City of Guelph

2017 Annual Report
Closed Eastview Road Landfill Site

Prepared by:

AECOM Canada Ltd.
105 Commerce Valley Drive West, 7th Floor
Markham, ON L3T 7W3
Canada

T: 905.886.7022
F: 905.886.9494
www.aecom.com

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April 27, 2018

Mili, New, Director
West Central Region
Ministry of the Environment
119 King Street West, 12th Floor
Hamilton, ON L8P 4Y7

Dear Ms. New:

RE: City of Guelph Eastview Landfill Site – 2017 – Annual Report

Pursuant to Condition #5 of the Ministry of the Environment's *Provisional Environmental Compliance Approval for a Waste Disposal Site, No. A170101*, I am pleased to submit the 2017 Annual Report for the Eastview Road Landfill Site in the City of Guelph. The report includes:

1) Closed Landfill Operations
2) Leachate Collection and Containment Performance Monitoring
3) Groundwater Monitoring
4) Surface Water Monitoring
5) Landfill Gas Monitoring

I trust that the enclosed report meets the needs of the Ministry, and fulfills the requirements of the Certificate of Approval. If further information is required, or should you have any questions, please do not hesitate to contact us.

Sincerely,

Cameron Walsh, CFM, CET
Division Manager

Solid Waste Resources Division
Infrastructure, Development and Enterprise
Location: 110 Dunlop Drive

T 519-822-1260 x 2053
F 519-767-1660
E cameron.walsh@guelph.ca

/dez

C Jackie Lamport, Senior Environmental Officer, MOECC, Guelph District Office

File #14.226.001

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AECOM: 2015-04-13

Authors

Report Prepared By:

PROFESSIONAL GEOSCIENTISTS
TERRY LA CHAPELLE
PRACTISING MEMBER
0782
ONTARIO
Apr 25/18

Terry La Chapelle, B.Sc., P.Geo.
Senior Geologist, Project Manager
Environment

Report Reviewed By:

Patty Wong

Patty Wong, B.Sc., P.Geo.
Senior Geologist
Patty.Wong@aecom.com

Executive Summary

The following table presents a summary of the 2017 Annual Report for the Closed Eastview Road Landfill Site. The landfill is operated under two Certificates of Approval/Environmental Compliance Approval (C of A/ECA):

a) Amended Environmental Compliance Approval (ECA) for a Waste Disposal Site No. A170101 under the Environmental Protection Act for the general landfill operation (most recently amended on May 12, 2012 for Post Closure operations and monitoring as revised in Table A).

b) Certificate of Approval (Sewage) No. 3-0048-90-006 under the Ontario Water Resources Act for the leachate collection system.

Each C of A/ECA specifies annual reporting requirements. These have been outlined in the left-hand column below, while the right-hand column provide a summary of the 2017 findings as well as a reference to the section of this report where the reader will find further details.

A. Amended Environmental Compliance Approval No. A170101 for the Waste Disposal Site

Surface Water, Stormwater, Groundwater and Landfill Gas Monitoring

ECA Reporting Requirement	Report Reference and Summary
5) A written report on the development, operation and monitoring of the *Site,* shall be completed annually (the "Annual Report"). The Annual Report shall be submitted to the *District Manager,* by April 30th of the year following the period being reported upon.	This report is to fulfill Condition 5.
6) The Annual Report shall include the following: (a) The results and an interpretive analysis of the results of all leachate, groundwater surface water and landfill gas monitoring, including an assessment of the need to amend the monitoring programs; (b) An assessment of the operation and performance of all engineered facilities, the need to amend the design or operation of the *Site,* and the adequacy of and need to implement the contingency plans; (c) A summary of any complaints received and the responses made; (d) A discussion of any operational problems encountered at the *Site* and corrective action taken; (e) A report on the status of all monitoring wells and a statement as to compliance with *Ontario Regulation 903;* (f) Changes to the gas collection system and an analysis of the results from the changes; (g) An assessment of the need to continue the operation of the PLCCS, or recommendations regarding any modifications to the PLCCS; (h) Assessment of the performance of PLCCS in maintaining the water levels in the outwash beneath the waste at the lowest levels to confirm that it is effective in controlling and collecting leachate from the outwash beneath the landfill;	• Leachate quality in the waste and the outwash below the waste is similar to previous years (Section 4.3). • Shallow groundwater quality remains similar to previous years. As the PLCCS continues to operate as designed preventing off-site leachate migration, no new exceedances of Reasonable Use are predicted in the shallow groundwater (Section 4.4). • Lower till groundwater quality is similar to previous years and shows no indication of leachate effects. (Section 4.5.2.2). • Bedrock groundwater quality is similar to previous years and shows no indication of leachate impacts. Reasonable Use is not currently exceeded, nor is it predicted to be exceeded in the future. Further assessment of water quality results from replacement Location 37R and former Location 37 was completed in the current hydrogeological assessment. The conclusions of this assessment were that although the former location 37 had a strong increasing trend in chloride, the alkalinity (which is also highly elevated in leachate) was decreasing. A similar relationship was also noted at Location 50. Therefore, this observed trend is inconsistent with a leachate source. Further, at the replacement location (37R), the chloride was found to be significantly lower than 37-I with alkalinity higher, with no apparent trends since they were installed. Water quality results from Location 96, indicates that deep monitor (96-I) appears to have a similar water quality to the former monitor 92-I (low chloride), which it replaced. However, the new shallow monitor in the upper bedrock (92-II) is exhibiting elevated chloride, although significantly lower than at former 37-I, as well. Although chloride concentrations are elevated, it had shown a decreasing trend since it was installed up to 2015. Since this time concentrations have shown some variability, with no observable increasing/decreasing trend. Further data is required to assess the water quality at these locations (Section 4.5). • All monitoring wells on site are maintained through proper capping and protection from damage. Also, the overall condition of each monitoring well will be assessed in each monitoring event so that any repairs or replacements of identified monitors that are damaged or destroyed will be completed in the next monitoring round. • Surface water sampling continues to indicate no adverse effects on downstream quality. (Section 5.4). • There is no evidence of gas migration off-site. (Section. 6.0).

Surface Water, Stormwater, Groundwater and Landfill Gas Monitoring

ECA Reporting Requirement	Report Reference and Summary
(i) Assessment that the target levels of contaminants are being met. If this is not being met further assessment with respect to boron shall be completed; (j) Assessment of shallow bedrock groundwater elevation trends to determine if any changes are occurring; (k) Assessment of hydraulic gradients between the water levels in the outwash beneath the waste and the shallow bedrock to determine if they are within the historical ranges and/or not changing significantly due to a potential lowering of the shallow bedrock water levels (outside seasonal changes); (l) Assessment of monitoring locations that did not meet the target levels with respect to the current boron concentrations observed at the individual locations of concern; and (m) Any other information with respect to the *Site* which the *Regional Director* may require from time to time.	• There were no operational changes recommended for 2017. • There were no recorded complaints in 2017 (Section 2.3). • The PLCCS is operating as designed and collects leachate effectively. The system creates an inward hydraulic gradient preventing off-site leachate migration. There is no need to implement any additional leachate control measures at this time (Sections 3.4, 3.5, 3.6, 3.7). • Based on the assessment of target elevations at individual locations, and the overall assessment for the site, future Reasonable Use exceedances in the bedrock aquifer are not predicted (Section 4.5.2). Groundwater flow is generally similar to previous years however the bedrock groundwater flow has been revised based on the current hydrogeological assessment, although the bedrock groundwater flow still remains similar to historic interpretations there is more flow coming into the site from the west along an interpreted incised bedrock low. Assessment of vertical gradients towards the bedrock was slightly higher than previous years related to the refined bedrock elevation surface. Vertical gradients are, on average, very low and therefore, the estimated downward flow velocity is also very slow, in the order of only a few centimetres per year. (Section 4.2) • There is no need to implement the contingency plans for groundwater – Section 4.7. • There is no need to implement the contingency plans for surface water – Section 5.5. • There is no need to implement the contingency plans for landfill gas migration off-site – Section 6.5.

Leachate

C of A Reporting Requirement	Report Reference and Summary
8.3 All data, interpretations and recommendations regarding this leachate characterization program and the impact assessment on the Water Pollution Control Plant with respect to both quantity and quality of leachate shall be included in the annual monitoring report.	• See Section 3.1, 3.2, 3.3 and 3.4.1, associated Tables and Figures, Appendix B and C. • Quantity of leachate collected and discharged to the sanitary sewer in 2017 was calculated at 133,603 m^3. (Section 3.4). • The leachate quality from the Perimeter Leachate Collection System is similar to previous years. • As leachate quality is similar to previous years, there is no significant impact on the Waste Water Treatment Plant. (Section 3.2.1).

B. Certificate of Approval No. 3-0048-90-006 for the Leachate Collection System

C of A Reporting Requirement	Report Reference and Summary
6(a) A monthly summary and interpretation of leachate flows at all pumping stations.	• Both the south and west systems collected similar volumes in 2017. Lower collection rates are generally experienced in the dry summer months (Sections 3.2 and 3.4.1, Tables and Charts in Appendix B).
6(b) A monthly summary and interpretation of leachate levels in all manholes.	• The PLCCS is operating as designed (Section 3.3 and 3.5 and associated Tables in Appendix B).
6(c) An estimate of the annual volume of leachate collected.	• The total quantity of leachate collected in 2017 was Calculated at 133,603 m^3. (Section 3.4).
6(d) An assessment of the efficiency of the system with respect to the quantity of leachate collected, control of groundwater levels upgradient of the containment wall, and control of leachate migration downgradient of the site.	• The system has continued to function efficiently. The hydraulic gradients are consistently inward across the sheet pile wall thus preventing off-site movement of leachate into the shallow groundwater (Section 3.6).
6(e) An assessment of the need to implement the contingency plan based on Condition 6(d).	• There is no need to implement contingency measures (Section 3.8).
6(f) Any changes to the operation, procedures or equipment associated with the system.	• No changes in operation, procedure or equipment occurred in 2017 (Section 3.10).
6(g) Any operational problems encountered and remedial measures taken.	• Maintenance on the pumps due to corrosion of the impellers was conducted on the PLCCS in 2017. During this time backup pumps were employed. The repaired pumps were all reinstalled and operational by July 2017 (Section 3.9). • All recommended repairs to the condensate traps, as recommended in the 2016 ASI inspection of the traps were completed (Section 3.9). • The leachate collection system was flushed and videoed to ensure it was operating as

C of A Reporting Requirement	Report Reference and Summary
	designed (Section 3.9).
6(h) Recommendations respecting any proposed changes in the operation, procedures, equipment or monitoring of the system.	• No changes are recommended.

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1. Introduction

1.1 Background

The City of Guelph currently owns the Eastview Road Landfill Site located in the northeast corner of the city. The landfill was in operation until October 2003 and is now closed. The landfill property is about 81 ha of which about 45 ha had been landfilled. The closed landfill is bound by Eastview Road to the south, Speedvale Avenue to the north and Watson Road to the east (Figure 1).

In 2003, the City submitted the closure plan for the landfill site to the MOECC. In 2005, the MOECC issued an amendment to the Provisional Certificate of Approval # A 170101 (C of A) for post closure of the Closed Eastview Road Landfill Site.

Based on recommendations in response to MOECC review comments on the 2007 and 2008 annual reports, the laboratory chemistry results are provided in CD format attached. Also provided on this CD are:

- an electronic copy of the Annual Report;
- the northeast quadrant pumping volumes were added to the groundwater elevation trends for the deep bedrock monitors (16-VIII and 90-I) for comparison purposes;
- the measured water temperatures taken during groundwater sampling (Table A6, Appendix A); and
- An updated Table A1 (Monitor Construction Details) to include the replacement locations and new locations as well as the former top of pipe elevations for monitoring wells 37-I and 37-II (Location 37 replaced in late 2011).

In 2011, the City applied for several amendments to the C of A, one of which was the reduction of monitoring as outlined in previous annual reports. This revised monitoring program was accepted by the MOECC but still needed to be incorporated into the C of A, through an amendment. As there were several amendments to the C of A that would take time to review and incorporate before the final could be issued, MOECC Approvals Branch notified the City that the revised monitoring program could be implemented in the summer of 2011. The revised monitoring program was then initiated for the site for the remainder of that year.

The amended Environmental Compliance Approval (ECA) was issued to the City on May 12, 2012. All operations and monitoring completed in 2017 have been in accordance with the amended ECA.

All monitoring at the landfill is conducted by a qualified Environmental Technician employed by the City of Guelph under the direction of AECOM.

1.2 Objectives

As part of the requirements under Condition 5 of the current ECA, an Annual Report on the monitoring undertaken at the landfill must be submitted to the MOECC no later than April 30 of the following year.

The objective of this Annual Report is to satisfy all the requirements set forth in Condition 6 and 8 in the ECA as well as Section 6 of the Perimeter Leachate Collection and Containment System (PLCCS) C of A, specifically on all aspects of operations and environmental monitoring at the landfill.

1.3 Scope and Organization of this Report

The Annual Report is organized to be comparable with the actual requirements set forth in the ECA/C of A. This has provided a more concise and user friendly reporting style which received a positive response from the MOECC during their review of the 1996 Annual Report, the first report in which the concept was initiated. The Executive Summary, at the beginning of this report, is also structured so that each of the reporting requirements of the ECA/C of A. are quoted, cross-referenced to the report and addressed in a summary statement.

Following this introductory section, the balance of the report is structured as follows:

Section 2 .... Closed Landfill Operations
Section 3 .... Leachate Management
Section 4 .... Groundwater Monitoring
Section 5 .... Surface Water Monitoring
Section 6 .... Landfill Gas Monitoring
Section 7 .... Conclusions and Recommendations

The Appendices at the back of the report provide much of the associated technical information.

2. Closed Landfill Operations

2.1 Clean Fill Needs in 2017

Clean fill was brought into the site in 2017. The fill was spread and used where required.

2.2 Operational Problems and Remedial Measures

No operational problems occurred at the site in 2017. No remedial measures were required in 2017. However, routine maintenance and cleaning of the pump stations was undertaken in 2017.

2.3 Public Complaints and Responses

Public complaints are reported to landfill staff for investigation. Copies of complaint records are provided to complainants, if desired, and kept on file at the landfill office. There were no recorded complaints in 2017.

2.4 Recommended/Approved Operational Changes

There are no operational changes recommended for 2018.

3. Leachate Management

3.1 Leachate Quality and Impact on the Waste Water Treatment Plant

3.1.1 Leachate Quality

Based on the amended Certificate of Approval # 3-0048-90-006 (C of A) dated February 15, 1996, sample collection of leachate at the Eastview Road Landfill is required from the main pumping station only. Leachate sampling and assessment are required under the C of A, Schedule A, and Condition 8.3. Leachate samples were collected from the main pumping station in 2017. Leachate from the south and west pumping stations is pumped to the main station and then pumped to the municipal sewer for treatment at the Guelph Wastewater Treatment Plant (WWTP). The relative locations of the three-leachate pumping stations at the landfill are shown schematically in Figure 2.

In 2017, the C of A quarterly sampling requirements for the main pumping station were:

a) pH;
b) five-day carbonaceous biochemical oxygen demand ($CBOD_5$);
c) chemical oxygen demand (COD);
d) total Kjeldahl nitrogen (TKN);
e) phenols; and
f) iron.

Semi-annual samples were collected for the remaining Model Sewer Use by-law parameters listed in Table 1 of the C of A, and for Municipal/Industrial Strategy for Abatement (MISA) parameters listed in Table 2 of the C of A.

3.2 Model Sewer Use By-Law Parameters

3.2.1 Main Pumping Station

The sampling results for the Model Sewer Use by-law parameters are presented in **Table 1**: Leachate Analytical Data from the Main Pumping Station. The results show that all parameters were within the Model Sewer Use by-law limits for every parameter on every sampling occasion. As well, the water quality results are similar to those observed historically.

In past reports, the loading on the WWTP was calculated. These loadings, specifically for leachate $CBOD_5$ and TKN, were consistently within 1% of the corresponding WWTP influent loads, and thus considered insignificant. The Manager of the City of Guelph WWTP had continually confirmed these loadings were not significant. Since the water quality collected from the Main Pumping Station continues to be similar to that observed in the past, it is expected that the loadings on the WWTP will continue to be insignificant. In the future, if there is any significant change in the water quality collected (i.e., significant increases in concentrations observed), the loading calculation will be completed to assess the potential affects.

Table 1: Leachate Analytical Data from Main Pumping Station

Parameter	Sampling Dates 2017				Model Sewer Use By-Law Limits	2017 Avg. Conc. (mg/L)
	July	August	September	November		
pH	7.26	6.97	7.18	7.76	5.5-9.5	7.29
CBOD5	<40	8	<2	<2	300	13
COD	230	210	110	57		152
Oil & Grease (animal)	<0.5				150	0.5
Oil &Grease (mineral)	<0.5				15	0.5
Suspended Solids	36			8	350	22
Total Phosphorus	0.34			0.057	10	0.199
TKN		120	32		100	76
Phenols	<0.001	<0.02	<0.06	0.0051	1	0.022
Chlorides	750			240	1500	495
Sulphate	<1			45	1500	23
Aluminum	0.047			0.031	50	0.039
Iron	13	9.8	7.2	2.6	50	8.2
Fluoride	0.23			0.17	10	0.2
Antimony	<0.0025			<0.0005	5	0.0015
Bismuth	<0.005			<0.001	5	0.003
Boron	6.3			0.75		3.53
Chromium	<0.025			<0.005	5	0.015
Cobalt	0.0063			0.0011	5	0.0037
Lead	<0.0025			<0.0005	5	0.0015
Manganese	0.23			0.23	5	0.23
Molybdenum	<0.0025			0.00058	5	0.0015
Selenium	<0.01			<0.002	5	0.006
Silver	<0.0005			<0.0001	5	0.0003
Tin	<0.005			<0.001	5	0.003
Titanium	<0.025			<0.005	5	0.015
Vanadium	0.0055			0.00085	5	0.00318
Copper	<0.005			0.0016	3	0.0033
Nickel	0.04			0.0073	3	0.0237
Zinc	<0.025			0.052	3	0.039
Cyanide	0.0072			<0.005	2	0.0061
Arsenic	<0.005			<0.001	1	0.003
Cadmium	<0.0005			<0.0001	1	0.0003
Mercury	<0.0001			<0.0001	0.1	0.0001

3.2.2 Summary

A review of the analytical results of samples collected from the main pumping station for each event in 2017 shows that all parameters were within the Model Sewer Use by-law limits. The leachate would not contribute a significant CBOD5, TKN or hydraulic load to the WWTP.

3.3 MISA Priority Pollutants

Leachate samples were collected from the main pumping station for analysis of the MISA parameters listed in Table 2 of the C of A. Samples were collected on July 20, 2017 and November 28, 2017. The analytical results are provided in Table C5 in Appendix C.

The MISA parameters can be divided into two categories, the first being conventional and metals, and the second being organics. All of the parameters in the first category were below Model Sewer Use by-law limits (where applicable), and were detected at relatively low concentrations.

The results of the MISA analysis, are presented in Table C5: 2017 Semi-Annual MISA Priority Pollutants Analysis from the Main Tank along with the corresponding method detection limits (MDL). Parameters in the second category, the organics, were generally below the laboratory detection limits, except for the highlighted parameters found in Table C5. As observed in the past, trace levels of the halogenated volatile organics (ATG 16) chlorobenzene, non-halogenated volatile organics (ATG 17) benzene and m-p-xylene were detected in 2017. Also, as observed on occasion in the past, trace levels of MCPA (ATG 21), Palmitic acid, Pimaric acid and 9,10-Dichlorostearic acid (ATG 26) were detected above detection limits.

As previously observed, low levels of Chlorinated Dibenzo-p-dioxins (ATG 24) continue to be detected. These compounds would not be unexpected as they are commonly found in municipal leachate at very low concentrations. However, to put these overall detections into perspective, the calculated toxicity equivalent based on the octachlorodibenzo-p-dioxin concentrations detected, was 3.59 and 3.96 pg/L, respectively, whereas the Ontario Drinking Water Standard is 15 pg/L.

3.4 Quantity of Leachate Collected

3.4.1 Annual Quantities

The volume of leachate collected is measured by a flow meter located in a chamber adjacent to the main pump station. These reading are collated with actual weekly volumes and pump hours down loaded through a SCADA system. Table B1 in Appendix B summarizes the monthly flow volumes and pump hours at the Main Pump Station in 2017.

As shown in Table B1, in 2017 a total of 133,603 m^3 of leachate was collected and discharged to the sanitary sewer. Of the total, about 63,227 m^3 was collected by the south station and 70,376 m^3 was collected by the west station (Table B2). The annual volume of leachate collected since 1991 is summarized in **Table 2**. The 2017 volume collected is slightly higher than observed in 2016.

Section 3.7.1 compares leachate volumes collected in 2017 to leachate production rates calculated via the water budget, to show that the PLCCS is effectively collecting leachate.

Table 2: Quantity of Leachate Collected Annually

Year	Quantity (m^3)	Year	Quantity (m^3)
1991	94,199	**2005**	64,525
1992	143,095	**2006**	83,556
1993	126,667	**2007**	60,724
1994	162,604	**2008**	89,750
1995	185,761	**2009**	83,644
1996	156,010	**2010**	119,692
1997	126,192	**2011**	104,412
1998	105,575	**2012**	113,625
1999	94,863	**2013**	161,786
2000	109,913	**2014**	153,653
2001	119,813	**2015**	123,759
2002	99,899	**2016**	113,037
2003	94,989	**2017**	133,603
2004	91,426		

3.5 Monthly Leachate Flows in Pump Stations

A summary of estimated leachate flows from the South and West pump stations is shown in Table B2 of Appendix B. Table B2 shows the following:

a) monthly pumping hours for each pump;
b) monthly volume of leachate pumped from each pump station; and
c) the average pumping rate each month, measured in m^3/hour of pump operation, for all pumps combined.

Table B3 in Appendix B shows the average daily flow rate, on a monthly basis, from each of the three Pump Stations. The average daily flow rate at the Main Pump Station was highest in January at 588.7 m^3/day and lowest in October at 200.3 m^3/day. At the South Pump Station the average daily flow rate was highest in March and lowest in October, with recorded rates of 266.1 m^3/day and 115.2 m^3/day, respectively. At the West Pump Station the average daily flow rate ranged from 345.2 m^3/day in January to 85.0 m^3/day in October 2017. The average leachate discharge rate from the site in 2017 was 366.8 m^3/day. The highest rates are recorded in the spring and lowest in the fall.

3.6 Monthly Leachate Levels in the Manholes

Leachate levels in the manholes were collected monthly to assess the performance of the PLCCS in maintaining unimpeded flow towards the pump stations. Figure 3 is the leachate and groundwater monitoring site location map, which shows the locations of the manholes and pumping stations.

The leachate levels measured in the collection system during 2017 are summarized in Tables B4 and B5 (Appendix B). These tables also include the collection pipe invert elevations and the top of sheet pile wall elevations adjacent to each manhole. Hydrographs of leachate elevations from selected manholes in both the south and west collection systems are illustrated in Figures 4 and 5.

Under normal operating conditions, the leachate levels measured in the collection system should be lowest at the pump station. This is based on the design of the system, which has increasing invert elevations away from the pump stations. Therefore, higher elevations are expected with increasing distances away from the pump stations as flow is induced through pumping. Below is a brief discussion on the measured leachate elevations in both the south and west collection systems.

South Collection System

Leachate elevations along the southeast section of the south collection system during 2017 show an apparent strong decrease from MH 1S towards the pump station (Figure 4a). This is based on the actual leachate elevations in the manholes.

In the southwest section of the south collection system, leachate elevations were similar to the pump station elevations (Figure 4b). As discussed in the past, only direct pumping of the PLCCS controls this section of the collection system. The pipe inverts along this section are flat at an elevation of 339.5 mASL, which also corresponds to the pump station invert. Therefore, it is expected that the leachate levels measured in this section would be similar to the pump station levels.

The overall patterns of the leachate levels continue to indicate that the south collection system is working as designed to collect and control leachate from beneath the landfill.

West Collection System

Leachate elevations in the west collection system exhibited a general decreasing trend from MH 2W to the pump station and from MH 8W towards the pump station (Figure 5).

The overall patterns of the leachate levels continue to indicate that the west collection system is working as designed to collect and control leachate from beneath the landfill.

3.7 Effectiveness of the Leachate Collection System

In the following discussion, the overall effectiveness of the leachate collection and containment system will be evaluated based on:

a) assessing the overall leachate quantity collected through the use of the detailed water budget for 2017;
b) confirming that leachate flows freely towards the collection system through the outwash below the waste; and
c) confirming that the sheet pile wall is still effectively preventing off-site leachate migration as indicated by water level differences.

3.7.1 Correlation of Predicted and Actual Leachate Quantities Collected

To provide a benchmark to assess the effectiveness of the PLCCS in the collection of leachate during 2017, a detailed water budget was calculated (**Table 3**). This water budget is used to predict the approximate amount of available surplus precipitation that could ultimately infiltrate through the landfill cover and waste and then be collected by the PLCCS. It should be noted that the calculations are for infiltration only and do not take into consideration surface water runoff from the landfill, a portion of which could also be collected by the PLCCS.

