.001	< 0.001
Dibromochloromethane	mg/L	< 0.0002	< 0.0002	< 0.0002
Dichloromethane	mg/L	< 0.0005	< 0.0005	< 0.0005
Dissolved Organic Carbon	mg/L	0.3	0.7	< 0.2
Ethylbenzene	mg/L	< 0.0001	< 0.0001	< 0.0001
Hardness	mg/L	< 1	< 1	< 1
Iron	mg/L	< 0.1	< 0.1	< 0.1
Lead	mg/L	< 0.0005	< 0.0005	< 0.0005
m+p-Xylene	mg/L	< 0.0001	< 0.0001	< 0.0001
Magnesium	mg/L	< 0.05	< 0.05	< 0.05
Manganese	mg/L	< 0.002	< 0.002	< 0.002
Mercury	mg/L	< 0.0002	< 0.0002	< 0.0002
Methyl Ethyl Ketone	mg/L	< 0.005	< 0.005	< 0.005
Methyl Tert Butyl Ether	mg/L	< 0.0002	< 0.0002	< 0.0002
Naphthalene	mg/L	< 0.0005	< 0.0005	< 0.0005
Nickel	mg/L	< 0.001	< 0.001	< 0.001
Nitrate	mg/L	< 0.1	< 0.1	< 0.1
Nitrite	mg/L	< 0.01	< 0.01	< 0.01
Nitrite + Nitrate	mg/L	< 0.1	< 0.1	< 0.1
o-Xylene	mg/L	< 0.0001	< 0.0001	< 0.0001
pH (Lab)	unitless	6.5	6.49	6.41
Phenols	mg/L	< 0.001	< 0.001	< 0.001
Phosphorus (total)	mg/L	< 0.03	< 0.03	< 0.03
Potassium	mg/L	< 0.2	< 0.2	< 0.2
Sodium	mg/L	< 0.1	< 0.1	< 0.1
Styrene	mg/L	< 0.0002	< 0.0002	< 0.0002
Sulphate	mg/L	< 1	< 1	< 1
Tetrachloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001
Toluene	mg/L	< 0.0002	< 0.0002	< 0.0002
Total Dissolved Solids	mg/L	< 10	< 10	< 10
Total Kjeldahl Nitrogen	mg/L	< 0.7	< 0.7	< 0.7
Total Xylenes	mg/L	< 0.0001	< 0.0001	< 0.0001
Trans-1,2-dichloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001
Trans-1,3-dichloropropylene	mg/L	< 0.0002	< 0.0002	< 0.0002
Trichloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001
Trichlorofluoromethane	mg/L	< 0.0002	< 0.0002	< 0.0002
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	< 0.0002
Zinc	mg/L	< 0.005	< 0.005	0.007

Detailed Results from Trip Blank Sample - Spring 2014

Reading Name	Units	Blank - Trip 2014-05-06	Blank - Trip 2014-05-07	Blank - Trip 2014-05-08	Blank - Trip 2014-05-06	Blank - Trip 2014-05-07	Blank - Trip 2014-05-08
1,1,1,2-Tetrachloroethane	mg/L	< 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
1,1,2,2-Tetrachloroethane	mg/L	< 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
1,1-Dichloroethane	mg/L	< 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
1,2-Dibromoethane	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
1,2-Dichlorobenzene (o)	mg/L	< 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
1,2-Dichloropropane	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
1,3,5-Trimethylbenzene	mg/L	< 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
1,4-Dichlorobenzene (p)	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Benzene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Bromodichloromethane	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Bromoform	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Bromomethane	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Carbon Tetrachloride	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Chlorobenzene	mg/L	< 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
Chloroform	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Chloromethane	mg/L	< 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
Cis-1,3-Dichloropropylene	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Dibromochloromethane	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Dichloromethane	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethylbenzene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
m+p-Xylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
o-Xylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Styrene	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Tetrachloroethylene	mg/L	< 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
Total Xylenes	mg/L	< 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
Trans-1,3-dichloropropylene	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Trichloroethylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Trichlorofluoromethane	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Vinyl Chloride	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002

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