Table 3: Water Balance Calculation for the Closed Eastview Road Landfill – 2017

Month	Mean Temperature (°C)	Total Precipitation (mm)	Evapotranspiration (mm)	Surplus Water (mm)
January	-4.0	116.9	0	116.9
February	-1.9	80.1	0	80.1
March	-1.6	95.2	0	95.2
April	8.5	120.7	43.5	77.2
May	11.4	179.7	68.7	111
June	18.1	128	115.4	12.6
July	20.4	47.1	84.1	-37
August	18.5	76.3	87.3	-11
September	17.7	42.5	-1.5	44
October	11.5	90.3	51	39.3
November	1.3	90.6	3.8	86.8
December	-6.9	52.8	0	52.8
Total Year		**1120.2**	**452.3**	**667.9**
Average Year*		**914**	**513**	**401**

Notes: Soil Moisture Storage Based on 100 mm. / Under Average Conditions for 2017.
** 20 year average (1994-2013) for Guelph Dam (revised from 1984-2003)*

The detailed water budget determined that overall, 2017 was generally wetter than an average year in terms of total precipitation (Appendix E). However, the calculated total yearly surplus precipitation was 667.9 mm (Table 3), which is also higher than the average of 401 mm. During an average year, surplus water is available to infiltrate during the winter, spring and fall and there is a deficit of surplus due to high evapotranspiration at ground surface (average surplus) during the late spring and summer. In 2017, this was generally the case in July and August, only when a negative surplus was calculated. Therefore, in 2017, the total surplus of water potentially available to infiltrate was calculated at about 716 mm (sum of the months with positive surplus). This estimated 716 mm of surplus would be more indicative of the total surplus that could be available for infiltration and ultimately collected by the PLCCS, as there is not likely a significant actual loss of stored moisture from the landfill during deficit periods. Using this 716 mm, the estimated surplus that could be available to infiltrate into the landfill was about 109,763 m^3. The total quantity of leachate collected during 2017 was calculated at 133,603 m^3. Therefore, using the very conservative surplus, it appears that the PLCCS collected about 122% of the estimated volume that could have infiltrated into the landfill.

This, once again, demonstrates that the PLCCS continues to be effective in collecting leachate from beneath the landfill.

3.7.2 Leachate Elevations Beneath the Landfill with Respect to Target Elevations

Leachate flow beneath the landfill is strongly influenced by the PLCCS. This has been demonstrated by leachate elevations measured at locations 1-IR, 51-II, 52-I, 55-I 56-I, 57-I, 58-I and 61-I as well as, to a lesser extent, at locations 63-I, 66-I and 67-I over the years (current levels shown on Figures 6 to 8). This was best demonstrated in the past after the PLCCS was optimized (southeast leg of south collector was lowered), when all leachate levels began to drop. This decrease continued into the late 1990s and then stabilized. Prior to the optimization, it was observed that, corresponding high and low elevations measured in the PLCCS were generally reflected in leachate elevations. Normally, seasonal increases in leachate elevations beneath the landfill in the early spring would also be observed in the collection system. These elevations would then begin to decrease throughout the late spring and into the summer until they stabilized in the collection system. This also showed the influence of the collection system on the leachate levels beneath the site. Since the late 1990s, there has been and continues to be very little seasonal correlation between the leachate levels and the PLCCS. This would be expected as the PLCCS has decreased the leachate levels to their lowest levels, in the system, based on the design. Generally, it has been observed that during higher precipitation periods, the PLCCS pumping volumes increase to keep the level in the PLCCS at their lowest levels. The only exception is noted at the monitors (63-I, 65-I, 66-IR and 67-I) located near the edge of the interpreted outwash limit. These locations have shown a slight increase since their recorded lows in the 1990 and exhibit more seasonal effects. Although this may be the case, overall seasonal effects in the levels beneath the landfill are observed (i.e., water levels are generally higher during wetter years and drop during drier years) closer to the PLCCS in the outwash beneath the waste.

As would be expected, the overall leachate levels increased beneath the landfill in 2017 related to the much drier year experienced in 2016, when the levels had dropped to their lowest levels since the early 2000', most noticeably at 51-II, 55-IR, 57-I, 58-I, 61-IR, 63-I and 67-I. Overall, the water levels increased slightly more by the summer, since about 2008, at 55-IR, 56-IR, 57-I and 58-I. A review of the leachate levels in the PLCCS, as discussed earlier, showed that they were at expected levels with no changed observed. Landfill staff had noted that the impellers on the pumps were becoming corroded (most noticeable in late February). These pumps were pulled and the impellers replaced. By July, all pumps were fully operational again. After this, the water levels began to drop and were at normal levels by the end of the year. It is possible that pumping inefficiencies due to the corroded impellers in the spring caused this observed overall increase in the outwash beneath the waste.

However, at monitor 58-I, located in the northwest area of the landfill, a significant increasing trend appears to have occurred in 2017. The levels appeared to have peaked at significantly higher levels compared to observed historical levels. As well, the overall change from 2016 was over 1 m, whereas monitor 57-I (just to the south of 58-I) only showed a seasonal yearly change of around 0.5 m and monitors along the south system (55-IR and 56-IR), showed changes of less than 0.5 m. During this period, the levels at MH 1W to MW 5W (Figure 5) did not increase. It is unknown as to the cause of this apparent greater increase. Discussions with landfill staff have indicated that the monitor may be under pressure from the deeper waste as it had been observe to have moved higher (heaved). It is recommended that this monitor should be fully inspected, once there is safe access to the landfill cap (late spring), to determine if and how much the monitor may have heaved.

The effect of the PLCCS on leachate flow beneath the landfill is important. “Target elevations” have been set for leachate levels below the landfill that will minimize groundwater impacts on the bedrock aquifer. To maintain these leachate target elevations, the PLCCS must be effective in controlling and lowering leachate elevations in the outwash beneath the waste. This has been demonstrated, as it is observed that the PLCCS strongly affects leachate elevations in the outwash beneath the waste.

During 2017, leachate elevations at locations 1-IR, 52-I and 61-IR were below their target elevations throughout the year. As mentioned earlier, location 55-IR, 56-IR and 57-I showed an increase to above their target elevations for a short period in the summer (not observed since 2008). Location 58-I appears to be above the target elevation during most of the year, which has never been observed historically.

As expected[1], locations 51-II, 63-I, 65-I and 67-I, as well as the replaced location 66-IR, were still above their target elevations. It should be noted that from 1998 until 2003, location 51-II was occasionally below its target elevation, which also occurred again in 2016 but not in 2017. Therefore, the overall lower elevations exhibited at this location has demonstrated that the PLCCS can lower the leachate elevations in the landfill more than the modelling had predicted during drier periods.

In conclusion, the PLCCS has once again been demonstrated to be very effective in controlling and collecting leachate from the outwash beneath the landfill.

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[1] *Modelling had suggested that these areas would never have leachate elevations that would be below the target elevations. Section 4.5.2.1 later in the report discusses the implications on groundwater quality.*

3.7.3 Effectiveness of the Sheet Pile Wall in Preventing Off-Site Leachate Migration

The sheet pile wall will prevent off-site leachate migration if an inward hydraulic gradient is maintained across it towards the landfill (i.e., groundwater elevations are higher outside the sheet pile wall than leachate elevations inside). To determine the effectiveness of the sheet pile wall, groundwater elevations from the C- Series monitors just outside of the wall (Appendix A) and leachate elevations in the manholes inside the wall (Appendix B) are compared.

Figure 9 illustrates the relationship of the leachate elevations in the south collection system, the landfill just inside the collection system and groundwater elevations in selected monitors outside of the sheet pile wall. Under normal operating conditions, the leachate elevations are always lower than the groundwater elevations measured outside of the sheet pile wall.

Figures 10 and **11** illustrate the difference between the groundwater elevations in the C-Series monitors (outside of the wall) and leachate elevations in the adjacent manholes (inside of the wall). Positive differences denote inward hydraulic gradients. These figures show that inward hydraulic gradients were maintained across the sheet pile wall.

Along the west collection system, where the sheet pile does not exist (MH4W and MH3W), an inward gradient towards the collector pipe is still generally maintained as shown on **Figure 11**. Although the sheet pile wall does not exist here, this inward gradient prevents off-site leachate migration.

To determine if any off-site flow may be occurring beneath the sheet pile wall in the localized areas where it could not be advanced into the till, the piezometric elevations in C6-I, C9-I, C10-I and C11-I were compared to leachate elevations in the adjacent manholes. In all cases, a positive difference was maintained ensuring that no outward flow was occurring as shown on **Figure 11**.

3.7.4 Summary

The PLCCS continues to operate in a very effective manner.

Shallow groundwater is protected by the PLCCS. The leachate levels below the landfill remained consistently below the top of the sheet pile wall that surrounds much of the site. Furthermore, by pumping leachate out of the landfill, an inward gradient is maintained at the perimeter of the landfill (i.e., shallow groundwater flow is inward to the landfill, rather than outward).

In most cases, leachate elevations beneath the landfill were measured below the target elevations that were originally set for protection of the bedrock aquifer. However, the areas where the modelling predicted that the leachate elevations would be above their target elevations once again showed elevated leachate above their target levels in 2017. The potential effects of these levels above targets are dealt with separately in Section 4.5.2.1.

3.8 Need to Implement Contingency Plans for Leachate Control

The PLCCS is operating as designed and collects leachate effectively. The system creates an inward hydraulic gradient preventing off-site leachate migration. There is no need to implement any additional leachate control measures at this time.

3.9 Operational Problems and Remedial Actions

3.9.1 General PLCCS Operation

Maintenance on the pumps due to corrosion of the impellers was conducted the PLCCS in 2017. During this time backup pumps were employed. The repaired pumps were all reinstalled and operational by July 2017. All recommended repairs to the condensate traps, as recommended in the 2016 ASI inspection of the traps were completed. The leachate collection system was flushed and videoed to ensure it was operating as designed.

3.9.2 Methane in the Leachate Collection System

Methane may be found in PLCCS manholes due to their proximity to the waste. Consequently, all manholes and Pump Stations have signs warning of the possible presence of landfill gases. Confined space entry procedures are followed when it is necessary to enter any confined space.

The PLCCS manholes and Pump Stations were monitored during 2017 for methane. Monitoring results are shown in Appendix D in Tables D6 and D7. The table shows two monitoring events for 2017.

South Side Collection System

Table D6 documents methane concentrations in the south PLCCS. During the two monitoring events at MH 8S and one event at MH7S, trace methane detections were recorded well below the LEL[2]. All other manholes showed no methane for both events. Historically, the methane concentrations on the south side of the site have been low. Methane can be expected in the PLCCS manholes because of their proximity to the waste. No remedial action is required since the manholes are already connected to the landfill gas extraction system.

West Side PLCCS

Table D7 documents methane concentrations in the west side PLCCS. In 2017, methane was generally not detected in the manholes during either sample event, with the exception of trace readings for MH8W and MH9W as observed historically. The West Pump Station showed no methane during both monitoring events. No remedial action is required since the manholes are already connected to the landfill gas extraction system.

Main Pump Station

There was no methane measured in the Main Pump Station (MPS) or the Old Main Pump Station (OMPS) during the monitoring events in 2017, as shown in Table D7. No remedial action is required at this time.

3.10 Recommended/Approved Changes to the Leachate Control System

There were no changes to the operation of the leachate control system in 2017. No recommended changes are required in 2018.

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2. LEL – Lower Explosive Limit. The LEL for methane gas is 5% by volume in air. Note that methane is only combustible in concentrations between 5% and 15% by volume in air.

4. Groundwater Monitoring

4.1 The 2017 Groundwater Monitoring Program

Groundwater levels are collected from all monitoring locations twice per year. Monthly water levels are measured at all leachate locations and from selected lower till and bedrock locations. All of the data are compiled and presented in Appendix A. Figure 3 is a site plan showing all monitoring locations around the site.

Groundwater quality monitoring is conducted at the landfill in accordance with amended ECA. **Table 4** below, outlines the monitoring locations and frequency of sampling conducted during 2017. The groundwater quality results are provided in Appendix C. Standard Quality Assurance/Quality Control (QA/QC) groundwater quality data are not provided in this report but are available on request. It should be noted that the current monitoring program reflects the reductions as accepted by the MOECC, as provided in the 2008 annual report.

Table 4: Summary of 2017 Routine Groundwater Sampling

Formation	Monitor Locations	Sampling Program (per year)	Actual Sampling Frequency and Comments
Waste	51-IR, 59-I, 65-I, 67-I	Two Times	Two times during 2017
Waste/Fill Outwash Beneath Waste	51-II, 55-IR, 56-IR, 57-I, 58-I, 61-IR, 63-I, 66-IR	Two times	Two times during 2017
Sandy Outwash	2-I, 13-IV, 13-V, 14-II, 14-III, 15-IV, 15-V, 18-III, C2-I, C6-I, C9-I, C10-I, C11-I	Two times	Two times during 2017
	17-IV, 30-I*, (10-II, 10-III)		Once during 2017 – Dry/Not sampled in fall*, (Decommissioned late 2017)
	2-II, 9-I, 11-II, 16-V, 28-I, 35-I	One Time	Once during 2017
Upper Till	4-IIIR, 5-II, 11-I, 13-III, 15-III, 16-IV, 21-IR, 60-II, 60-III	Two Times	Two times during 2017
	17-III, 19-IV	One Time	Once during 2017
Lower Till	4-IIR, 53-IIR, 60-I	Two Times	Two times during 2017
	11-III, 13-II, 15-II, 16-I, 16-VI, 17-II, 19-II	One Time	Once during 2017
Bedrock	4-IR, 37-IR, 37-IIR, 50-I, 53-I, 91-I, 93-I, 94-I, 95-I, 96-I, 96-II	Four Times	Four times during 2017
	14-IV, 16-VII, 54-I, 90-II	Two Times	Two times during 2017
	9A-I, 13-I, 15-I, 17-I, 19-I, 20-IR	One Time	Once during 2017
Deep Bedrock	16-VIII, 90-I	Requested by MOECC	Sampled in early summer, late summer, fall

Chemical Analyses:
a) Conductivity, pH, Alkalinity, Phenols, ICAP Metals (including Major Cations Ca, Mg, Na, K and Trace Metals I, Br, Cr, Ni, Fe, Mn, Zn).
b) Major Anions (including SO_4, Cl, NO_3, NO_2).
c) Field Parameters: pH, conductivity, temperature.

The focus of the groundwater monitoring program is intended to evaluate water quality based on the leachate indicator parameters and the critical leachate parameters. These parameter lists were agreed upon by the Technical Experts during discussions leading up to the hearing for continued operations of the Eastview Road Landfill. In 1998, the MOECC, in their review of the 1997 Annual report, accepted the recommendation for the reduction of the groundwater analytical parameter list to reflect only the leachate indicator parameters and the critical leachate parameters. This parameter list has been in effect since the 1998 monitoring period. In 2001, Iodide (I) and Bromide (Br) were also added to this list.

4.2 Groundwater Elevations and Flow Directions

As discussed with the MOECC, a further assessment of the geological model for the site and groundwater flows was completed in the fall of 2015. Based on this assessment, a revised bedrock surface map was interpreted that showed that a possible incised bedrock low was trending into the site from the west and Location 96 intercepting the inferred low that was trending through the site to the south across Eastview Road. This interpreted bedrock surface map is illustrated on Figure 12. Based on the current interpretation, the shallow bedrock flows were revised to now include location 96.

From the collected data, groundwater flow maps are produced for the shallow groundwater system and the bedrock groundwater system (Figures 13 and 14). As well, groundwater elevation trends for selected shallow groundwater, lower till and bedrock monitors are provided in Appendix A. In general, groundwater elevations across the site typically follow seasonal trends such that water levels are higher during the wetter periods of the spring but decrease during the usually drier summer months.

Overall, groundwater levels trends in 2017 generally followed seasonal trends indicative of a wetter year following a drier year. Generally, groundwater elevations showed increases from the fall lows in 2016 into mid-summer of 2017 as expected, with some decreasing trend into the early fall. Where monthly water levels are taken, levels then began to increase slightly until the end of the year, most noticeably at locations in and around the southern and western area of the landfill.

Generally, both bedrock and overburden monitors exhibited a similar trend. As compared to previous years, seasonal water level fluctuations in 2017 were similar to historical lows and seasonal highs, with the seasonal lows much higher than in 2016 during the drier period. As well, the greatest fluctuations were again observed in the upper bedrock.

As requested and discussed with the MOECC Technical reviewer, the landfill water well P10 was included in the water level monitoring program in late 2015 and 2016, as it was scheduled to be decommissioned. The intent of adding this water well location was to potentially determine the possible flow direction in the deep aquifer. Although water levels have been collected, no top of casing survey is currently available to assess the water level measurement to flow. It was recommended that the well be resurveyed in the spring of 2017, prior to decommissioning, so that these flows can be reviewed. At this time, the well has yet to be decommissioned. It has been requested that a survey be taken in 2018. Although this may be the case, it should be noted that the current water levels, which ranged from 41.19 to 42.16 mBTOC were found to be similar to the original water level taken when the well was installed in December 1986 at 42.6 mBTOC.

Further to the above, there are two monitoring locations (16 and 90) installed in 2003 that monitor the water levels in the deep bedrock aquifer. There is now sufficient data to assess water level measurements for trends in the deep bedrock (Figure A7-Appendix A). As requested by the MOECC technical reviewer, the total pumping volume from the northeast quadrant production wells is also reviewed along with the water levels.

As discussed in earlier annual reports, in 2003 and 2004 there appeared to be some correlation to water levels with respect to the pumping. However, there were no apparent effects from pumping throughout 2005 into 2007 based on the water level trends observed. This would be expected as pumping volumes remained fairly stable during this period. During 2008, there were also no apparent affects from the pumping on water level trends even though pumping volumes did show a slight increase. A similar observation was noted in 2009, as the water levels continued to increase into the early part of the year even though overall pumping had begun to increase. By the end of August 2009, pumping volumes had increased again (slightly over 2008) and stabilized, however, water level declines occurred prior to this change, which indicates that this was related to seasonal variation and not the increase in pumping. Unlike the shallow bedrock and overburden, the deep bedrock water levels did not exhibit any increase into the late fall.

The 2010 data, indicates that the pumping volumes still remained at the higher levels (generally within historical norms), but were slightly lower than the latter half of 2009. As discussed above, the water levels continued to decrease until early 2010 and then increased into the summer when there was no change in pumping. As there was no change in pumping between 2009 and 2010, and only slightly lower pumping in 2008, with no apparent effects noted between 2008 and 2009, it is most likely that the greater decrease in seasonal change noted in late 2009 and early 2010 is related to lower surplus precipitation in the late fall/winter-early spring.

Since 2010, the pumping volumes trends have generally remained similar, along with water levels in the deep bedrock appearing to be generally following seasonal trends as observed in the shallow system but to a lesser extent. This is once again observed in 2017 where the water level trends generally appear to be responding to season trends showing a similar pattern as the shallow system.

Overall, comparing the water levels collected to-date from the deep monitors with the pumping volumes in the northeast quadrant, indicate that there may be some correlation as evident in 2003 and 2004, when the pumping volumes were more variable. Since this time, the pumping volumes were more stable and water level trends appeared to only exhibit season variation similar to the shallow bedrock and overburden, although seasonal variability was higher. Further, even though the pumping volumes did increase in both 2008 and 2009, although still below the maximum historical volume, there was no clear evidence that it was having a noticeable effect on water levels, even though there was a significant drop in water levels noted in late 2009. In 2010, pumping continued at the higher rate, although slightly lower than in 2009. During this period there was still no clear evidence of an effect from pumping on the water levels as the seasonal trends observed were concluded to be related to the drier year and the distribution of precipitation.

Water levels during 2017 continued to respond to seasonal effects as observed since 2011. The pattern of pumping and water level response does not suggest that there is any measureable effect on the water levels beneath the landfill from water taking in the northeast quadrant in 2017.

The shallow groundwater system lies in the sand and gravel outwash and/or in the upper part of the silty sand till where outwash is absent[3]. Leachate elevations in monitors 51-IR and 59-I in the landfill waste are found to be perched above the shallow groundwater system and are not used in the evaluation. Figure 13 illustrates the shallow groundwater flow in November 2017. The groundwater flow is similar to previous years

Of note, is the local control that the PLCCS exerts on the shallow groundwater flow system within the landfill. As discussed previously in Section 3.4, the leachate collection system acts to lower leachate levels inside the sheet pile wall below the groundwater levels outside the sheet pile wall, thereby creating inward flow across the wall. This prevents any leachate flow out of the landfill site to the shallow groundwater system. This is best demonstrated along the southwest leg of the south collector. Along this portion, leachate levels measured in the system were, on average throughout most of the year, around 340.12 mASL, whereas outside the system the groundwater levels were on average 342.14 mASL.

Figure 14 illustrates the bedrock groundwater flow in November 2017 below the landfill. The groundwater flow is generally similar to previous years with the exception of incorporating location 96. Historically and confirmed by further bedrock installations to the west in the mid to late 2000s (as recommended by the MOECC), groundwater flow was interpreted to be flowing into the site from the west. This flow was expected based on the interpreted bedrock topography and water quality, at that time, which suggested a bedrock low feature trending into the site from the west.

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[3] *The geology of the site has been extensively documented in previous reports; see 1995 Annual Report Section 4.2, pg. 38*

As part of the last investigations completed in late 2011 and early 2012, original location 92-I was moved and a new location was completed further east. Both a deep (monitor 96-I) and shallow upper bedrock monitor (monitor 96-II) were installed, with the deep monitor replacing 92-I. This location encountered the bedrock at a deeper elevation (~4 m lower) than the original location (92) and location 37R. As well, initial water levels at both the deep and shallow monitors appear much lower than levels closer to the landfill property. It was suspected that this location had intercepted the bedrock feature that was suspected in this area and was initially shown on Figure 5 in the 1992 Groundwater and Surface Water Monitoring Report, Eastview Road Landfill Site, dated June 1993.

Based on this newer information and in discussions with the MOECC, an additional hydrogeological/geological assessment was completed to update that geological model with respect to the deep and shallow bedrock aquifers including the more recent information from Location 37R and location 96. This additional hydrogeological assessment was completed in the fall of 2015 (“Interim Assessment for Additional Hydrogeological Investigation on Monitor Replacement to the West of the Site with Respect to Chloride at Locations 37/50, and Follow-Up Assessment on Ministry of the Environment and Climate Change Comments, Closed Eastview Landfill Site, City of Guelph, dated December 10, 2015”) and is found in Appendix F. Based on this current assessment, it was found that at location 96, the bedrock topographical contact was about 6 to 7 m lower than the contact at other locations in the area (such as former 92 and 37R). As well, the water levels were also much lower at 96-II than the other shallow bedrock monitors along the western boundary, which could possibly suggest some flow to the west. To better address this, a re-evaluation of the bedrock surface topography was completed on a more regional scale using all available water wells in the area and the existing landfill bedrock locations, including the recently completed location 96. This revised bedrock topography interpretation is illustrated on Figure 12 on a site specific scale.

As presented and discussed at a meeting with the MOECC groundwater reviewer on October 27, 2015, the topographical bedrock surface interpretation still indicates that there appears to be an incised bedrock low through the site but it is now inferred to be more easterly into the site and then southeasterly based on the inclusion of the bedrock contact at location 96. This incised low is inferred to continue to the southeast based on the drop in the bedrock elevation contact as observed at water well 6701108. It was put forth by the MOECC groundwater reviewer that the bedrock topography to the west, may be just a local low in the bedrock, however, it was discussed that the current interpretation would be more viable geologically as an erosional feature. Based on the topographical interpretation, the shallow bedrock groundwater flows were re-visited to include the water level from 96-II, at that time. Revised bedrock groundwater flow in May and November 2014 were completed and illustrated, the inferred flow pattern generally follows the bedrock topography as would be expected. This was also the case in 2017 as illustrated on Figure 14 during the fall of 2017.

In conclusion, the current interpretation of groundwater flow direction around the site has generally remained similar to previous years, with the exception of the refinement of the bedrock flow.

In order to assess downward groundwater flow through the till, several locations were selected to show vertical groundwater elevation trends with depth (Appendix A). The selected locations were chosen to illustrate the relationship of groundwater elevations in the outwash/upper till, lower till and bedrock. These figures also illustrate the seasonal groundwater elevation fluctuations across the site. These figures show that in most cases, downward gradients are observed across the till below the site.

Of importance are the gradients below the landfill footprint. Examining the 2017 gradients between the water levels measured in the outwash beneath the waste only (1-IR, 51-II, 55-IR, 56-IR, 57-I, 58-I, 61-IR, 63-I, 66-IR and 67-I) and the interpreted bedrock groundwater surface, the estimated vertical gradients beneath the landfill ranged from 0.07 to 0.28 m/m or on average about 0.15 m/m. The downward movement of groundwater, below the landfill, is estimated to be only 1.31 to 4.52 cm per year or on average 3.16 cm per year. These gradients and downward flow velocities are slightly higher than those observed in previous years. The slightly higher gradients are a reflection of the refinement of the bedrock flow, which has caused a slightly lower piezometric surface in the western and central areas of the landfill footprint. Although considered anomalous, the current higher water level at 58-I was included, which also has increased the calculated gradient (average in 2017 was 0.18, whereas average in 2016 was 0.11 in a drier year and average in 2015 was 0.07 which was wetter than 2016 but drier than 2017).

To put these actual flow velocities into perspective, on average, it would take hundreds of years for the leachate to move through the till into the underlying bedrock, based on the 2017 water levels.

In conclusion, vertical gradients towards the bedrock are, on average, low. The estimated downward flow velocity is also very slow, in the order of only a few centimetres per year.

4.3 Leachate Quality

Section 3.1 examined the quality of the leachate in the PLCCS, as it related to sewer discharge. In this section, the leachate quality measured in groundwater monitors in the waste, and in the outwash beneath the waste, is presented. It is this leachate quality that is most relevant to assessing possible impacts on groundwater quality in the natural environment.

Chemistry results for the leachate are presented in Appendix C. **Table 5**, is a summary of the critical leachate and leachate indicator parameter list for both the waste and outwash below the waste during 2017. Figure 16 shows the locations of the leachate monitors as well as all the overburden monitors.

Table 5: Summary of Leachate Quality from the Waste and Outwash Beneath the Waste in 2017

Parameters		Waste				Outwash Beneath Waste			
		Avg.	Min.	Max.	Samples	Avg.	Min.	Max.	Samples
General	pH (pH units)	7.72	7.63	7.78	4	7.57	6.89	7.95	16
	Conductivity (µS)	17250	15000	20000	4	4425	1400	7000	16
	Alkalinity (mg/L)	6475	5200	8400	4	1321	510	2600	16
	Hardness (mg/L)	1950	1600	2400	4	1359	620	2200	16
Critical Indicators	Chloride (mg/L)	2325	2000	2600	4	764	150	1400	16
	Boron (mg/L)	26	16	40	4	3.61	0.41	8.6	16
	Phenol (µg/L)	110	33	190	4	<20	<1	96	16
	Iodide (mg/L)	<2.1	<0.5	<5	4	<0.97	<0.1	<5	16
Leachate Indicators	Calcium (mg/L)	65	40	80	4	201	120	300	16
	Sodium (mg/L)	1675	1400	2000	4	418	51	870	16
	Magnesium (mg/L)	435	340	560	4	208	77	450	16
	Potassium (mg/L)	800	620	1200	4	29.6	1.1	100	16
	Iron (mg/L)	8.7	3.5	13	4	8.26	0.21	41	16
	Manganese (mg/L)	0.075	0.054	0.1	4	0.13	0.018	0.46	16
	Ammonia (mg/L)	818	720	1100	4	25	0.39	76	16
Other Constituents	Sulphate (mg/L)	<14	<5	<20	4	10	1.6	42	16
	Bromide (mg/L)	<16	<5	<20	4	<6.8	<1	13	16
	Nitrate (mg/L)	<0.9	<0.1	<2	4	<0.17	<0.1	1.26	16
	Nitrite (mg/L)	<0.09	0.028	<0.2	4	<0.01	<0.01	0.049	16

In general, the leachate quality is characterized by elevated concentrations of chloride, boron, phenols (critical leachate parameters), sodium, potassium, magnesium, iron, manganese, ammonia and alkalinity (leachate indicator parameters). In 2001, iodide and bromide were added to the list as part of an investigation conducted for locations 37/50. Both of these parameters are found to be elevated in the leachate as well.

The concentrations of these parameters vary with location across the landfill but in most cases are elevated above the background concentrations. However, it should be noted that parameters such as chloride and sodium might be elevated in the background due to other sources such as road salt. As well, parameters such as iron, manganese, and ammonia can be elevated due to natural background conditions, in either the sandy outwash (manganese) or the wetland peat (iron and ammonia).

As mentioned in the previous annual reports, a change in leachate quality was noted at monitor 51-II, where an increase in leachate strength had occurred. This increasing trend began in late 2006 and persisted into early 2008. Since 2008, no further increase was observed with the concentrations remaining at the higher levels. This monitor is installed in the outwash beneath the waste. Since the increase was sudden, this change may be related to a compromised monitor (possible break or crack in monitor due to shifting) as observed at other locations on the landfill. Although this increase has occurred, the current concentrations observed for the leachate indicators for the most part are still around the upper range found in the outwash beneath the waste. Should a further increase continue, this monitor should be inspected to determine if it has become fully compromised. If this monitor becomes fully compromised, it should be replaced. Currently, concentrations have shown no recent increase into 2017.

Also, as mentioned in the previous annual reports, anomalous leachate quality was noted in November 2008 at 51-IR. Several leachate indicator parameters increased significantly, although chloride was reported as less than the laboratory detection limit. In the spring and summer of 2009, the chloride concentration was once again similar to previous years (1450 to 1660 mg/L). However, most of the other indicator parameters remained slightly elevated compared to the historic concentrations for monitor 51-IR. In the fall of 2009, a further increase occurred for all leachate indicators, which persisted into 2011. In fact, the leachate quality concentrations observed are approaching the original leachate quality observed in 51-I, which was replaced by 51-IR in 2003. Monitor 51-I became compromised in 2000 (monitor pipe broken) caused by a blockage. This monitor was constructed in the early 1990s with an extra-long screened interval from 22.6 m to 7.3 m below ground surface and it was inferred that the monitor broke within the screen due to settling of the waste in the landfill. As this was the case, the replacement monitor, 51-IR, was constructed with a shorter screened interval from 22 m to 15.9 m to reduce the risk of a similar problem. Since this time, the leachate quality from the replacement monitor was found to be slightly lower than the original monitor. Since this latest increase was also abrupt, it is possible that this monitor has been partially compromised (possibly cracked) allowing the higher waste leachate that the original monitor reflected to now leak into the monitor. This change in leachate quality is not considered an issue as it remains within the concentrations observed at the other waste monitor 59-I. However, it should be monitored closely to ensure that a full breakage does not occur. If this monitor becomes fully compromised, it should be replaced.

Routine organic analysis of the leachate is performed once per year. The results for 2017 are presented in Table C6, Appendix C. The results were similar to previous years with low concentrations of BTEX (benzene, toluene, ethylbenzene and xylene) and organic compounds. Higher concentrations of the above parameters are usually associated with leachate in the waste and not in the outwash beneath the waste.

Of all the leachate indicator parameters identified, only boron, chloride and phenols are considered as critical leachate indicator parameters. As the above parameters best characterize the leachate, evaluation of leachate quality within and below the landfill will focus on these parameters. Further to these traditional indicator parameters, iodide and bromide have been included in the leachate indicator parameter list. Studies have shown that iodide can be elevated in landfill leachate, as observed in the leachate from Eastview. Further, brine (salty) water quality is also enriched with iodide, however, road salt impacted water are deplete in iodide. As this is the case, iodide has been added to the critical leachate parameter list.

As observed historically, the concentrations of leachate varied widely throughout and below the landfill during 2017. The ranges observed were: chloride from 150 to 2,600 mg/L; boron from 0.41 to 40 mg/L; and phenols from less than the laboratory detection limit (1 μg/L) to 190 μg/L. These ranges are generally similar to those observed in the past. As well, the range for iodide was less than the laboratory detection limit (0.1 mg/L) to <5 mg/L. The higher concentrations are found in the waste and the lower concentrations are found predominantly in the outwash beneath the waste. In 2017, four waste monitors (51-IR, 59-I, 65-I and 67-I) and eight outwash monitors (51-II, 55-IR, 56-IR, 57-I, 58-I, 61-1R, 66-IR and 63-I) were sampled.

Spatially, leachate quality has remained similar at most locations, with the exception of the increase noted at location 51. However, some minor increases in chloride and sodium have been noted at 57-I and 58-I.

Leachate concentrations, as in the past, are significantly higher in the waste than in the outwash beneath the waste. During 2017, the average concentrations of the critical leachate parameters chloride, boron and phenol as well as iodide were:

a) 2,325 mg/L, 26.0 mg/L, 110 μg/L and <2.1 mg/L, respectively, in the waste; and
b) 764 mg/L, 3.61 mg/L, <20 μg/L and <0.97 mg/L, respectively, in the outwash beneath the waste.

In conclusion, the leachate quality remains variable across the site and leachate concentrations are still significantly lower in the outwash below the waste than in the waste.

4.4 Shallow Groundwater Quality

4.4.1 Measured Exceedances of Reasonable Use

As discussed previously in Section 3.4.4, the PLCCS is operating as designed to prevent leachate flow from the landfill into the shallow groundwater system around the site. Therefore, there was no exceedance of Ministry of the Environment Guideline B7, the Reasonable Use Guidelines (RUG), in the shallow groundwater attributable to leachate release in 2017.

The installation of the PLCCS was completed at the site as leachate impacts were once detected in the shallow groundwater system to the south of the site. The intent of the PLCCS was to mitigate any further off-site leachate impacts from occurring.

Shallow groundwater monitoring subsequent to the installation of the PLCCS have been and still are used to confirm that the previously impacted groundwater has, in fact, renovated over time and that no new leachate inputs are present. While the presence of other sources of impacts such as road salt can complicate the analysis, the following is a discussion of the 2017 results.

The residual leachate impacts were best observed in monitor 16-IV and historically in monitors 2-I and C6-I. Chemical trend plots for leachate indicator parameters chloride and boron as well as leachate indicator parameters ammonia, alkalinity and sodium are provided in Appendix C (Figures C1 to C3).

As discussed in previous years, monitor 2-I had exhibited decreasing trends since 1992, after the completion of the PLCCS. In 1996, the trends showed that the water quality was beginning to stabilize indicating that the residual leachate that was present in the past had mostly dissipated. There is no indication of any residual leachate effects in 2017 in monitor 2-I.

Monitor C6-I, closer to the sheet pile wall, still exhibits no appreciable trends during 2017. Although concentrations of both chloride and sodium remain elevated, the concentrations of boron, phenol and ammonia continue to be low and still indicate that there are no leachate effects present in 2017. Further analysis of the groundwater continues to indicate that this location is showing a strong road salt signature, as observed since 1996.

Location 16, as observed since 1998, continues to exhibit very little variation in groundwater quality. Groundwater quality still indicates that there are some very minor residual leachate affects at this location. Chloride concentrations have remained similar, since about 2002. As well, boron has decreased over time and now remains at a concentration just below about 1 mg/L (below the RUP) compared to those observed back in 1998 and 1999 (around 3 mg/L). The boron concentration was above 4 mg/L in 1991. This overall decrease over time has demonstrated that water quality at this monitor has improved. This is further demonstrated by a similar increasing trend in sulphate and calcium as the boron had decreased. Sulphate is generally found to be higher in the natural groundwater than in the leachate. During 2017, all other leachate indicator parameters are similar to historical levels.

Locations 10 and 13 had been exhibiting increased and/or high concentrations of sodium and chloride as indicated in previous reports. This has persisted into 2017 and has been related to road salt due to their locations beside the roadways. A more in-depth investigation undertaken in 1996 in response to PLC concerns found that there were no increasing trends for either alkalinity or boron; however, higher than background ammonia was present and iron was also elevated, especially at location 14. An extensive groundwater analysis was performed which concluded that the sodium and chloride were from road salt. The ammonia and iron are considered to be naturally occurring (coming from the peat). However, starting in 2009, elevated phenolics were observed at monitor 10-III. This change in water quality corresponds with the installation of the water main along Eastview Road, which passed very close to this location. It is therefore concluded that this is the cause of this change.

Further to the above locations showing road salt impacts, in mid-1999 chloride concentrations increased at location 14 and were in the range of 300 to 400 mg/L (14-II). However, no increase in sodium was observed at that time. This increase in chloride was attributed to the movement of road salt impacted waters from the upgradient location 13. This increase was the initial front of road salt impacted water to reach location 14, which is why only chloride had increased. This occurs, as chloride is more mobile than sodium. Concentrations remained at these levels, although there appeared to be some seasonal increases in chloride observed bet\ween 2003 to 2008. In the fall of 2008, chloride and sodium at locations 13 and 14 increased, most noticeably in the shallow monitor 13-V. This jump may be related to the reconstruction of the area at the corner of Watson and Eastview Road as part of the widening of Watson Road. Since 2013, the chloride has now decreased to pre-construction levels although sodium still remains slightly higher.

Similar to location 14, an increase in chloride, sodium and iron were noted at C11-I upgradient of the leachate collection system, most noticeably since 2012. Based on the water levels (Figure 9) and the location of the sheet pile wall, this location is upgradient of any leachate sources. However, this location is downgradient of Watson Road and the corner at Eastview Road (location 14). The change in water quality is most likely related to road salt effects. The increase in iron could also be related to this change as water quality upgradient in the outwash at 13-IV has highly elevated iron.

From 1999, there had been a very minor increase in boron at monitor 15-IV from around 0.2 mg/L to around 1 mg/L by the end of 2002. No other parameters were showing this same trend and further analysis of the data did not indicate any leachate effects. Since this time, boron concentrations decreased to historical levels by 2011. The presence of the elevated boron was most likely related to minor residual leachate impacts similar to that observed at Location 16. In 2017, concentration remained at background levels.

Further to the above discussion, review of water quality further to the south of Eastview Road at monitor 9-I had shown a slight increasing trend for chloride and sodium starting in 2007 which persisted into 2008. A slight decrease occurred in 2009 but minor concentration increases from this time continued into 2012. Concentrations have now shown a decrease into 2016, stabilizing in 2017 at just above background since the highest level noted in 2012. This change was not considered to be related to the landfill as the PLCCS is working as designed (no changes at Location 2 or C6-I). Upon further review, the increase began to occur around the same time as the construction activities associated with the housing development on the south side of Eastview Road and the construction of the water main. These activities have been observed to be very close to the Hadati Creek and location 9. Further assessment of this water quality will be undertaken as more data become available, however, it does appear that the cause is related to the construction activities mentioned earlier.

Guideline B7 Criteria

Although there is no new leachate migration downgradient of the landfill, the monitors in this area were still compared to the RUG (Table C7 Appendix C). As observed on this table, there are several locations that exceed the Guideline B7 criteria (RUG) for some parameters. Of all the parameters that exceed the B7 limit, only boron, historically, at location 16 was considered related to residual historical leachate impacts as discussed above. All other parameters that exceeded the B7 limit are considered to be either natural or a result of road salt impacts. These include:

a) Chloride and sodium at locations 10-II and 13-IV. The parameters exceed the B7 limit as a result of road salt impacts, as discussed above.

b) Sulphate at location 18-III. High sulphate concentrations at location 18 have been discussed in the past and are related to gypsum (1992 Groundwater and Surface Water Monitoring Report – Eastview Road Landfill Site, GLL 93-134, dated June 1993).

c) Elevated iron and manganese were once again noted at locations 2, 9, 10, 13, 14, 15, 16, 18 and 35. These elevated parameters are considered naturally occurring and are related to the wetland and associated peat (iron) and in the outwash sand (manganese), as discussed in Section 4.*3.*

d) Nitrate was exceeded at location 16-IV. This is not considered landfill related and is most likely related to changes that have occurred in this area.

e) Elevated iron and highly elevated zinc, above the RUP, were observed at 35-I in the spring. This is considered related to the galvanized pipe construction at this location most noticeably for the elevated zinc.

The chemistry trends (time-concentration plots) to the west of the site are provided in Appendix C (Figures C4 to C6). Groundwater quality in this area is similar to previous years showing road salt effects and exhibit no leachate impacts, although an increased trend in road salt effects had been noted at 30-I with some occasional chloride increases at 28-I, further downgradient. This would be expected as groundwater flow from the west is towards the site. However, in late 2009, chloride and sodium concentrations abruptly decreased by half and spikes in phenol concentrations began to occur at 30-I. Phenol has generally decreased with a concentration spike observed again in 2013, and again in 2015. During this time, chloride has remained at lower concentrations and is currently showing no apparent trends. It appears that this drive point monitor may have become compromised allowing infiltration of surficial water from the wetland.

In conclusion, there are no new exceedances of Reasonable Use measured in the shallow groundwater downgradient of the landfill. Some exceedances due to very minor residual leachate effects still exist, but these are continuing to decrease over time.

4.4.2 Predicted Exceedances of Reasonable Use

If the PLCCS continues to work as designed to prevent any further off-site migration of leachate, no new exceedances of the Reasonable Use Guidelines related to the landfill are predicted in the shallow groundwater.

4.5 Bedrock Groundwater Quality

4.5.1 Measured Exceedances of Reasonable Use

Nineteen bedrock monitoring locations are currently routinely sampled at the Eastview Road Landfill. These locations are shown on Figure 17. Bedrock groundwater quality results are provided in Appendix C with the 2017 results summarized in **Table 6**.

Table 6: Summary of Bedrock Groundwater Quality During 2017

Parameters		Bedrock Groundwater Summary			
		Avg.	Min	Max.	Samples
General	pH	8.17	7.96	8.39	46
	Conductivity (μS)	449	290	770	46
	Alkalinity (mg/L)	205	160	250	46
	Hardness (mg/L)	192	73	350	46
Critical Indicators	Chloride (mg/L)	<14	<1	58	46
	Boron (mg/L)	0.051	0.016	0.12	47
	Phenol (μg/L)	<1	<1	<2	46
	Iodide	<0.11	<0.1	<0.5	46
Leachate Indicators	Calcium (mg/L)	40	16	72	47
	Sodium (mg/L)	21	6.5	43	47
	Magnesium (mg/L)	22.5	7.2	41	47
	Potassium (mg/L)	0.99	0.61	2.4	47
	Iron (mg/L)	<0.24	<0.1	0.62	47
	Manganese (mg/L)	0.007	0.002	0.017	47
	Ammonia (mg/L)	<0.23	<0.05	0.49	46
Other Constituents	Sulphate (mg/L)	<17	<1	65	46
	Bromide	<1	<1	<1	46
	Nitrate (mg/L)	<0.19	<0.1	3.99	46
	Nitrite (mg/L)	<0.02	<0.01	0.097	46

Notes: 96-II and 50-I were not included in the above table due to elevated chloride.

Groundwater quality in the bedrock in 2017 is generally similar to previous years for most parameters. As discussed in previous reports, the overall average chloride and conductivity had been showing an increasing trend. This change in the average was related to the increasing trend noted most noticeably at location 37. As well, location 91-I had also shown initial variable elevated chloride. In addition, the chloride concentration at location 95 was elevated until early 2012 when an abrupt decrease occurred. This monitor was relocated, in the winter of 2012, approximately 5 m to the east to facilitate the construction of the new road. In late 2011, locations 37 and 92 were re-located to facilitate the development on the adjacent property. Initial water quality from location 37 indicated much lower chloride concentrations than at the original location, however, the new shallow bedrock monitor at location 96 exhibited elevated chloride concentrations compared to monitor 92-I and replaced location 37R, although they have now shown a decreasing trend. Further, monitor 50-I had an increase in chloride into late 2013 with concentrations continuing now at these levels into 2017. These will be discussed further below. No other leachate indicator parameters showed any changes. As this was the case, new monitor 96-II was excluded from the **Table 6**.

Long term trends based on the critical leachate indicator parameters boron and chloride have been evaluated. Figures 18 and 19 are the trends for bedrock quality north and south of the site. Figure 18 illustrates the boron trends. As discussed in the past, during a laboratory change in mid-1993, boron concentrations became scattered.

In 1995, this scatter began to show a consistent but stable trend. This trend has persisted into 2017. There is no indication of leachate impacts in the bedrock groundwater based on boron alone.

Figure 19 illustrates the chloride trends. As discussed in the past, there was a slight scatter just after a laboratory change in mid-1993, however, the chloride concentrations have exhibited very little variation over time. As stated in previous reports, Location 37 was still exhibiting an increasing trend into the first half of 2011, as was originally observed since 1994. Also, location 50-I, exhibited a slight increasing trend from 1994, which had become stable at around 50 mg/L from 2003 to 2008, but has shown slightly higher concentrations since 2011, with a further increase since 2013 and stabilizing by 2017. In 1998, chemical analysis of these locations showed that there might be a slight shift in the chemistry towards a road salt or brine water signature at 37-I. As well, to a lesser extent, 50-I was also showing a possible change in chemistry that may be starting to trend to a road salt or brine water signature. In 2008, the data collected continued to show that this trend was occurring in 37-I with a further shift towards a road salt or brine water signature.

To address the increasing chloride in the above wells, an assessment to determine the possible source of these increasing chloride concentrations was conducted (i.e., whether they were from a possible leachate source or from another source). This assessment was discussed in the 2002 annual report.

As recommended by the MOECC, six additional bedrock monitors were installed around the site including one location west of location 37 (Figure 3, location 92) in 2003. Groundwater levels collected from these locations continued to support the interpreted groundwater flow in the bedrock, along Eastview Road.

Further, the assessment of the geology immediately southwest of location 37, at location 92, showed that the bedrock surface was higher, inferring that an incised bedrock low trends though the site. This information suggests that locations 37 and 50 would be upgradient of the landfill, as in past interpretations. This was further confirmed in the interim report on the further assessment of location 37/50. However, even though the MOECC reviewer agrees that this interpretation is valid, groundwater flow could also be interpreted as potentially away from the landfill. This concern was raised based on the continued increase of chloride at location 37-I and the fact that 37-I could be interpreted to be upgradient of 50-I.

Based on the above, it was recommended that further investigation in this area was needed to better refine groundwater flow. Therefore, three additional bedrock locations were completed in the area around Location 37/50, including near the former scale house, as requested by the MOECC. These locations were completed in September 2007 and were designated 93-I, 94-I and 95-I (Figure 3). The construction of these monitors was similar to that of 37-I, which was originally drilled as a water well and had an open hole to around 5 m deep. The intent was to be able to compare these additional locations with 37-I. A further refinement of the groundwater flow based on the new locations was completed as part of the interim report assessment and was discussed in previous reports. A summary of the water quality result assessment as discussed in this interim report is provided below.

Water quality sampling has been conducted at the newer locations at a frequency of four times a year, starting in November 2007. Review of these data continues to show that the chloride concentrations at 37-I had continued to increase as discussed in previous annual reports. Since 1995, concentrations have increased from around 10 mg/L to around 300 mg/L in 2008 and 2009. A minor increase of chloride was also noted at 50-I where chloride concentrations increased from around 20 mg/L in 1995 to around 60 to 70 mg/L in 2008 and 2009.

The data collected from these locations show that monitors 93-I and 94-I have chloride concentrations that are very low and similar to background (around 1-4 mg/L). Whereas, monitor 95-I has concentrations that were slightly higher than the concentrations at monitor 50-I (around 70-100 mg/L). Overall, the water quality observed continues to indicate an off-site source. This is demonstrated at monitor 94-I, located closer to the landfill, which has significantly lower chloride concentrations than monitors 37-I, 95-I and 50-I. If the source of the chloride at monitor 37-I was landfill related, it would be generally expected that the monitor closer to the source would also be impacted. Further, monitor 95-I exhibited slightly higher chloride concentrations than at the downgradient monitor 50-I, which may also suggest an upgradient source. In 2005, the public well (P13, MOECC #6701123) located upgradient and southwest of locations 37/50 on Eastview Road was added to the semi-annual residential well monitoring program until it this program was discontinued in 2009. Chloride concentrations at this well were around 80 to 90 mg/L to as high as 105 mg/L in November 2006. These concentrations are on average slightly higher than both monitors 95-I and 50-I. As this public well is considered upgradient of the landfill, this appeared to further supports an off-site chloride source.

As stated earlier, the elevated and increasing trend at monitor 37-I did not appear to be landfill related. In the 2002 assessment, the review of the water quality indicated that it was trending towards a road salt/mineralized signature. The current data collected up to 2009 had confirmed this since the change in water quality has now trended to a road salt signature, further indicating a non-landfill source. The reason for the continued increase and highly elevated chloride at this location only is unknown. The monitors (94-I and 95-I) installed in the same hydrogeological stratigraphic interval are found to have significantly lower chloride concentrations and, in the case of 94-I (closer to the landfill), are at background levels. Therefore, it was concluded that the water quality at 37-I appeared to be highly suspect.

Based on discussions with MOECC reviewer on this interim report, it was agreed that both wells, deep and shallow upper bedrock at location 37, be decommissioned and replaced with a proper monitor construction located just inside of the fence line on the landfill property. In addition, a shallow upper bedrock monitor was to be completed at 92-I. Location 37 was decommissioned and re-located in November/December 2011 in accordance with the MOECC request. The monitors at this location were designated 37-IR (shallow) and 37-IIR (deep). Further, original location 92-I was also re-located due to development activities in November 2011 to a new location further to the east outside the area of development. The recommended shallow well was completed in February 2012. The new monitors at this location were designated 96-I (deep) and 96-II (shallow). All new locations were incorporated into the monitoring program in 2012 and are shown on Figure 3.

Water quality results from location 37R, exhibit significantly lower major ions, specifically chloride than at original Location 37. Chloride was generally 30 mg/L or lower in both the deep (37-II) and shallow (37-IR) upper bedrock. It should be noted that the screened interval and stratigraphic depth at 37-IR is the same as the original 37-I, although 37-IR is constructed of a PVC pipe with clay grout seal to surface, whereas 37-I was comprised of an open bedrock hole with a steel casing to surface (i.e., old water well construction). This now suggest that the higher chloride concentrations observed may have been partially related to leakage around the steel casing. These concentrations are also significantly lower than at Location 50, as well. Further data are required to better assess the water quality in this area, but the results collected since installation have indicate an improvement in the water quality compared to the former Location 37. It is recommended that these bedrock monitors continue to be part of the quarterly monitoring events.

Initial water quality results for Location 96, indicate that the deep monitor (96-I) appears to have a similar water quality (low chloride) to the former monitor 92-I, which it replaced. However, the new shallow monitor in the upper bedrock is exhibiting elevated chloride, although significantly lower than at former 37-I. These concentrations were initially stable at around 130 mg/L (37-I had increased to a high of 359 mg/L) since it was installed but have generally been decreasing, seasonally since 2015, and have had lows dropping to 65 mg/L by the end of 2015. Since this time, concentrations have shown some variability from less than 100 mg/L to 63 mg/L, with no observable increasing/decreasing trend. As stated earlier, based on the preliminary review of the geology, this location may be within a suspected bedrock incised low in this area. As discussed earlier, a further hydrogeological/geological assessment was undertaken to review and revise the geological model with respect to groundwater in the deep and shallow bedrock. This assessment provided a re-evaluation of the water quality in the in the western area including the updated information from Location 37R and location 96.

As part of this re-assessment, the water quality results were further evaluated. Historically, water quality signatures at location 37/50 were assessed through piper plots, which indicated that they were trending towards a more mineralized signature and did not appear to be related to the landfill. Although these trends have continued over time, a further review of the water quality trends was undertaken at the former 37-I and 50-I with respect to other landfill indicators, most notably alkalinity, along with a comparison of the new and replacement locations, including location 96. This assessment summarized below.

Location 37 and new location 37R were reviewed for chloride and alkalinity trends. Alkalinity was selected in this assessment since, like chloride, it is also elevated to highly elevated in the landfill leachate. Figure 20 presents the trends for chloride and alkalinity for these locations. As observed, this figure once again shows the strong chloride increase that occurred at 37-I since the early 1990s. Although chloride was increasing, alkalinity actually began to show a decreasing trend during the same period. Also, when chloride began to increase more rapidly, alkalinity also decreased further. It would be expected that, should the change in the chloride be related to the landfill leachate, that alkalinity would also start to increase over time. Therefore, this observed trend is inconsistent with a leachate source. Further, at the replacement location, the chloride was found to be significantly lower with alkalinity higher, with no apparent trends since they were installed. Boron was also reviewed as it is considered a critical indicator. It was found at low levels with no trend observed at 37 or 37R. The only noticeable change was that the boron concentrations were even lower at 37R (<0.05 mg/L) than in former 37-I. Figure 21 is the chloride and alkalinity plot for location 50. This figure also shows the increasing chloride trend at this location with a similar alkalinity decrease relationship. As with location 37/37R, boron also showed no observable trend.

A full discussion of the water quality along the western area of the landfill is found in the assessment report contained in Appendix F.

As mentioned earlier, location 95 had to be relocated to facilitate the construction of the new road for the adjacent development in the winter of 2012. The intent was to relocate it approximately 5 m to the east, off the road allowance, and reinstall with the same monitor installation as 95-I. Water quality collected from the replaced well now exhibits much lower chloride concentrations than the original location and is more similar to 37-IR. The cause of the lower chloride concentrations at this relocated location is unknown at this time but since the initial drop, chloride has been increasing slightly into 2017. Further data are required to better assess the water quality in this area.

In 2003, one of the additional locations (monitor 91-I) had also exhibited elevated chloride concentrations. This location is situated upgradient of the landfill along Watson Road and therefore, the chloride did not appear related to the landfill. On a few occasions, chloride concentrations observed were higher than those presently found at monitor 37-I at that time (up to about 190 mg/L). Periodically, elevated chloride continued to be observed at 91-I, generally following seasonal trends, to about 2009. Since this time, concentrations have been generally below 10 mg/L, with a high noted of 40 mg/L in July 2010. The cause of the earlier elevated concentrations is not known, however, this location is upgradient of the site and elevated concentrations are not related to the landfill.

At monitor 4-IR, although there had been a subtle increasing trend noted since it was replaced in 1993 to about 2009 at around 50 mg/L, chloride/sodium has exhibited anomalous jumps recently. The initial and most significant chloride increase was in the spring of 2015 (170 mg/L) and then again in the spring of 2016 (90 mg/L). The cause of these increases are not apparent and further analysis does not indicate a leachate shift. Further, this location is inferred to be upgradient of the landfill along Speedvale Avenue and chloride concentrations returned to about 50 mg/L during subsequent monitoring events (although still reported, these concentration have been removed from the long term trend graph). Further assessment of this trend in chloride and sodium will be completed as more water quality becomes available.

In conclusion, there is no indication of leachate impacts in the bedrock groundwater in the area of the landfill based on chloride alone, although elevated and increasing chloride concentrations in some bedrock monitors will continue to be assessed in the future.

It should be noted that during the assessment of the bedrock groundwater quality, all leachate indicator parameters are used to determine if there are potential landfill impacts occurring. The evaluation of both critical leachate indicator parameters chloride and boron is completed as chloride is very mobile and found at high levels in the landfill leachate and boron, while less mobile than chloride, is only found in the landfill leachate. Due to the fact that chloride can also come from other sources, if it is found to be increasing it would only act as an early warning that a change is occurring that may be related to the landfill or some other source. However, should boron begin to increase on its own or with chloride, it is a more reliable indication that landfill impacts are occurring. Therefore, based on the above assessment of the critical leachate parameters boron and chloride, along with a full analysis of all leachate indicator parameters, there is no indication of leachate impacts in the bedrock groundwater.

No leachate effects are observed in the bedrock groundwater, nor would it be expected based on the very slow rate of groundwater flow downwards through the overlying tills.

Since leachate has not been detected in the bedrock, there can be no exceedance of Reasonable Use due to landfill impacts. However, to further confirm this, groundwater quality at the bedrock locations downgradient of the site have been compared to the B7 Guideline Limits (Table C8, Appendix C). As expected, there were no parameters that exceeded the B7 limit in the bedrock, except for 17-I and 9A-I for iron. With respect to 17-I, iron had consistently exceeded the B7 limits in the past. Similarly, 9A-I has also exceeded the B7 limit historically. These are considered to be natural and not landfill related for two reasons:

a) the upgradient monitors, closer to the landfill, had lower iron concentrations; and
b) the actual concentrations observed at monitor 17-I and 9A-I are within the range observed in the background monitors.

As requested by the MOECC Technical reviewer, sampling of the deep bedrock was completed starting in the fall of 2015 at location 16 and 90 as well as the on-site well (P10). A sample was also collected during the spring, late summer and fall of 2016 and the early summer, late summer and fall of 2017 at 16/90 as well as in the spring of 2016 at P10 before this well was taken off-line. Water quality results are provided Appendix C with historical results also included for P10. Water quality results from P10 in the fall or 2015 and spring 2016 were found to be comparable to historical results with low chloride (~2 mg/L), low alkalinity (~200 mg/L) and slightly elevated sodium (~17 mg/L). Both 90-I and 16-VIII were generally similar but had slightly higher chloride and sodium as well as potassium. Water quality since sampling began in late 2015 has remained similar with no observable trends. Water quality at 90-I exhibits low chloride (~4 mg/L), low alkalinity (120 mg/L), elevated sodium (~35 mg/L) and elevated potassium (~40 mg/L). Water quality at 16-VIII exhibits low chloride (~9 mg/L), low alkalinity (~130 mg/L), elevated sodium (~22 mg/L) with low potassium (~9 mg/L). Water quality at location 90 and 16 will be continue to be assessed as more data becomes available, although the current water quality is generally similar to the long term water quality at P10 and similar to the shallow bedrock and does not indicate any potential effects from the landfill.

4.5.2 Predicted Exceedances of Reasonable Use

The leachate in the waste, or in the outwash beneath the waste, can move very slowly downward through the till and, eventually, into the bedrock aquifer. Although the groundwater flow in the till is very slow (a few centimetres per year) and leachate will require a long time to reach the bedrock (several hundreds of years), it is still necessary to demonstrate that the contaminant concentrations in the bedrock will remain within the limits dictated in Guideline B-7, the Reasonable Use Guideline (RUG).

Two methods of predicting impacts on groundwater quality are used at the site: the leachate hydraulic target elevations, and monitoring of the water quality in the till above the bedrock. Each is discussed below.

4.5.2.1 Target Elevations

At the Eastview Road Landfill Site, the RUG predictions for the bedrock aquifer were made using a computer model called POLLUTE. A series of modelling runs was completed to back-calculate the leachate water level elevations that need to be maintained beneath the landfill, through operation of the PLCCS, to ensure that the RUG is ultimately met in the bedrock (Gartner Lee, 1993c). These are called the target elevations. Leachate water level elevations in the outwash beneath the waste are measured monthly and compared to target elevations. Section 3.6.2 in this report provides a detailed analysis of the target elevations. In previous years, most areas within the landfill met their target elevations and, therefore, RUG will be met in the bedrock beneath these areas.

A few small, localized areas of the landfill have not met their target elevations over the past few years, either occasionally or consistently (Section 3.6.2), specifically: monitor 51-II, and monitors 62 through 67. Monitor 59 technically does not meet its target elevation as well, but field investigations in 1995 determined that its water level was anomalous compared to monitors at surrounding locations 62 through 67, which are used in the assessment (see the 1997 revised modelling report for more details). Monitoring has, however, demonstrated that the impacts in the outwash below the waste are significantly lower than were assumed in the original POLLUTE modelling, to the extent that RUG can be met in the bedrock despite not meeting the original target elevations at some locations. Based on recommendations made in the 1995 Annual Report[4], further POLLUTE modelling was conducted in late 1996 and early 1997 with the more up-to-date data to confirm that RUG will be met (Re-Modelling of Leachate Migration in the Tills – Eastview Road Landfill, GLL 96-362 dated May 1997). A brief discussion of the findings of this modelling exercise is provided below for the reader’s benefit.

The original modelling incorporated conservative contaminant concentrations for boron and chloride with the smaller database available in 1992. These concentrations were 20 and 45 mg/L for boron and 1,550 mg/L for chloride. However, the addition of several landfill monitoring locations (15) in both the waste and the outwash beneath the waste that had been sampled over three to five years, up to 1996, showed that the leachate quality concentrations were significantly lower than the original contaminant concentrations employed. This is strongly demonstrated in the groundwater quality in the outwash beneath the waste. Monitoring of the outwash beneath the waste has shown that on average boron was about 3 mg/L and chloride was about 350 mg/L since 1994. However, locally some monitors had shown boron and chloride highs of 14.7 mg/L and 960 mg/L, respectively.

To better determine if the localized areas that did not meet, or periodically did not meet, their target elevations would contribute to future RUG exceedance at the bedrock, the POLLUTE modelling was revisited with the more up-to-date data, at that time. To provide conservatism in the model, a concentration for boron of 8 mg/L was used. This concentration was used due to the fluctuations observed at certain locations as stated above. As well, the groundwater elevations used in the model were based on the higher than normal levels observed during 1996 in the outwash below the waste.

POLLUTE modelling was revisited in the northeast area of the landfill (locations 62 through 67) as well as at location 55 and at location 51. Each location was modelled using the original concentration of 20 mg/L, the conservative concentration of 8 mg/L and the actual average concentration from 1995. The results of the study are outlined in the report “Re-Modelling of Leachate Migration in the Tills - Eastview Road Landfill” (GLL 96-362 dated May 1997). The study concluded that there would be no exceedance of the Reasonable Use Guideline concentrations in the bedrock below locations 51, 55 and the northeast area of the landfill, even though original target elevations were not attained. Below is a brief discussion on the monitors that once again did not meet their

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[4] *1995 Annual Report - Section 6.2.3.3, Page 110.*

target elevations, with reference to the revised modelling results (Gartner Lee, 1997), to determine whether or not the failure to meet the target elevations could result in a future exceedance of RUG in the bedrock aquifer.

Location 51

Monitor 51-II did not meet its target elevations as predicted. The boron concentrations in the outwash below the landfill in monitor 51-II were marginally lower, averaging 6.2 mg/L in 2017, compared to 6.27 mg/L (1995) used in the revised modelling assessment in 1997, and the 20 mg/L that was used to set the original target elevation. The average downward gradient in 2017 at this monitor was about 0.15 m/m, which translates into a downward velocity of about 2.95 cm/a, which is higher than historical and is related to the revised bedrock surface.

Given the fact that the water levels were slightly above the target elevation, and the boron concentration is marginally lower than in 1995, there is still little overall concern regarding RUG at this location. (Note that the revised 1997 modelling showed that all scenarios, including boron concentrations as high as 20 mg/L, still resulted in RUG compliance.) As this is the case, a further assessment with the POLLUTE model is not warranted at this time.

Location 63

Since 1996, the average concentration of boron in the outwash at this location was well below the Reasonable Use limit of 1.225 mg/L. Therefore, the B7 limit would also be met in the bedrock below this location regardless of whether or not the target elevation is met. Between 1998 and 2006, samples could not be obtained from this monitor, due to very low water levels. This shows that the leachate had been substantially drawn down in this area, which shows the effectiveness of the PLCCS. As well, the boron concentration would be expected to be similar to historical concentrations, which were very low and decreasing since the monitor was installed in 1995. Although this had been the case, with the slight increase in water levels since the spring of 2007, samples were once again obtained from this location. In 2017, the average boron concentration was 0.83 mg/L. Therefore, the RUG will also be met in the bedrock below this location regardless of whether or not the target elevation is met.

Location 65

Similar to Location 63 above, the average concentration of boron in the outwash at this location continues to be well below the Reasonable Use limit of 1.225 mg/L in 2017 at 0.34 mg/L. Therefore, the RUG will also be met in the bedrock below this location regardless of whether or not the target elevation is met.

Location 66-IR

As with Locations 63 and 65 above, the average concentration of boron in the outwash at this location had been well below the Reasonable Use limit of 1.225 mg/L since 1996. Therefore, the RUG would also be met in the bedrock below this location regardless of whether or not the target elevation is met. As with monitor 63-I, samples could not be collected since late 1998 due to very low water levels. However, it was expected that this location still meets the RUG due to the very low boron concentrations observed since it was installed in 1995 (the last boron concentration in Sept 1998 was 0.17 mg/L). This monitor was replaced in April 2007 and is now designated 66-IR. The boron concentration in spring of 2013 was 0.67 mg/L, which was well below the RUP. The fall 2013 boron concentration at 66-IR was found to be 3.6 mg/L. This concentration was considered anomalous as historical concentrations mentioned above have always been low, however the boron increased into 2014 at an average 6.2 mg/L. In 2017, boron decreased slightly to an average of 4.35 mg/L from 5.2 mg/L in 2016 and was also lower than 2014. Although this is the case, the revised 1997 modelling showed that all scenarios, including boron concentrations as high as 20 mg/L still resulted in RUG compliance. Therefore, the RUG would be met.

Location 67

Based on the initial boron concentration of 45.35 mg/L, the revised modelling in 1997 indicated that this location could eventually (in about 300 years) exceed the B7 limit in the bedrock. However, it was suspected that this initial boron concentration was not representative and there were already trends at that time suggesting that it would quickly decrease to a point below about 14 mg/L where the B7 limit would be achieved. In fact, that is what did happen. By 2000, the measured boron concentration at this location was 2.67 mg/L. As with locations 63 and 66, this location had been essentially dry since 2001 (insufficient volume for sampling). During this period, it was reasonable to assume that there would still be similar boron concentrations in this area, and therefore, the RUG will be met. As with 63-I, the slight increase in water levels at location 67-I allowed sampling to resume in 2007. Similar to monitor 66-IR, and to a lesser extent 63-I, boron at 67-I also jumped in 2014 from 5.9 mg/L to an average of 13.5 mg/L. In 2017, the average boron concentration dropped slightly again to 4.35 mg/L from 4.85 mg/Lin 2016 and 7.4 mg/L in 2015. This average concentration is much lower than the 14 mg/L used in the revised modelling assessment in 1997.

As discussed earlier, 55-IR, 56-IR and 57-I did go over their trigger levels for a brief period before decreasing back down to more historically levels. As this was the case, based on the brief period it would not be expected that this would cause any potential B7 exceedance as generally these location are well below their target and boron concentrations are low (55-IR-~4.2 mg/L, 56-IR-~7 mg/L and 57-I-~1 mg/L). As well, water levels at 58-I were found to be anomalously high and appeared to be well above the trigger level. Again this is not considered an issue especially since the average boron is 0.43 mg/L, which is well below the B7 limit of 1.225 mg/L.

Notwithstanding the above assessment, it is important to recognize that while the location-by-location assessment of target elevations is a useful guide to the effectiveness of the PLCCS in different parts of the landfill site, Reasonable Use compliance in the bedrock aquifer is applied at the site boundary, so there is a mixing, or averaging, effect that will occur in the groundwater flow system. The revised modelling assessment in 1997 recognized this and modelled the overall effects at the site under long-term average conditions, concluding that the “overall average boron concentrations in the bedrock aquifer will remain well within Reasonable Use Guidelines” (p.9).

Based on the assessment of target elevations at individual locations, and the overall assessment for the site, future Reasonable Use exceedances in the bedrock aquifer are not predicted.

4.5.2.2 Lower Till Groundwater Quality

Sampling and testing the water quality in the lower till provides a predictive “early warning” of any leachate movement towards the bedrock aquifer. Because of the very slow rate of downward flow in the tills beneath the landfill, as noted above, no leachate should be detected in the lower till in 2017 or for many more years in the future.

A summary of groundwater quality in the lower till during 2017 is provided in **Table 7** and is similar to previous years. Spatially, the water quality is slightly variable but at each location it is stable (i.e., no apparent trends).

Table 7: Summary of Lower Till Groundwater Quality During 2017

Parameters		Lower Till Groundwater Quality			
		Avg.	Min	Max.	Samples
General	pH (pH units)	8.23	8.13	8.3	6
	Conductivity (µS)	323	280	400	6
	Alkalinity (mg/L)	168	150	200	6
	Hardness (mg/L)	88	40	180	6
Critical Indicators	Chloride (mg/L)	<1.82	<1	2.9	6
	Boron (mg/L)	0.12	0.044	0.31	6
	Phenol (µg/L)	<1	<1	<1	6
	Iodide (mg/L)	<0.1	<0.1	<0.1	6
Leachate Indicators	Calcium (mg/L)	18	12	29	6
	Sodium (mg/L)	38	16	56	6
	Magnesium (mg/L)	10.2	2.6	25	6
	Potassium (mg/L)	0.73	0.54	0.95	6
	Iron (mg/L)	<0.16	<0.1	0.4	6
	Manganese (mg/L)	0.02	0.0075	0.032	6
	Ammonia (mg/L)	0.26	0.19	0.39	6
Other Constituents	Sulphate (mg/L)	6.7	1.6	14	6
	Bromide	<1	<1	<1	6
	Nitrate (mg/L)	<0.13	<0.1	0.27	6
	Nitrite (mg/L)	<0.02	<0.01	0.056	6

To assess long term groundwater quality in the lower till as it relates to possible downward groundwater flow, vertical profiles for till monitors and associated bedrock monitors were prepared for selected locations. The groundwater parameters selected for these trends were the critical leachate indicators boron and chloride. The locations were selected to provide background (4, 13 and 19) and locations where there is the possibility of downward migration of contamination (11, 15, 16, 53 and 60). The profiles are provided in Appendix C; Figures C7 to C10 are for chloride, Figures C11 to C14 are for boron and Figures C15 to C18 illustrates the remaining critical leachate indicator parameter phenol.

Historical trend evaluation has been discussed previously. Chloride concentrations at most locations during 2017 are stable and similar to previous years. There is no indication of any leachate impacts in the lower till. However, there are two locations (4 and 53) that warrant further discussion as provided below. These locations were not included in the above statistics.

The first is location 4. In 1999, chloride and sodium were slightly higher compared to historical trends in monitor 4-II. The assessment of this increase, at the time, did not show it to be related to leachate impacts. These slightly higher concentrations generally persisted to about 2002 with some apparent seasonal decreases. In 2003, concentrations increased to their highest levels (chloride 82.1 mg/L), at that time, in the spring but decreased again in the fall. During 2004, these concentrations increased again and by August were at their highest levels ever recorded (chloride 108 mg/L). Further evaluation of the water quality in 2004 indicated a shift to dilute road salt effects. In 2005, chloride concentrations began to decrease again, however, over the long term the overall trend was showing an increase. It is known that the shallow monitor is highly impacted by road salt (4-IIIR). Therefore, based on the changes since 1999 and in 2004, it was concluded that there has been slow leakage through the seal at this monitor. A similar situation was also observed in the early 1990s in the original bedrock monitor (4-I), which was ultimately replaced in 1993. Monitor 4-II, in the lower till, was replaced in April 2007. Water quality results collected for the three subsequent monitoring events in 2007 had shown a significant change in the chloride concentration, which decreased to about 50 to 60 mg/L and persisted into 2008. In 2011, a slight increase was noted, as well as an anomalous jump in the fall. In 2013, concentrations continued to drop but were still above the 2008 levels, although not as high as those observed before the replacement. Concentrations remained stable at these higher levels throughout 2015 (~90 mg/L), with a drop in the spring to 48 mg/L followed by a jump to 130 mg/L in the fall of 2016 with another jump to 160 mg/L in the fall of 2017. Continued assessment of this location is warranted. Although changes appear to be occurring, Location 4 is considered up gradient of the landfill and PLCCS.

The second location is 53/C2. In late 2003, it was noted that chloride concentrations seemed to increase slightly at 53-II. At the time, it was not considered a concern as it was within the historical range for this location. However during 2004, chloride, and to a lesser degree sodium, calcium, magnesium and sulphate, increased significantly. In fact, the chloride concentration in June of 2004 was similar to that of C2-I in the overlying outwash. It was noted during this period that the water levels also increased by about 1.5 m. It had therefore been concluded, as discussed earlier, that the seal in this monitor was compromised. This location was also replaced in April 2007. Review of the chloride concentration from the three subsequent monitoring events indicated that the levels decreased over those observed in 2006 (66 mg/L in June 2006 and 25 mg/L in November 2007), although they were still above historical concentrations. In 2008, chloride levels further decreased to around 20 mg/L. These lower concentrations persisted in to 2015 with a slight increase to 37 mg/L in late 2015. Since this time, chloride concentrations are generally between about 27 to 36 mg/L. It is expected that some residual chloride is still present after the replacement of this monitor and that this should clear over time.

Further to the above, a change in water quality in the lower till monitor 60-I was observed in the fall of 2011 that has persisted into 2017, although overall the water quality does appear to be trending back to historical concentrations. In some cases, there was a decrease in parameter concentrations and for others, an increase or spike, most noticeably ammonia, phenols, iron, calcium and, to a lesser degree, chloride and potassium. A similar change was also noted in the intermediate monitor 60-II. This location is on-site directly adjacent to the landfill along the western access road (Figure 3). The shallow monitor at this location does exhibit leachate effects with shallow groundwater flow directed from here to the PLCCS. This location is also adjacent to the park footprint and, although not within the footprint, some excavation activities were conducted in this area as observed by landfill staff in 2011 (location was now in a depression). Due to this, flooding was noted in the spring so the monitors were extended and the depression filled in. Based on the above, these monitors may have been compromised due to the initial construction activities in 2011. If these changes (increase) persist, this location may need to be replaced as 60-I is monitoring the lower till adjacent to the landfill. It appears that decreases in parameter concentrations have been occurring since 2013, which have persisted into 2017, therefore, no action is required at this time.

These trends do not indicate any leachate impacts in the lower till.

In conclusion, the 2017 chemistry and the vertical profile trends do not indicate any presence of leachate impacts in the lower till. Therefore, it is not predicted that Reasonable Use will be exceeded in the bedrock groundwater.

4.6 Need to Implement Contingency Plans

The groundwater analysis discussed previously in this section indicates that there are no leachate effects related to the landfill in the shallow groundwater system (other than residual contamination pre-dating the PLCCS), in the lower till or in the bedrock. Therefore, there is no need to implement any contingency plans.

4.7 Adequacy of the Monitoring Program and Recommended Changes

The current revised monitoring program is adequate for the site. No changes are recommended.

5. Surface Water Monitoring

The surface water monitoring program in and around the Eastview Road Landfill site consists of nine (9) monitoring stations. The purpose of this program is to establish the surface water quality entering the site, leaving the site, and downstream from the site. Background water quality is also determined by monitoring two stations in adjacent watersheds.

Comparisons are made between the nine stations to determine if the landfill is impacting surface water quality or if the quality is changing over time. The laboratory results are compared against water quality targets established by Gartner Lee Limited (1993d), Provincial Water Quality Objectives (PWQO) (MOE 1999), and data collected at the stations since 1992. Surface water quality results for at least the past six years are provided in Table C3, Appendix C. As requested by the MOECC, the laboratory was contacted to provide a lower detection limit for nickel so that it could be compared to the PWQO. Starting in 2011, water quality results now reflect this lower detection limit.

5.1 Objectives

The objectives of the surface water monitoring program are (Gartner Lee Limited, 1993d):

a) to assess whether the landfill is in compliance with surface water quality policies of the MOECC;
b) to evaluate the effectiveness of the perimeter leachate containment and collection system in preventing leachate impacts in Hadati Creek;
c) to evaluate the effectiveness of sediment control measures in reducing total suspended solids concentrations to the wetland in the southeast part of the site; and
d) to provide a mechanism which will trigger the implementation of a contingency plan in the event that the landfill is not in compliance with the surface water policies of the MOECC.

5.2 Sampling Methodology and Site Descriptions

Nine monitoring stations (Figure 22) are routinely sampled; however, parameter analyses vary between the stations. A typical sampling event consists of measuring field parameters (pH, conductivity, dissolved oxygen and temperature) as well as collecting water samples and delivering them to a certified laboratory on the same day for analysis for the designated parameters. In 2017, City of Guelph staff collected the water samples and Maxxam Analytics performed the water quality analyses.

5.2.1 Background water Quality Stations

Stations SW15, SW7 and SW5 represent background water quality from different watersheds in the vicinity of the landfill.

SW15 is located in an adjacent watershed on the southeast side of Speedvale Avenue, northeast of the landfill property boundary at Watson Road.

SW7, also located in an adjacent watershed, is on the northeast side of Watson Road approximately halfway between Eastview Road and Grange Road. Due to the housing construction activities along Watson Road, it is most likely this station will become more representative of background rural/urban use.

SW5 is located at the upstream end of the ditch on the southwest side of the landfill property, near the culvert that crosses under Speedvale Avenue. This is the only surface water flow path entering the site under normal flow conditions and represents background water quality, upstream of the landfill.

5.2.2 On-Site Water/Downstream Quality Stations

SW1 is located along the southwest ditch at the storm sewer inlet near the landfill entrance off Eastview Road. Water quality at this location indicates the contributions (if any) from the landfill to the southwest ditch by comparison with results from SW5.

SW16 is located at the storm sewer outlet on the southeast side of Eastview Road near the landfill entrance, and indicates the contributions (if any) of drainage from the southwest ditch to Hadati Creek. This site is located downstream of the confluence with the Eastview Road ditch (SW2) and the southwest ditch (SW1).

SW24 was located within the landfill site where runoff could be received during wet weather events. A series of two rock check dams were installed in 1997 to allow suspended sediments to settle out of the runoff prior to discharging from the site. As part of the completion of the Eastview Community Park, two stormwater ponds were added and an upgrade to the check dams was completed in 2014. Sampling of the new ponds was undertaken in 2014 to assess baseline data. When flow is observed through the check dams, total suspended solids (TSS) samples are to be taken. One set of samples was collected in 2017 from the stormwater ponds in the spring as sufficient flow was observed over the check dams. The check dams were dry during the remainder of the sampling events.

SW4 is located in a drainage ditch at the outlet of the wetland, downstream of SW24 and on the northwest side of Eastview Road.

5.2.3 Downstream Surface Water Stations

SW3A is downstream of SW16 in the landfill in Hadati Creek, on the southeast side of Eastview Road. The results from this station are compared, as required by the surface water trigger, against the established Provincial Water Quality Objectives (PWQOs) and the Initial Action Levels (IALs).

5.3 2017 Sampling Program

Total precipitation during 2017 was 1,120 mm, which is higher than the long-term average annual precipitation of 914[5] mm. January thru May, July, August and November experienced more precipitation than normal with the remainder of the months experiencing less than normal precipitation (Appendix E). The mean monthly temperature was 7.9 C, which is slightly higher than the long-term average mean temperature of 6.7°C, but similar to that observed in 2016, 2012, 2006 and 2001.

Evapotranspiration in 2017 was calculated to be 452 mm, which is slightly lower than the long-term average annual evapotranspiration of 513[6] mm. The 2017 water surplus (the amount of precipitation remaining after evapotranspiration is subtracted) available for runoff and infiltration was 668 mm, which is much higher than the long-term average of 401[7] mm. The range of annual water surplus is estimated to be from 207 mm to 480 mm per year, thus the overall surplus water for 2017 exceeded the long-term range. In summary, 2017 would be considered, overall, a wetter than normal year.

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[5] *Long term average based on 20yr Normal (1994-2013) for Guelph Dam, revised from the 20yr Normal (1984-2003) of 881 mm.*

[6] *Long term average based on 20yr Normal (1994-2013) for Guelph Dam, revised from the 20yr Normal (1984-2003) of 556 mm.*

[7] *Long term average based on 20yr Normal (1994-2013) for Guelph Dam of 914-513 = 401 mm.*

The 2017 sampling program followed the protocol described by AECOM (2009). This included sampling of all monitoring locations, four times a year (when sufficient flow occurs) starting with the Spring Freshet, if attainable. These sampling events are outlined in **Table 8**.

Table 8: 2017 Surface Water Sampling Events

Date Sampled	Sampling Event	Comments
April 05, 2017	Spring Freshet	All monitoring locations were sampled, including storm ponds (SW 24A and SW 25M).
August 23, 2017	Summer Dry	All monitoring locations were sampled.
October 26, 2017	October Wet	Seven monitoring locations were sampled – SW4 No Flow.
November 29, 2017	Fall Wet	All monitoring locations were sampled

5.4 2017 Sampling Data

Surface water quality results for selected stations and parameters are presented in **Table 9**. The full surface water data set and field measurements are included in Appendix C (Tables C3 and C4).

Critical Leachate Indicators

Gartner Lee Limited (1993d) defined Initial Action Levels (IALs) for five leachate indicator parameters (**Table 10**). If the concentration of one or more of these parameters exceeds the IAL at SW3A (Hadati Creek), then a series of actions is triggered. These actions include confirmation of the sample concentration within 30 days, followed by additional testing and contingency plan implementation, if necessary. Details of this process are provided in Gartner Lee Limited (1993d).

During all sampling events, un-ionized ammonia, phenol, chromium and nickel concentrations were generally at or below their laboratory analytical detection limits (of 0.001 mg/L, 0.005 mg/L and 0.001 mg/L, respectively, where applicable) and their initial action level (IAL) for each parameter at SW3A. It should be noted that the reported detection limit for phenol was 0.005 in October, which is above the IAL. The laboratory will be notified to ensure they attain the PWQO detection limit of 0.001 mg/L.

Phenol concentrations were generally low, and were at or below the PWQO (<0.001 mg/L) at SW3A and all other on site and downstream stations, with the exception of November, where SW 3A, SW 2 and SW 16 were slightly above the PWQO, but as mentioned above SW 3A was still below the IAL. Historically, occasional spikes in phenols concentrations have generally been observed in the past at both background and downstream stations and are not considered related to the landfill.

Un-ionized ammonia concentrations were calculated using field pH and temperature. At SW3A, downstream of the landfill, the un-ionized ammonia concentrations were low (0.0003 – 0.0008 mg/L), and well below the IAL of 0.04 mg/L. Concentrations at all stations were low, during all 2017 sampling events and well below the PWQO.

Table 9. Summary of Surface Water Quality, 2017

Parameters		IAL	PWQO	SW5 Upstream of Landfill (West Drainage Ditch)				SW1 Upstream of Storm Culvert (West Drainage Ditch)				SW2 Upstream of Storm Culvert Eastview Road Ditch				SW16 Storm Culvert Discharge (Hadati Creek)				SW-3A Downstream of Landfill (Hadati Creek)			
				Min	*Max*	*Avg*	*N*	*Min*	*Max*	*Avg*	*N*	*Min*	*Max*	*Avg*	*N*	*Min*	*Max*	*Avg*	*N*	*Min*	*Max*	*Avg*	*N*
General	Field pH	-	6.5-8.5	7.44	8.01	7.69	4	7.01	7.96	7.69	4	7.38	7.78	7.53	4	7.4	7.85	7.64	4	7.27	7.92	7.66	4
	Alkalinity			71	220	178	4	160	300	253	4	190	400	263	4	180	300	245	4	170	310	250	4
	Hardness			69	330	227	4	230	370	318	4	230	470	305	4	230	370	298	4	230	380	305	4
Initial Action Level Parameters	Un-ionized Ammonia	0.04	0.02	0.0003	0.0005	0.0004	4	0.0001	0.0014	0.0007	4	0.0002	0.0098	0.0027	4	0.0003	0.0010	0.0006	4	0.0003	0.0008	0.0005	4
	Conductivity	2,179		200	1000	650	4	680	960	890	4	630	1600	940	4	680	940	823	4	690	950	843	4
	Chromium	0.2	0.1	<0.005	<0.005	<0.01	4	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4
	Nickel	0.05	0.025	<0.001	0.001	<0.001	4	<0.001	0.003	<0.002	4	<0.001	0.0016	<0.001	4	<0.001	0.003	<0.002	4	<0.001	0.003	<0.002	4
	Phenols	0.002	0.001	<0.001	<0.001	<0.001	4	<0.001	<0.005	<0.003	4	<0.001	<0.005	<0.002	4	<0.001	<0.005	<0.002	4	<0.001	<0.005	<0.002	4
	TSS			1	7	3	4	1	4	3	4	1	49	14	4	1	2	2	4	2	17	7	4
Additional Parameters	Total Ammonia	-		<0.05	<0.05	<0.05	4	<0.05	0.089	<0.06	4	<0.05	0.86	<0.26	4	<0.05	0.087	<0.07	4	<0.05	0.078	0.06	4
	Boron		0.2	0.017	0.045	0.029	4	0.022	0.025	0.023	4	0.024	0.094	0.046	4	0.027	0.035	0.031	4	0.025	0.04	0.033	4
	Calcium			24	97	64	4	62	100	88	4	61	120	81	4	66	100	82	4	63	110	85	4
	Chloride			16	130	77	4	91	120	113	4	69	270	133	4	75	110	93	4	74	120	101	4
	Iron		0.3	<0.1	**0.84**	<0.29	4	<0.1	0.29	<0.18	4	0.25	**8.4**	**2.45**	4	0.27	**0.59**	**0.37**	4	0.16	**0.58**	**0.4**	4
	Magnesium			2.9	24	16.2	4	15	29	24	4	15	30	20	4	16	27	21	4	16	29	22	4
	Manganese			0.004	0.049	0.019	4	0.009	0.088	0.053	4	0.025	0.32	0.146	4	0.027	0.11	0.085	4	0.018	0.12	0.081	4
	Potassium			0.86	5.9	2.7	4	1	1.8	1.5	4	3.3	13	6.4	4	1.9	4.4	3.1	4	1.9	4.4	2.8	4
	Sodium			10	90	54	4	53	72	67	4	41	160	80	4	53	67	61	4	52	71	62	4
	Zinc		0.02	<0.005	0.015	<0.009	4	**0.024**	**0.17**	**0.126**	4	0.018	**0.062**	**0.038**	4	**0.024**	**0.12**	**0.082**	4	**0.022**	**0.11**	**0.068**	4

Notes: all units are mg/L except pH (unitless), temperature (°C) and conductivity (µS/cm)

IAL: Initial Action Level (GLL, 1993)

PWQO: Provincial Water Quality Objective (MOE, 1999)

Bolded values represent concentrations above PWQOs, Bold and Shaded values represent concentrations above the IALs and PWQOs

* *Ammonia result considered suspect*

Table 10: Initial Action Levels for Leachate Indicator Parameters

Parameter	Initial Action Level (IAL)
Un-ionized Ammonia (NH_3)	0.04 mg/L
Chromium (Cr)	0.2 mg/L
Nickel (Ni)	0.050 mg/L
Phenols	0.002 mg/L
Conductivity	2179 µS/cm (2 × geometric mean of laboratory background concentrations)

At SW3A, the conductivity ranged from 690 – 950 µS/cm, and were well below the IAL value of 2,179 µS/cm during all 2017 sampling events. At SW1 and SW16, concentrations were within historical background values and ranged from 680 to 960 and 680 to 940 µS/cm, respectively. The highest measurement at SW5 (upstream of landfill) was 1,000 µS/cm, which is slightly higher compared to the downstream stations and slightly lower than the historical average for this location (1,512 µS/cm[8]). SW5 is located immediately downstream of Speedvale Avenue. Since SW5 is located upstream of the landfill, it is not susceptible to landfill related influences. SW2 has been added to Table 9 as it collected runoff along Eastview Road that is also directed into Hadati Creek via a culvert upstream of SW16. The conductivity results at SW2 were generally similar in the spring but higher in the summer (August) compared to concentration observed at SW5. The higher results are most likely related to construction activities along Eastview Road that began in August of 2017.

Chloride concentrations parallel conductivity trends with higher chloride concentrations at stations adjacent/ downstream of roads than those at stations isolated/upstream of roads. A statistical summary of chloride concentrations measured at the surface water stations since 1993 is provided in **Table 11**.

Table 11: Statistical Summary of Chloride Concentrations in Surface Waters Since 1993

Site	Location Description	Minimum (mg/L)	Maximum (mg/L)	Average (mg/L)	Standard Deviation (mg/L)	Number of Observations
SW-15	Reference	21	180	41	21	88
SW-7	Reference	22	384	99	52	77
SW-5	Upstream	7.3	8330	332	882	91
SW-1	On-site	33.3	154	98	23	104
SW-2	On-site	23	664	146	107	91
SW-16	Downstream	38.4	509	121	62	101
SW-3A	Downstream	34	356	120	45	100

Note: Reference refers to a surface water station in an adjacent watershed from the site

5.4.1 Additional Parameters

Additional parameters are measured at the surface water stations in and around the site, and a summary of the 2017 analytical results are also shown in **Table 9**. Detailed results for all measured surface water parameters are available in Appendix C (Tables C3 and C4).

No IALs have been established for these additional parameters as natural sources exist around the landfill site, or aquatic toxicity information is lacking. However, comparisons of these parameters at different stations upstream and downstream of the landfill site can be useful to indicate if the landfill is contributing any additional concentrations to Hadati Creek. Furthermore, measured concentrations can be compared to the Provincial Water Quality Objectives (PWQOs), which have been established by the Ontario Ministry of the Environment (1999) as guidelines and objectives for a variety of chemical and bacteriological parameters in surface water.

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[8] *Average based on 1994 to 2016 laboratory conductivity results at SW5.*

Similar to previous years, zinc concentrations exceeded its PWQO (0.02 mg/L) at on- site stations and historically at background stations. Zinc concentrations were above the PWQO in the southwestern drainage ditch (SW1 all events), downstream in Hadati Creek (SW3A all events and SW16 all events) and the Eastview ditch (SW2 three of five event). This is consistent with results found at the reference site SW7, where zinc was above the PWQO during three of the four events as well. High concentrations in the reference (SW7) and upstream sites (SW5), historically and in 2017, suggest that elevated concentrations of zinc occur naturally in this area. Zinc is not an indicator of leachate at this site. The concentration of zinc was typically lower in the landfill leachate than those found in the surface water samples. Possible sources of this metal include the surrounding soils, natural groundwater discharge, automobiles on the adjacent roads, metals in culverts, debris near the watercourse, and disturbed watercourse sediment in the samples.

Comparison of zinc concentrations measured at SW1 and SW16 found that, generally, concentrations measured downstream are equal to or lower than those measured upstream (Figure 23).

Similar to zinc, iron exceeded its PWQO (0.30 mg/L) at every sampling location on one or more occasions in 2017. Iron concentrations were above the PWQO in the southwestern drainage ditch (SW1 three of five events), downstream in Hadati Creek (SW3A two of four events and SW16 three of five events), the Eastview ditch (SW2 four of five events) and the discharge to the site (SW5 one of two events sampled). As well, iron was above the PWQO at the background station reference site (SW7 all events sampled) and background adjacent watershed (SW15 four of five events sampled). Concentrations of iron at the reference sites suggest that elevated concentrations of iron occur naturally in this area. Possible sources of iron include the surrounding soils, automobiles on the adjacent roads, metals in culverts, and disturbed watercourse sediment in the samples.

At all stations, during all 2017 sampling events, chromium, nickel and boron were below their PWQO (0.1 mg/L, 0.025 mg/L and 0.2 mg/L, respectively).

In summary, the 2017 data for the Eastview Road Landfill site showed similar trends to those observed in recent years. None of the parameters exceeded their respective IAL values at SW3A. PWQO exceedances of zinc and iron were once again observed, however these parameters are not indicators of leachate. Highly elevated iron at SW 2 in August is attributed to inadvertent sediment collection in the sample bottle. Since the installation of the leachate collection system in 1991, impacted groundwater has not been contributing to surface water flows at the site, resulting in improved water quality than prior to the installation of the system.

5.4.2 Suspended Sediments

Historically, surface water sediment control was achieved using two crescent-shaped rock check dams lined with filter cloth, constructed upstream of station SW24 on the existing channel. During rain events, the check dams promote ponding of water between them, thus decreasing the flow velocity and allowing suspended sediment to settle.

As part of the completion of the Eastview Community Park, two stormwater ponds were completed and an upgrade to the check dams between the two ponds and at the downstream discharge point of the second pond was completed in 2013. Sampling was conducted in 2014 at these ponds in July and August and TSS was found to be low. Sampling was completed in the spring of 2017 as flow was observed from the ponds. The TSS in the ponds was found to very low between 1-2 mg/L.

As the landfill is final capped and vegetated and the park in the former burrow pit is also now vegetated and completed, it is no longer expected that TSS will be a potential issue to the southeastern wetland. However, sampling should still be completed if significant flowing conditions are observed from these ponds.

5.4.3 Summary

The key highlights of the 2017 surface water sampling program include:

a) no parameters at SW3A exceeded their respective IAL during the 2017 monitoring period; and
b) the 2017 surface water chemistry results indicate that the landfill is causing no discernible effect on downstream water quality;

5.5 Adequacy of the Monitoring Program and Recommended Changes

The current revised program is considered adequate to assess potential effects. No changes are recommended.

6. Landfill Gas Monitoring

This section describes the landfill gas monitoring program undertaken in 2017.

6.1 Gas Control System

An active gas control system has been in operation at the site since early 2004.

6.2 Landfill Gas Monitoring

The intent of the landfill gas monitoring program is to identify:

a) potential off-site migration of combustible gas; and
b) potential health and safety risks in on-site structures.

6.2.1 On-Site Structure Monitoring

The former scale house (now site office), parks storage shed and the corporate building maintenance shed contain methane detectors which activate when levels reach 20% LEL. To date, there have been no alarms triggered in any on-site building.

6.3 Combustible Gas Monitoring Program

In 2017, combustible gas concentrations in subsurface soils continued to be measured at the following locations:

a) 16 “BH” series monitors, located in the fill area;
b) 5 “D” series monitors in the buffer zone between the fill area and sheet pile wall;
c) 13 “C” monitors located outside the sheet pile wall adjacent to the fill area;
d) 10 “BH” monitors located in the buffer zone near the property line; and
e) 6 “GP” probes adjacent to on-site buildings in the southwest corner of the site.

6.3.1 Monitors Within the Landfill (“BH” series)

Gas concentrations in “BH” monitors were measured in April and August 2017 as shown in Table D1 in Appendix D. Methane can be expected in these monitor that are located in the landfill footprint.

Several monitors had methane detected in 2017 at generally low levels. Methane would not be unexpected in the landfill but would be expected to be at much higher concentrations. The lower readings and/or non-detects are related to the operation of the gas collection system and plant, which is extracting the methane gas from the landfill.

6.3.2 Monitors Adjacent to the PLCCS (C and D Series Monitors)

The “C” and “D” series probes monitor the performance of the PLCCS and are also suitable for gas concentration measurement.

The “D” series monitors are located between the PLCCS and the waste. “C” series monitors are located beyond the PLCCS and sheet pile barrier wall.

West Side of the Site

Methane concentrations measured in west side “C” and “D” monitors are shown in Table D2 in Appendix D. West side PLCCS manhole methane concentrations are tabulated in Table D7. All monitoring events in 2017 from west side “C” and “D” monitors showed methane concentrations of 0%. Methane concentrations in west side PLCCS measured 0% at most manholes, with the exception of MH 8W and MH 9W, which had recorded readings between 0.4 and 0.6% during the 2017 monitoring events.

Low methane concentrations in “C” series monitors may be expected on the west side of the site from time to time. However, both the high water table and the sheet pile wall act as barriers to gas migration. It is also likely that the PLCCS intercepts landfill gas that may not be collected by the gas control system and vents it to the atmosphere.

South Side of the Site

Table D3 documents methane concentrations in south side “C” and “D” monitors. Table D6 tabulates south side PLCCS manhole methane concentrations.

No methane gas was detected in the C series monitors along and outside the south PLCCS.

As observed historically, negligible to trace methane detections have been noted in the D3-I and D4-I. Detections of methane gas at these locations would not be unexpected as they are installed between the PLCCS and waste, with the highest generally noted at D3-I, historically. However, only trace detections were observed in 2017 at D4-I and D5-I.

In the south PLCCS, negligible to trace methane detections were generally observed at MH BS. Methane was consistently recorded at trace levels at MH 7S and MH 8S.

The above noted trends continue to indicate that minor amounts of landfill gas tends to migrate from the waste toward the PLCCS, most noticeably in the western leg, where it is intercepted and vented to the atmosphere.

Buffer Lands Near the Property Boundary

Ten “BH” monitors are located in the landfill buffer zone to document gas concentration near the property boundary. Monitoring results, as shown in Table D4 of Appendix D, indicate that landfill gas has not migrated to the property boundary.

Southwest Corner of the Site

Six “GP” probes monitor for gas migration and soil-gas conditions adjacent to on-site buildings. Table D5 in Appendix D presents methane measurements at the GP series probes.

At GP97-1, near the southwest property boundary, there was minor (0.2 to 2.1%) methane recorded during the two 2017 monitoring events. Historically, methane has not been detected or has been detected at negligible levels at this location and it was therefore concluded that methane migration off-site is not occurring in this area. The 2017 reading, although below 2.5%, indicate possible methane gas in this area. Closer scrutiny should be taken at this location in 2018.

At probe GP97-3, north of the Storage Building, gas concentrations in 2017 were measured to be below the LEL in both events (0 to 0.4%).

At probe GP97-4, northeast of the Administration Building, there was only negligible gas measured (0 to 0.1%) in 2017.

At probe GP97-5, north of the maintenance shed, had no methane recorded during the 2017 monitoring events.

Probe GP00-06, in the flowerbed adjacent to the scale house, has had recorded methane concentrations above the LEL during all monitoring events from February 2006 up to 2015. In 2016, methane concentrations dropped just below the LEL during both monitoring events for the first time since 2006. This continued in 2017, where methane concentrations in GP00-06 ranged from 1.7% to 3.4%.

At probe GP00-07 located adjacent to the Main pump station, there was only negligible (0.5%) to no methane recorded during the 2017 sampling events.

In general, construction activities undertaken on-site or in buildings where gas may be present, should be undertaken in accordance with the requirements of the Occupational Health and Safety Act and associated regulations. Gas detection systems should continue to monitor for the presence of gas in buildings.

6.4 Measured or Predicted Off-Site Occurrences of Combustible Gas

There have been no measured or predicted occurrences of methane migrating off-site to date. The monitoring program undertaken in 2017 should continue to assess the potential for off-site gas migration.

6.5 Need to Implement Contingency Plans

Given the monitoring data and the physical setting of the site, there is a low likelihood of gas migration off-site. Therefore, there is no need to implement a control system to address gas migration off-site.

6.6 Adequacy of the Monitoring Programs and Recommended Changes

6.6.1 Monitors within the Waste

Gas concentrations in BH series monitors within the fill area should continue to be measured at least once in the summer and once in the winter. Additional data may be collected to assist in assessment of the gas collection system operation.

The “C” and “D” probes should continue to be monitored for gas concentrations at least twice a year.

6.6.2 Buffer Lands near the Property Boundary

The ten “BH” probes, located in the buffer near the property boundary, should continue to be monitored at least twice a year.

6.6.3 Southwest Corner of the Site

The GP probes in the southwest corner of the site should continue to be monitored at least twice a year for methane.

6.6.4 PLCCS Gas Monitoring

The PLCCS manholes and pump stations should continue to be monitored at least twice a year for methane.

7. Conclusions and Recommendations

7.1 Conclusions

7.1.1 Operations

a) During 2017, there were no complaints registered at the landfill.

b) Approximately 133,603 m^3 of leachate was collected in 2017 and conveyed to the sanitary sewer.

c) The PLCCS is operating effectively to collect leachate, prevent its migration, and to minimize leachate mounding within the landfill. Contingency plan implementation is not required at this time.

d) There is no evidence of gas migration off-site.

7.1.2 Monitoring

a) The quality of the leachate from the PLCCS that is discharged to the municipal sanitary sewer remained within the Model Sewer Use By-Law Guidelines. The leachate $CBOD_5$, TKN and hydraulic loads are expected to be within 1% of the corresponding WWTP influent loads, as leachate quality remains similar to previous years, and thus would be insignificant.

b) Leachate quality in 2017 is generally similar to previous years. Higher concentrations are found in the waste and the lower concentrations are found predominantly in the outwash beneath the waste. The average critical leachate parameter concentrations are provided below:

Year	Outwash Beneath Waste			Waste		
	Boron*	Chloride*	Iodide*	Boron*	Chloride*	Iodide*
1994	3.0	364		22.9	1,579	
1995	4.0	374		34.3	1,641	
1996	3.83	348		21.0	1,530	
1997	2.47	347		15.7	1,330	
1998	2.53	371		15.54	1,418	
1999	4.57	392		28.09	1,625	
2000	2.16	363		22.77	1,926	
2001	3.55	414	<0.43	27.3	2,358	2.20
2002	1.3	341	<0.47	22.5	2,268	2.22
2003	6.23	593	<0.73	16.7	1,705	1.80
2004	4.9	563	<0.92	17.2	1,516	1.79
2005	2.2	428	<0.46	21.8	1,524	1.82
2006	1.58	332	<1.4	20.34	1,670	1.50
2007	1.9	378	<0.57	17.5	1,325	1.8
2008	2.07	413	<0.81	14.6	1,322	2.1
2009	2.43	515	<0.84	27	2,129	<1.9
2010	2.46	714	0.76	27	2,333	2.2
2011	1.96	701	<0.63	28	2,273	1.8
2012	2.9	878	<0.93	27	2,150	1.9
2013	3	787	<0.94	22	2,200	2.2

Year	**Outwash Beneath Waste**			**Waste**		
	Boron*	**Chloride***	**Iodide***	**Boron***	**Chloride***	**Iodide***
2014	3.69	736	0.78	30.25	2,250	4.43**
2015	3.4	743	<0.71	25.5	2,225	2.4
2016	3.5	755	<0.76	25.5	2,300	2.2
2017	3.6	764	<0.97	26	2,325	<2.1

*Note: * = Concentrations in mg/L*

*** = Slightly elevated concentration related to anomalous value of 12 mg/L at 59-I, whereas generally concentrations were 2 to 3 mg/L.*

The slightly higher concentrations in the outwash beneath the waste since 2010 are due to increases observed at 51-II.

c) Groundwater flow directions around the site are generally similar to previous years, however the bedrock groundwater flow has been revised based on the current hydrogeological assessment. Although the bedrock groundwater flow still remains similar to historic interpretations, there is more flow coming into the site from the west along an interpreted incised bedrock low. Assessment of vertical gradients towards the bedrock is now slightly higher than previous years due to the revised bedrock surface elevations. Vertical gradients are, on average, very low and therefore, the estimated downward flow velocity is also very slow, in the order of only a few centimetres per year.

d) Landfill leachate effects are contained on-site in the shallow groundwater system as the PLCCS is working as designed. There was no exceedance of Guideline B7, the Reasonable Use Guideline in the shallow groundwater attributable to leachate release in 2017.

e) If the PLCCS continues to work as designed to prevent any further off-site migration of leachate, no new exceedances of Guideline B7 related to the landfill are predicted in the shallow groundwater.

f) The bedrock groundwater quality is similar to previous years. Further assessment of water quality results from replacement Location 37R and former Location 37 was completed in the current hydrogeological assessment. The conclusions of this assessment were that although the former location 37 had a strong increasing trend in chloride, the alkalinity (which is also highly elevated in leachate) was decreasing. A similar relationship was also noted at Location 50. Therefore, this observed trend is inconsistent with a leachate source. Further, at the replacement location (37R), the chloride was found to be significantly lower than 37-I with alkalinity concentrations higher, with no apparent trends since they were installed. Water quality results from Location 96, indicates that deep monitor (96-I) appears to have a similar water quality to the former monitor 92-I (low chloride), which it replaced. However, the new shallow monitor in the upper bedrock (96-II) is exhibiting elevated chloride, although significantly lower than at former 37-I. Although chloride concentrations are elevated, it had shown a decreasing trend since it was installed up to 2015. Since this time concentrations have shown some variability, with no observable increasing/decreasing trend.

g) There is no indication of leachate in the bedrock groundwater, thus the Reasonable Use Guidelines are being met.

h) Guideline B7, the Reasonable Use Guidelines, is predicted to be met in future bedrock groundwater quality. Target elevations are being met in most areas within the landfill through the operation of the PLCCS. Where target elevations are not being met, the criteria used in the modelling completed in early 1997 were compared to the 2017 results and found to be similar. Therefore, the locations where the target elevations are not being met would not cause Guideline B7, Reasonable Use exceedances in the bedrock groundwater. In addition, the 2017 chemistry and vertical profile trends observed in the lower till do not indicate any presence of leachate impacts, again suggesting that Guideline B7, Reasonable Use will not be exceeded in bedrock groundwater.

i) The 2017 results show that the landfill has a negligible effect on downstream surface water quality.

7.2 Response to the 2016 Recommendations

Below are the **"Recommendations for 2017**" contained in the 2016 Annual Report. Alongside each recommendation (in bold text) are the actions taken to address these recommendations.

7.2.1 Operations

a) The City should continue to monitor gas concentrations in all GP probes and particularly probe GP00-06 and probe GP-007. Remedial measures should be implemented as required in this area.

The gas probes were monitored twice in 2017 with no need for remedial measures.

7.2.2 Monitoring

a) As part of the completion of the Eastview Community Park, two stormwater ponds were added and an upgrade to the check dams was completed in 2013. Sampling of the new pond will be undertaken in 2017 to assess baseline data and, if flow is observed through the check dams, TSS samples will be taken.

The stormwater ponds were sampled in the spring as flow was observed, no flow was observed for the remainder of the year.

7.3 Recommendations for 2018

The following are recommendations for 2018. (Note that these recommendations deal with issues other than the requirements specified in the ECA/C of A for the site).

7.3.1 Operations

a) The City should continue to monitor gas concentrations in all GP probes and particularly probe GP00-06 and probe GP-007. Remedial measures should be implemented as required in this area.

7.3.2 Monitoring

a) As part of the completion of the Eastview Community Park, two stormwater ponds were added and an upgrade to the check dams was completed in 2013. Sampling of the new pond will be undertaken in 2018 to assess baseline data, and if flow is observed through the check dams, TSS samples will be taken.
b) Need to assess Monitor 58-I for potential heaving of the monitoring pipe due to anomalously high water levels observed in 2017.

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Figures

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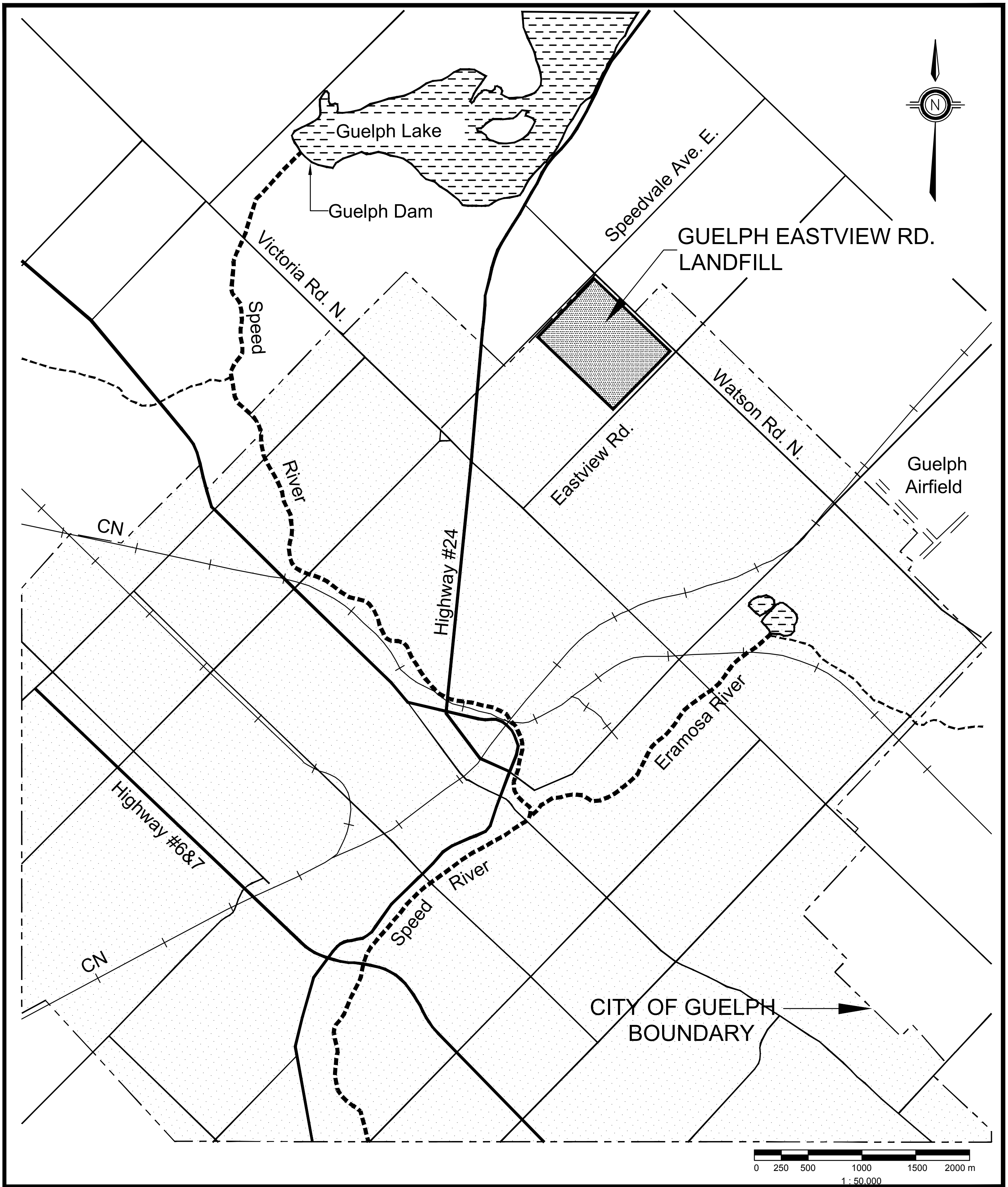

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AECOM

Eastview Road Landfill
City of Guelph

Location Map

Legend

PROJECT NUMBER
60565850

DATE
April 2018

FIGURE NUMBER
1

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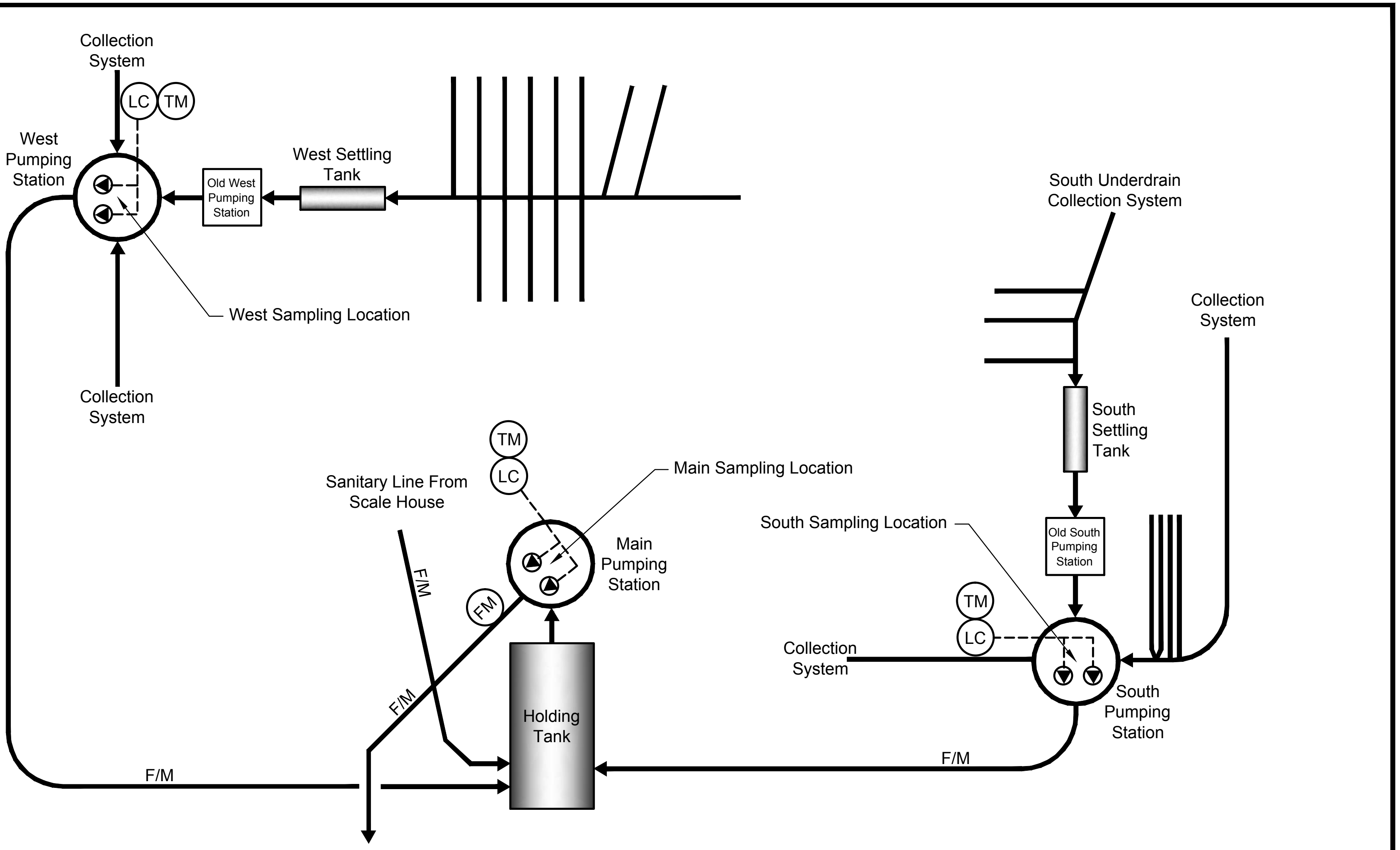

Legend

LC	Level Control
TM	Timer
FM	Flow Meter
F/M	Force Main

AECOM

Eastview Road Landfill
City of Guelph

Leachate Collection System
Process Flow Diagram

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PROJECT NUMBER	DATE	FIGURE
60565850	April 2018	2

FILE NAME: 60565850-2017AMR-F02.DWG

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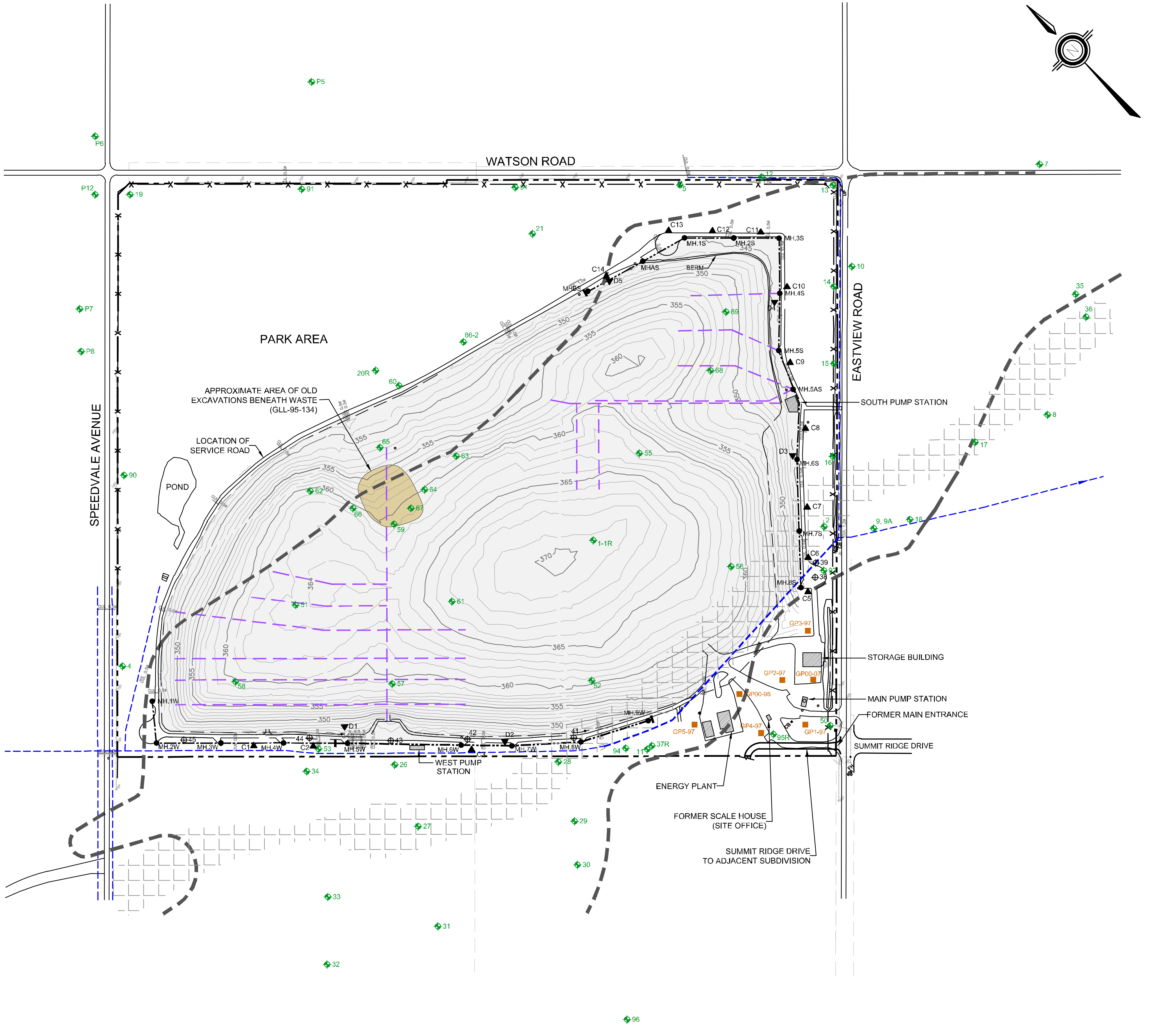

Legend

PROPERTY BOUNDARY

FENCE LINE

APPROXIMATE EXTENT OF LANDFILL WASTES

PERIMETER LEACHATE COLLECTION AND CONTAINMENT SYSTEM (PLCCS)

PLCCS WITH SHEET PILE WALL PRESENT

SURFACE DRAINAGE AND STORM DITCHES

BURIED SURFACE WATER CULVERT

UNDERDRAIN NETWORK

PERIMETER OF SURFICIAL OUTWASH INTERPRETED FROM 1966 AND 1972 AIR PHOTOGRAPH, BOREHOLE LOGS AND OTHER SITE INFORMATION. (REVISED JULY 1995)

APPROXIMATE EXTENT OF ESKER FORMATION

● MH.9W LOCATION AND DESIGNATION OF MANHOLES IN LEACHATE CONTAINMENT SYSTEM

30 BOREHOLE/GROUND WATER MONITOR

⊕38 GOETECHNICAL BOREHOLES COMPLETED FOR PRE-CONSTRUCTION OF PLCCS. DESTROYED DURING CONSTRUCTION OF PLCCS IN 1990 - 1991.

▲ C6 LOCATION AND DESIGNATION OF GROUND WATER MONITOR TO DOCUMENT LEACHATE CONTAINMENT SYSTEM PERFORMANCE (WATER ELEVATIONS ONLY)

▼ D4 LOCATION AND DESIGNATION OF GROUND WATER MONITOR TO DOCUMENT WATER LEVELS UPGRADIENT OF LEACHATE CONTAINMENT SYSTEM (WATER ELEVATIONS ONLY)

■ GP1-97 GAS PROBES

0 30 60 120 180 240 m

1 : 6000

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Closed Eastview Road Landfill
City of Guelph

Leachate and Groundwater Monitor Site Locations

PROJECT NUMBER	DATE	FIGURE
60565850	April 2018	3

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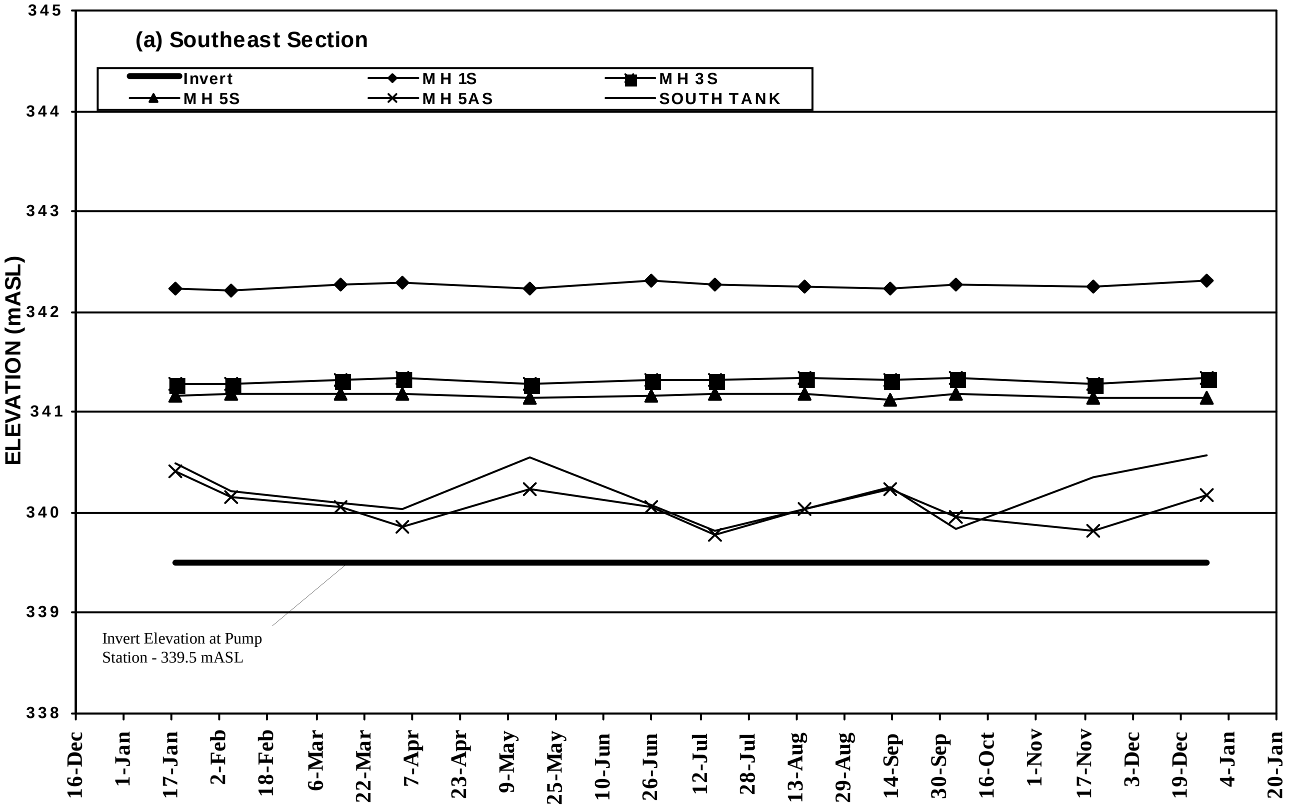
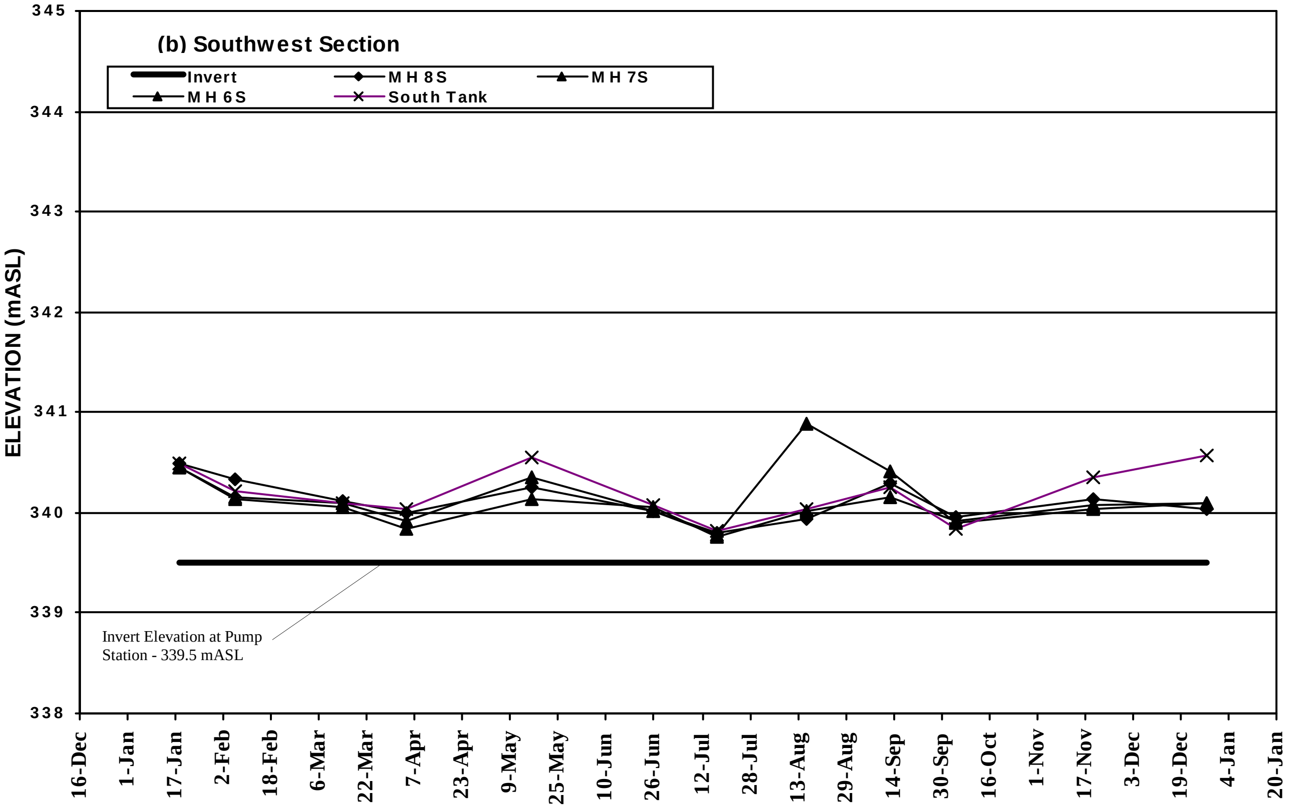




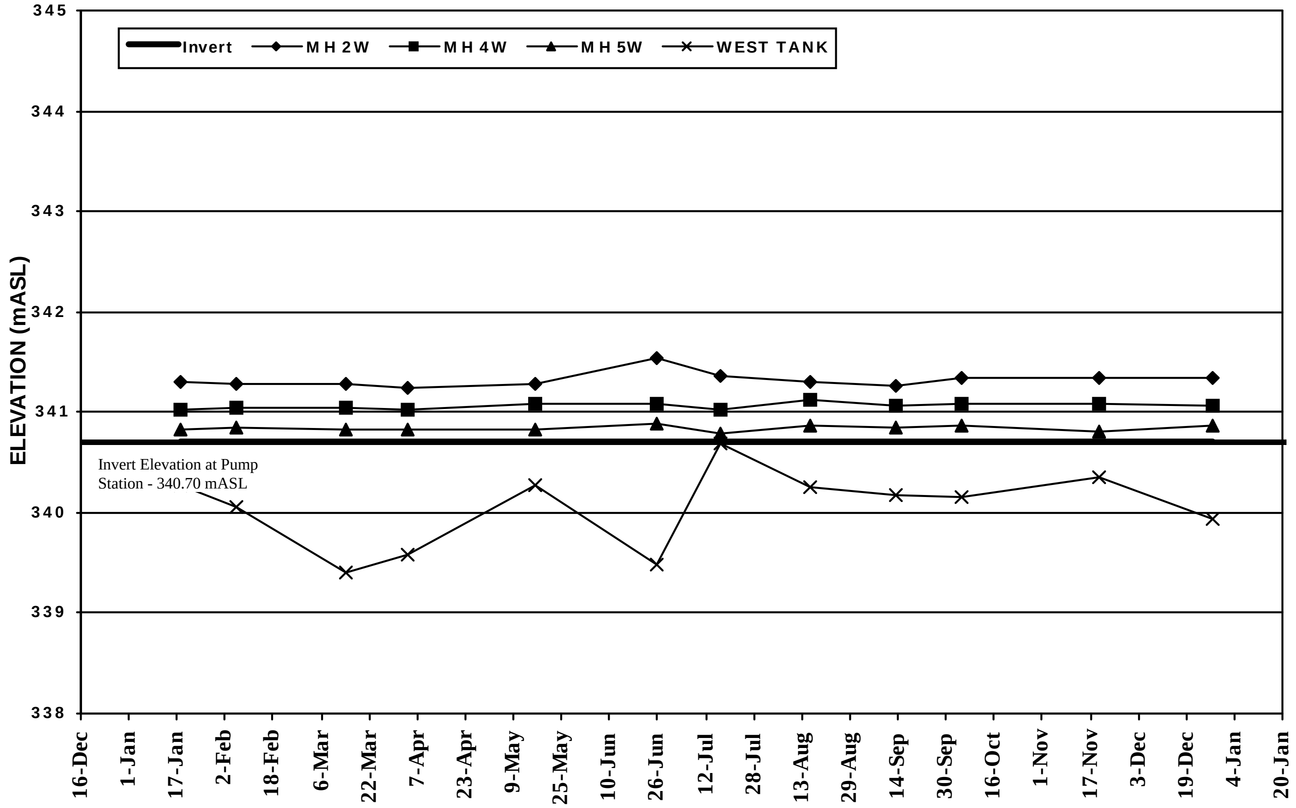
AECOM

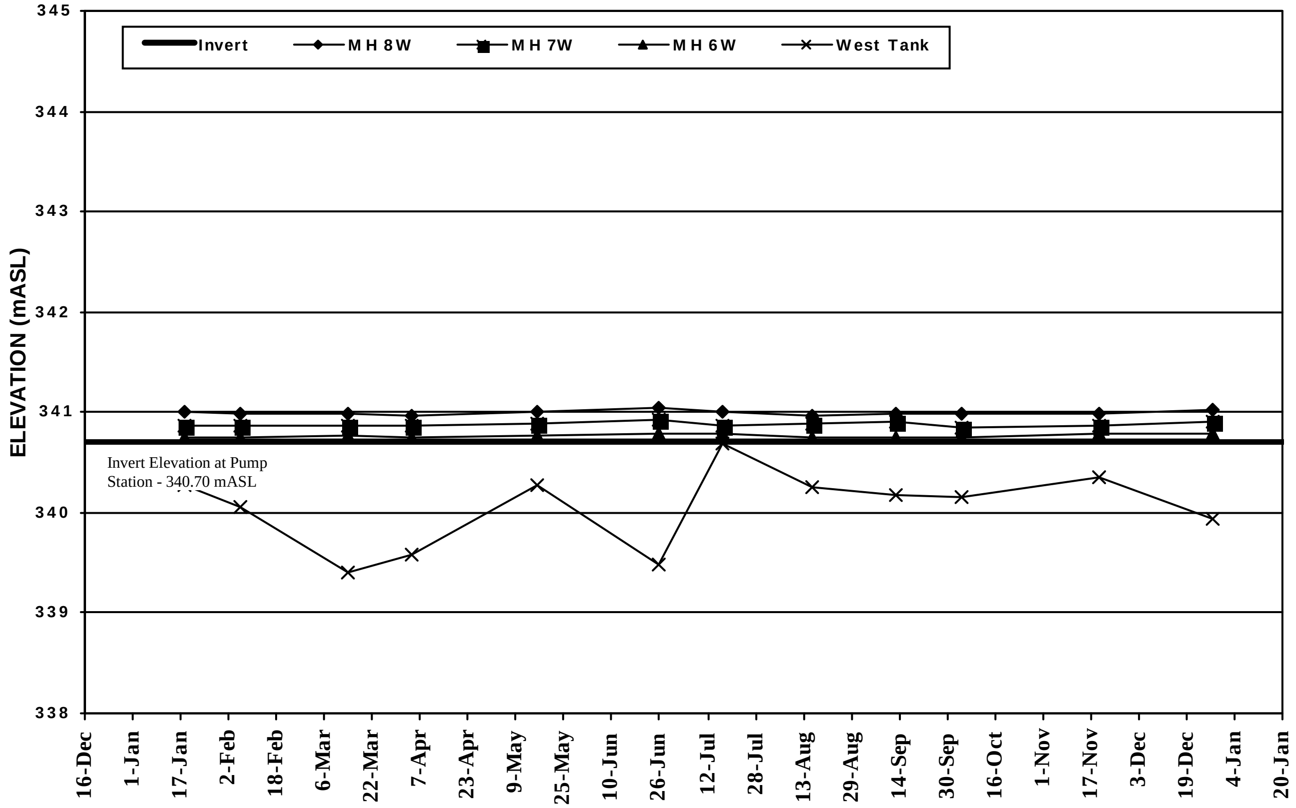
Closed Eastview Road Landfill Site

Leachate Levels Within Collector System
South Collector - 2017

FIGURE
4

60565850
10c Rpt Leachate Elevation Plots South





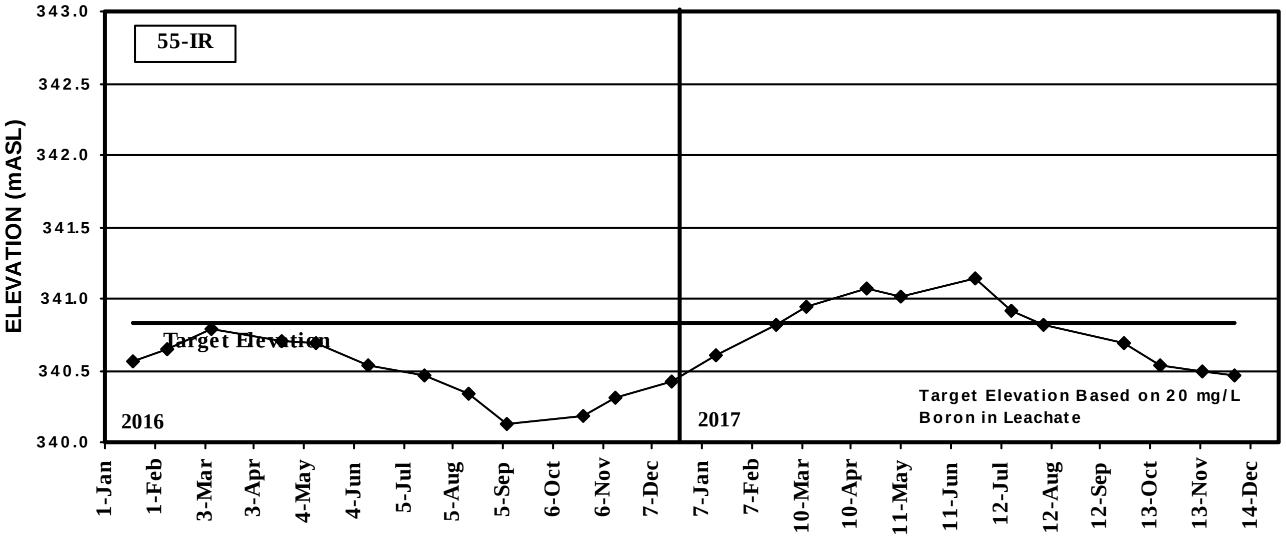
AECOM

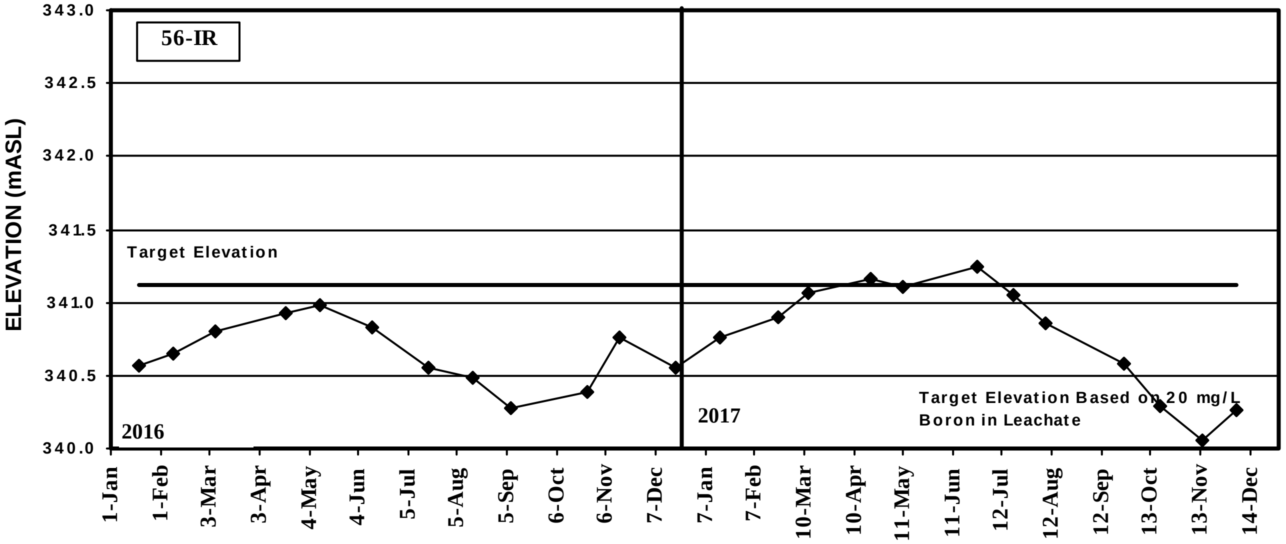
Closed Eastview Road Landfill Site

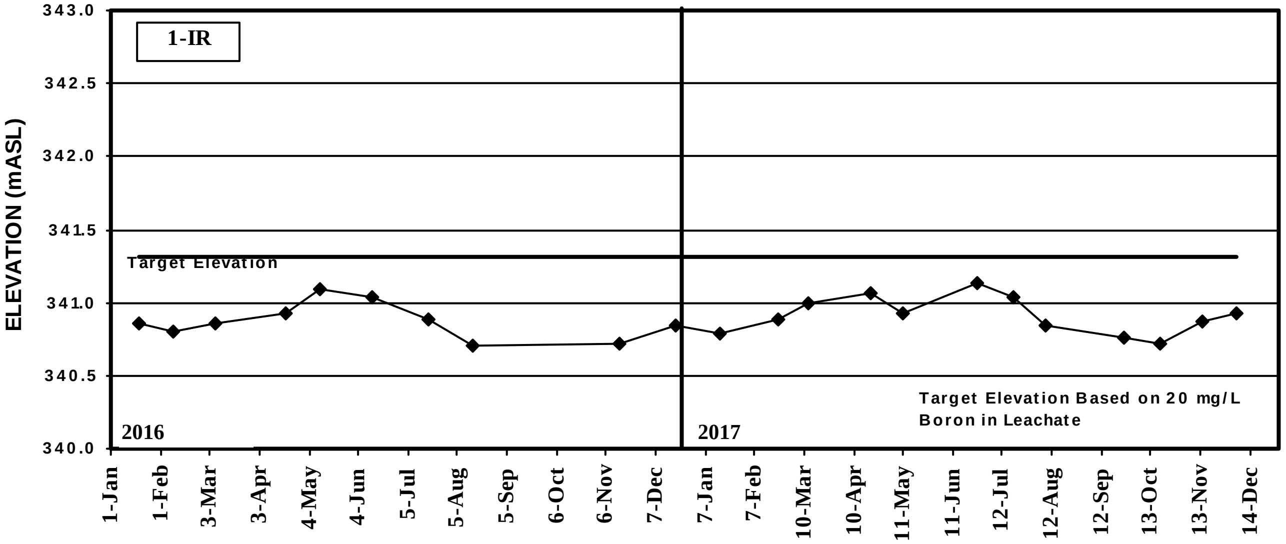
Leachate Levels Within Collector System
West Collector - 2017

FIGURE
5

60565850
10c Rpt Leachate Elevation Plots West1







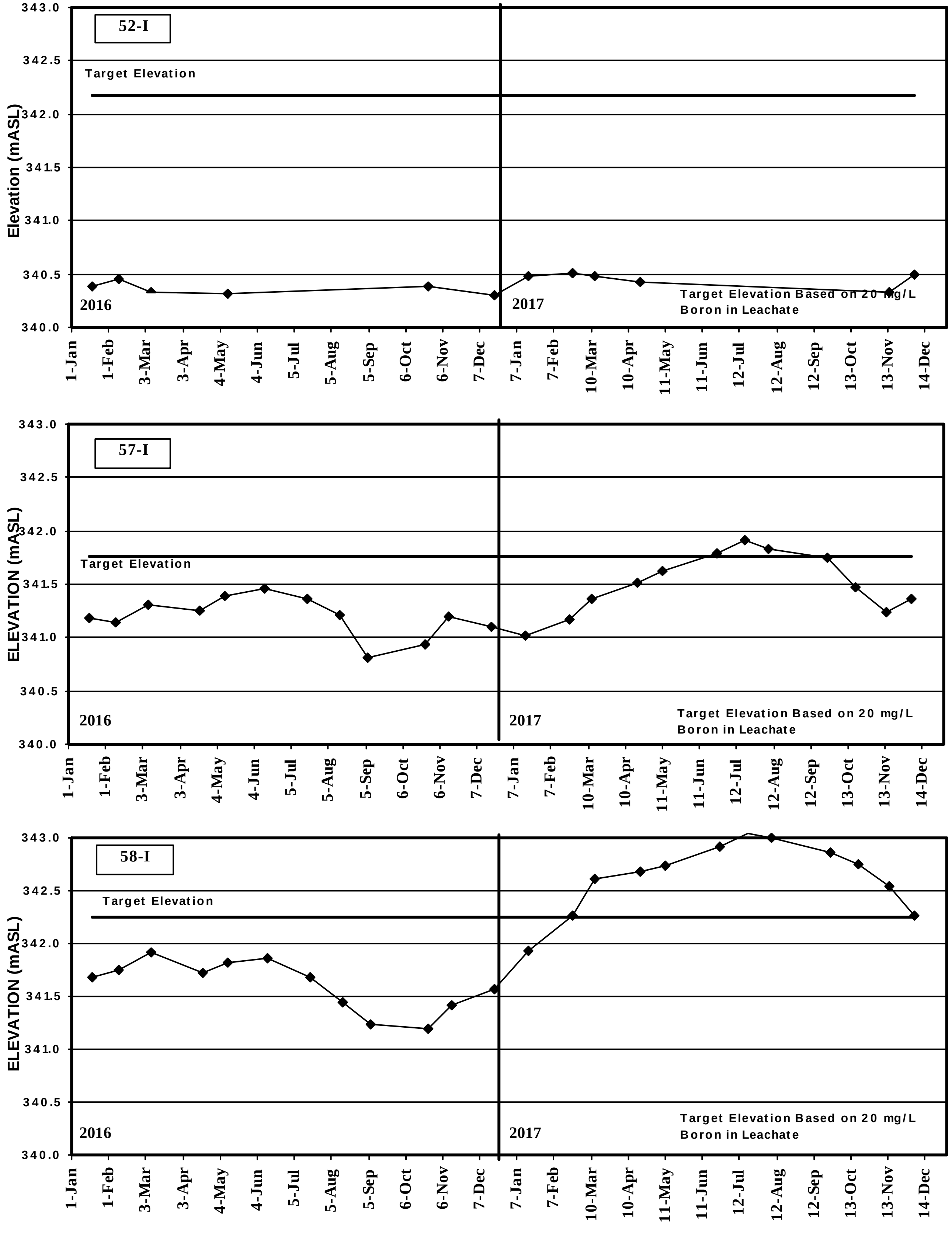
AECOM

Closed Eastview Road Landfill Site

Leachate Elevation Trends
Southern Area of Landfill

FIGURE
6

60565850
10 Leachate WL Southern Area



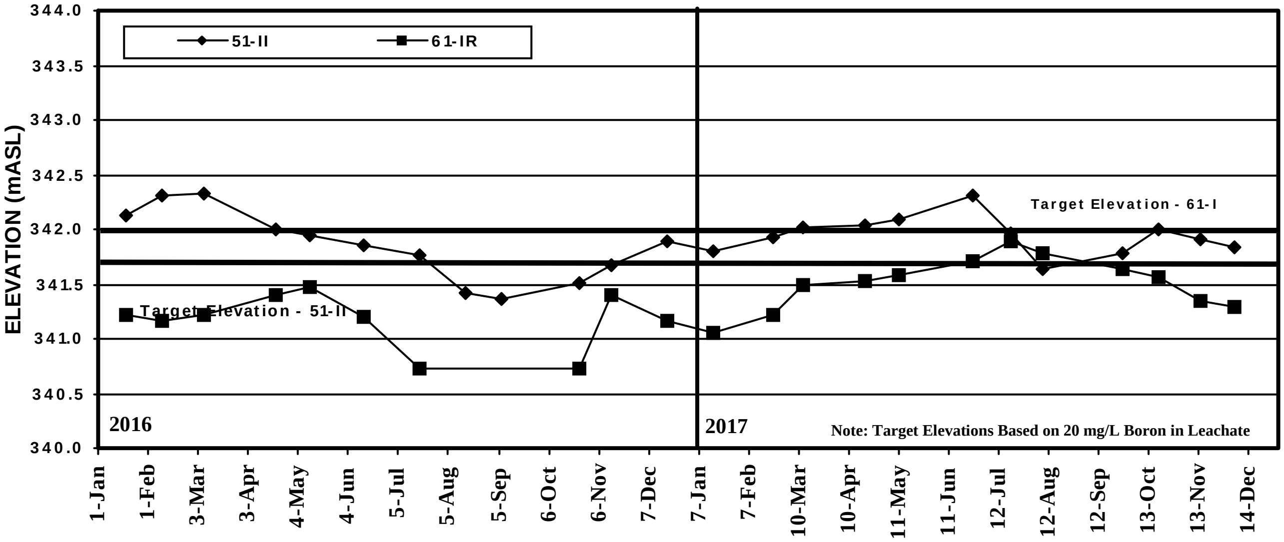
AECOM

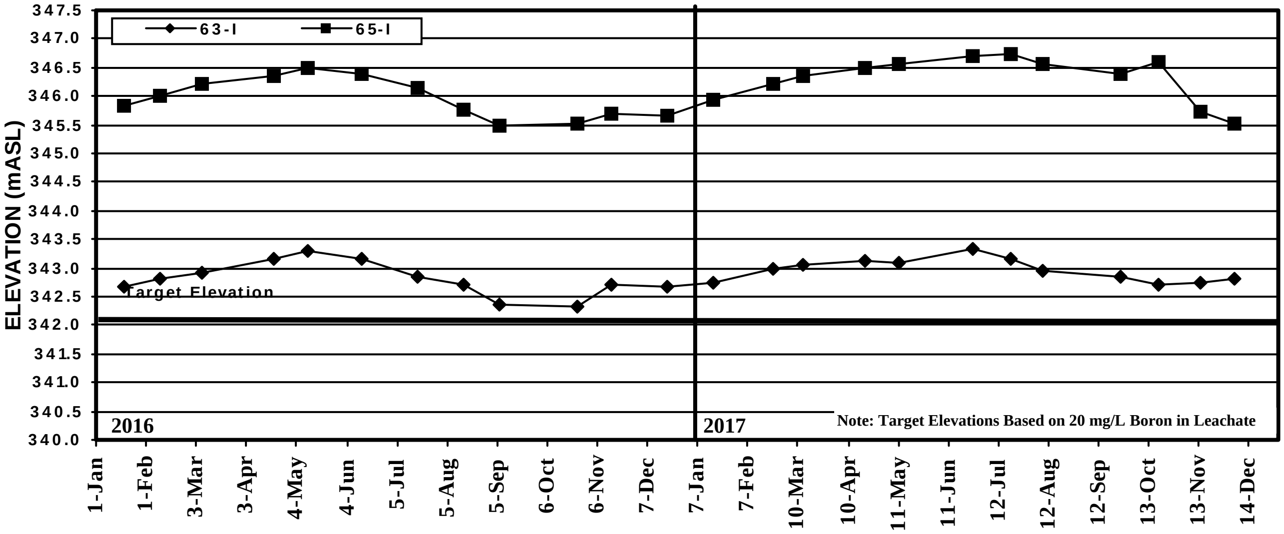
Closed Eastview Road Landfill Site

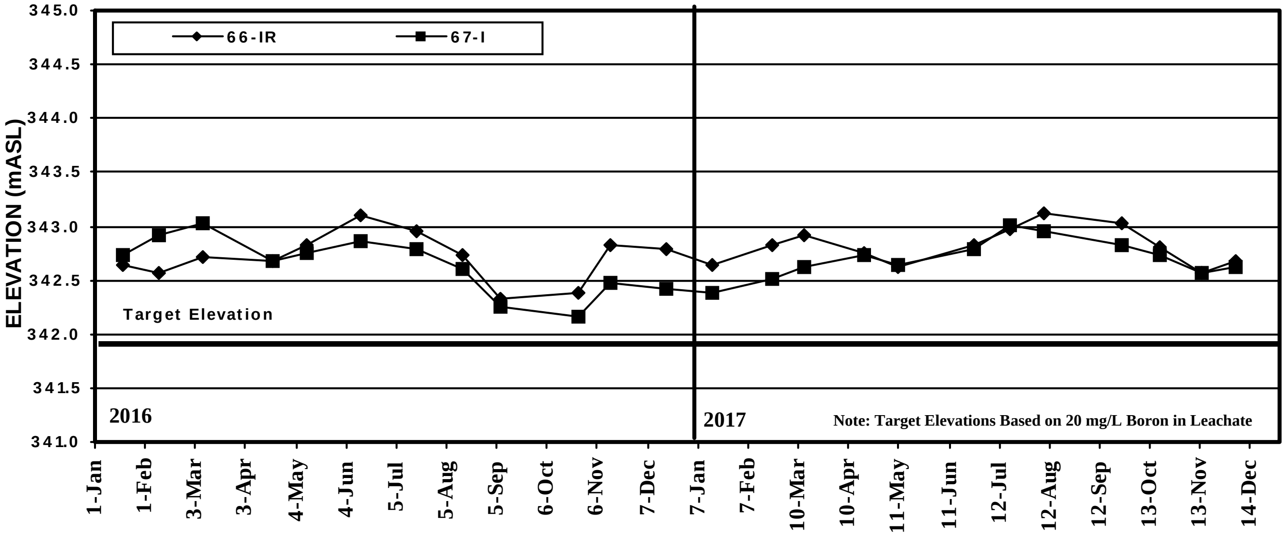
Leachate Elevation Trends
Western Area of Landfill

FIGURE
7

60565850
10 Leachate WL Western Area







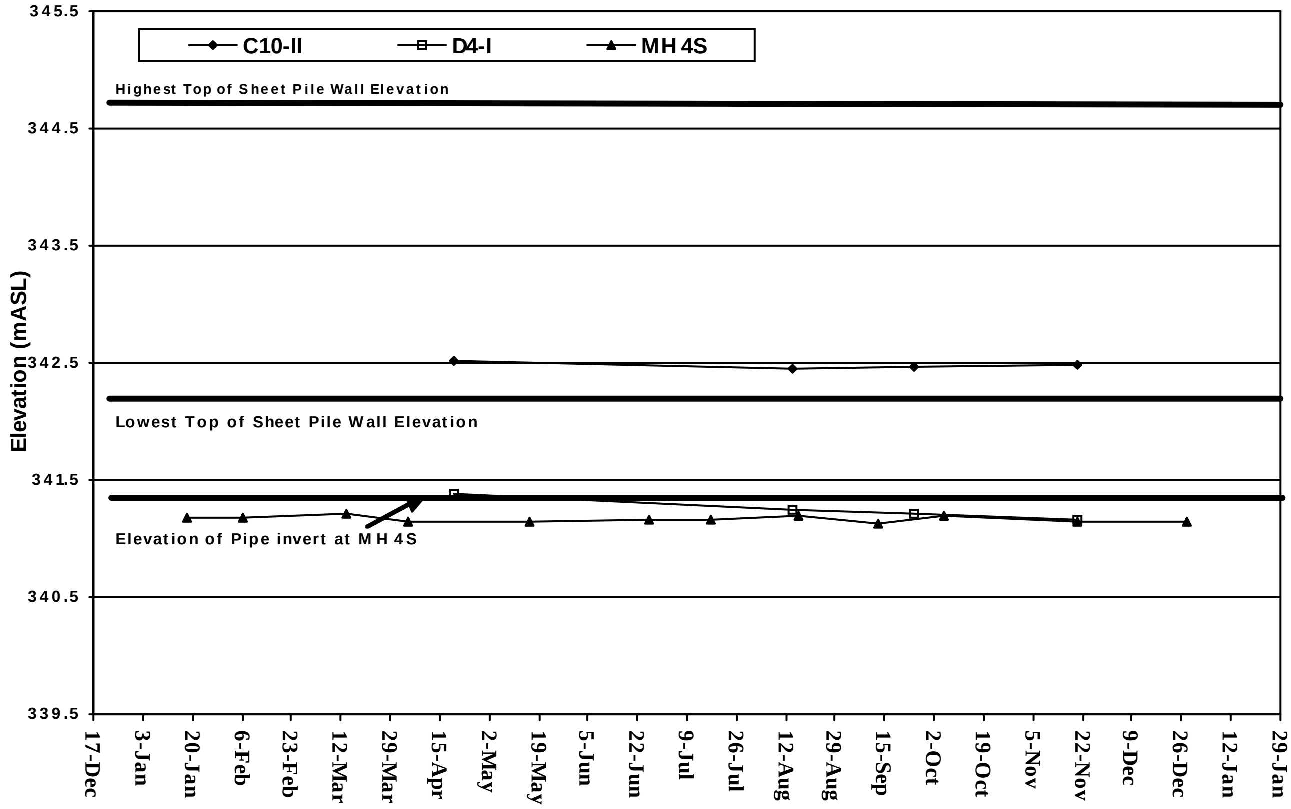
AECOM

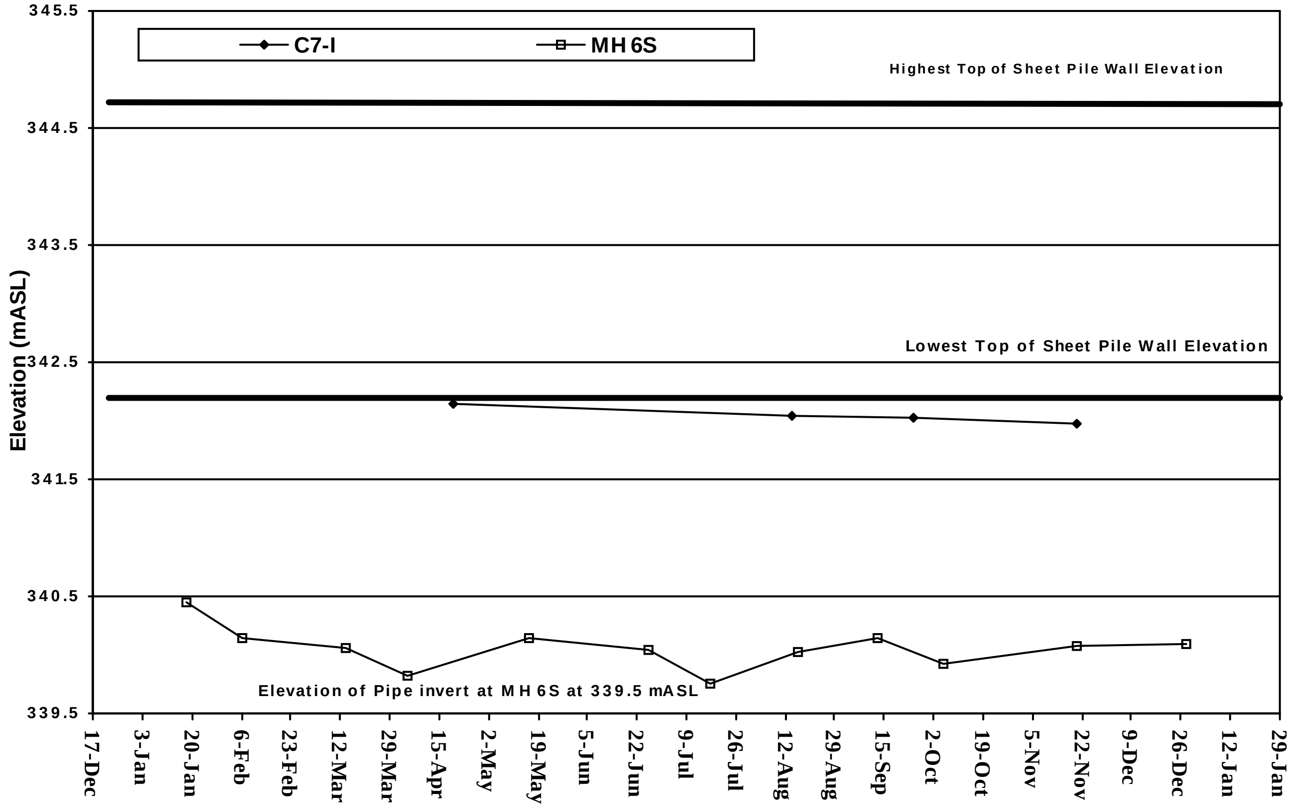
Closed Eastview Road Landfill Site

Leachate Elevation Trends
Interior Area of Landfill

FIGURE
8

60565850
10 Leachate WL Interior Area





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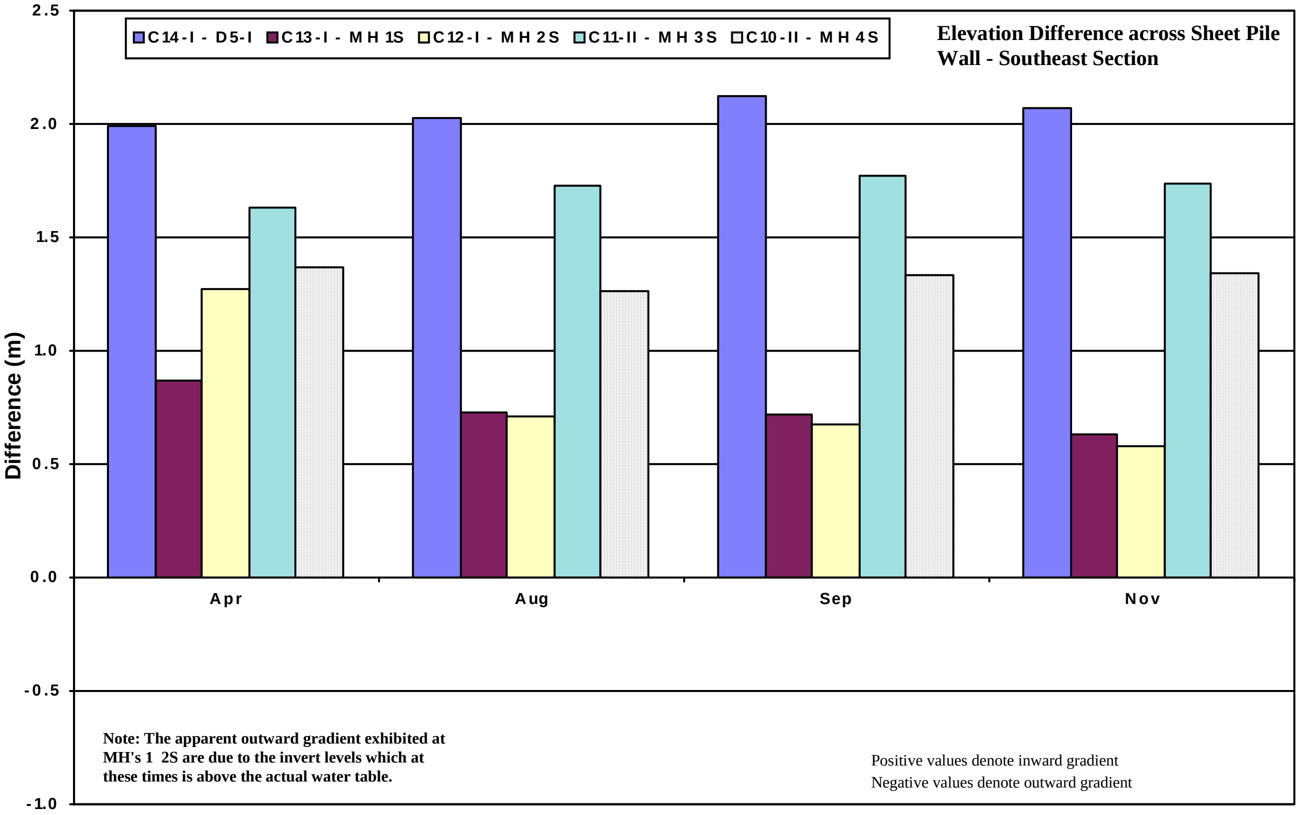
Closed Eastview Road Landfill Site

Water Elevations in the South Collection System
Selected Locations during 2017

FIGURE
9

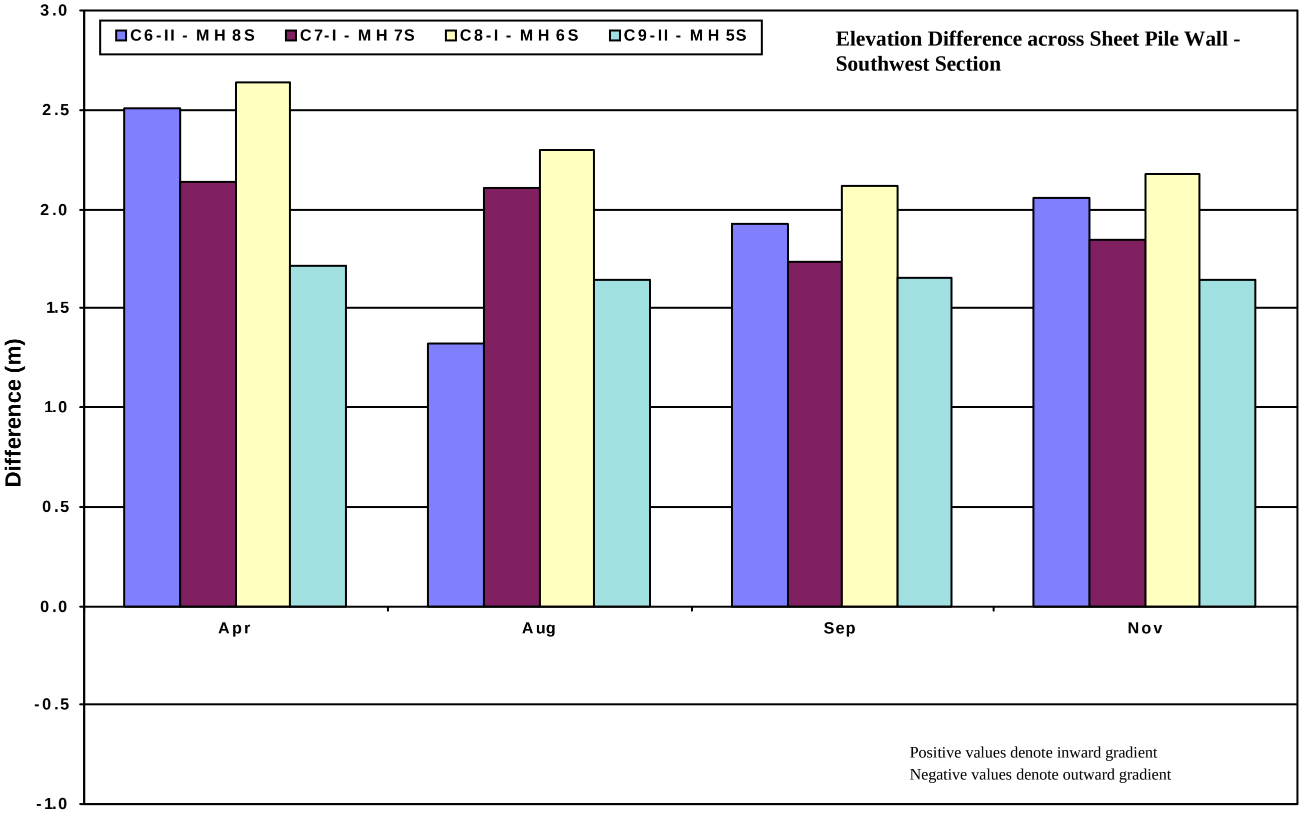
60565850
10c Rpt Water Level Comparison Along PLC



Elevation Difference across Sheet Pile Wall - Southeast Section

Note: The apparent outward gradient exhibited at MH's 1 2S are due to the invert levels which at these times is above the actual water table.

Positive values denote inward gradient
Negative values denote outward gradient



Elevation Difference across Sheet Pile Wall - Southwest Section

Positive values denote inward gradient
Negative values denote outward gradient

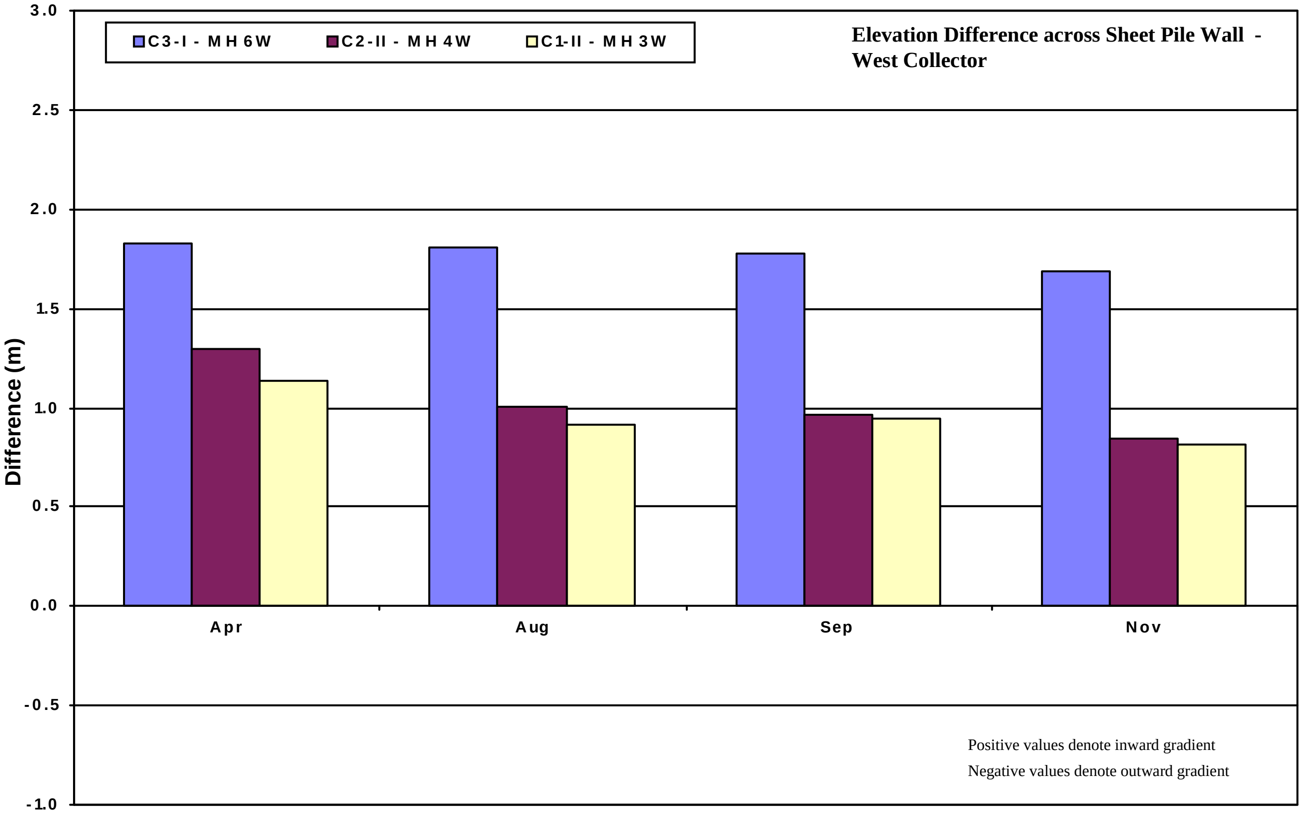
AECOM

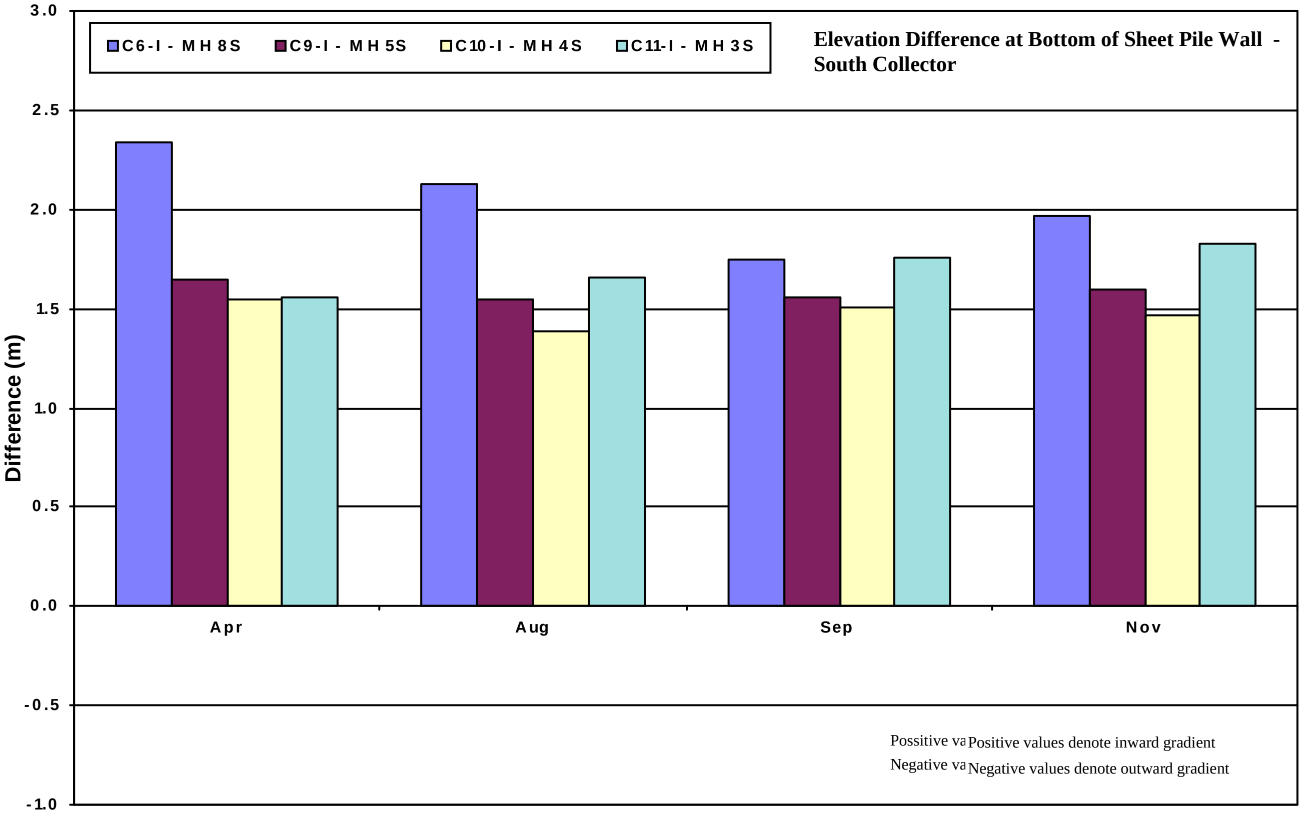
Closed Eastview Road Landfill Site

Leachate Elevation Difference Across Sheet Pile Wall
South Collector (2017)

FIGURE
10

60565850
10d Rpt Leachate Elev Plots Gradient Sou





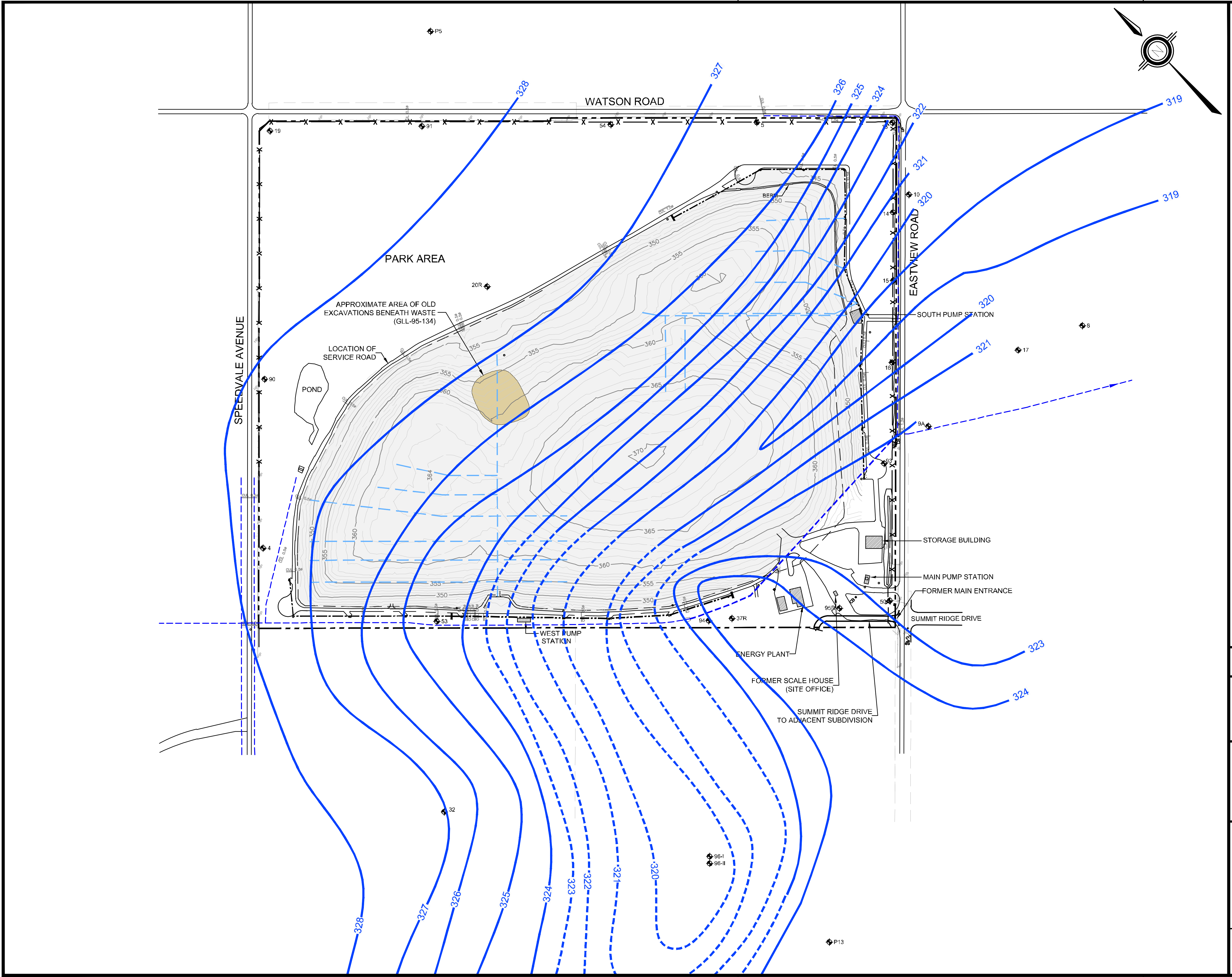
AECOM

Closed Eastview Road Landfill Site

Leachate Elevation Difference Across Bottom of Sheet Pile Wall West and South Collector (2017)

FIGURE
11

60565850
10d Rpt Leachate Elev Plots Gradient Wes



Legend

— - —	PROPERTY BOUNDARY
—x—	FENCE LINE
▨	APPROXIMATE EXTENT OF LANDFILL WASTES
—·—·—	PERIMETER LEACHATE COLLECTION AND CONTAINMENT SYSTEM (PLCCS)
⊢·—·⊣	PLCCS WITH SHEET PILE WALL PRESENT
- - -	SURFACE DRAINAGE AND STORM DITCHES
- - -	BURIED SURFACE WATER CULVERT
◆ 7	GROUND WATER MONITOR LOCATION
—343	ELEVATION CONTOUR OF BEDROCK TOPOGRAPHY

0 30 60 120 180 240 m
1 : 6000

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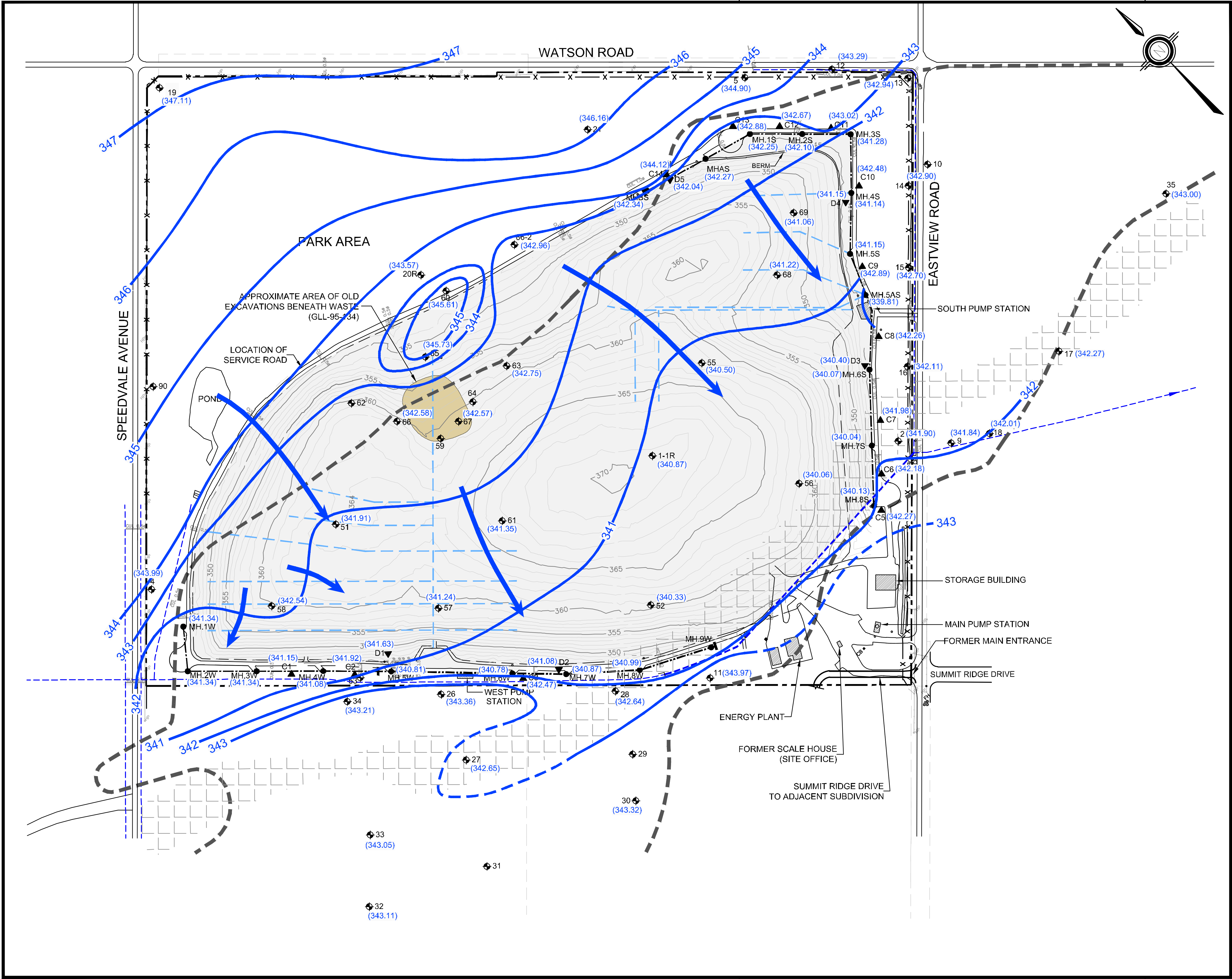
Eastview Road Landfill
City of Guelph

Inferred Site Bedrock Topography

PROJECT NUMBER	DATE	FIGURE
60565850	April, 2018	12



Legend

— · — · —	PROPERTY BOUNDARY
—— x ——	FENCE LINE
▭	APPROXIMATE EXTENT OF LANDFILL WASTES
— · · — · · —	PERIMETER LEACHATE COLLECTION AND CONTAINMENT SYSTEM (PLCCS)
⊢ · · — · · ⊣	PLCCS WITH SHEET PILE WALL PRESENT
- - - - -	SURFACE DRAINAGE AND STORM DITCHES
- - - - -	BURIED SURFACE WATER CULVERT
— — —	UNDERDRAIN NETWORK
▬ ▬ ▬	PERIMETER OF SURFICIAL OUTWASH INTERPRETED FROM 1966 AND 1972 AIR PHOTOGRAPH, BOREHOLE LOGS AND OTHER SITE INFORMATION. (REVISED JULY 1995)
⊔⊔⊔	APPROXIMATE EXTENT OF ESKER FORMATION
● MH. AS	LOCATION AND DESIGNATION OF MANHOLES IN LEACHATE CONTAINMENT SYSTEM
◈ 7	GROUND WATER MONITOR LOCATION
▲ C12	GROUNDWATER MONITOR TO DOCUMENT LEACHATE CONTAINMENT SYSTEM PERFORMANCE (WATER ELEVATIONS ONLY)
▼ D1	GROUND WATER MONITOR TO DOCUMENT WATER LEVELS UPGRADIENT OF LEACHATE CONTAINMENT SYSTEM (WATER ELEVATIONS ONLY)
(342.81)	GROUNDWATER ELEVATION (mASL)
—343	ELEVATION CONTOUR OF WATER TABLE
⟵	INFERRED DIRECTION OF SHALLOW GROUNDWATER FLOW

NOTES:

- Contours not shown in and directly adjacent to PLCCS for legibility.

0 25 50 100 150 200 m
1 : 5000

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Eastview Road Landfill
City of Guelph

Water Table and Shallow Groundwater Flow (Nov 2017)

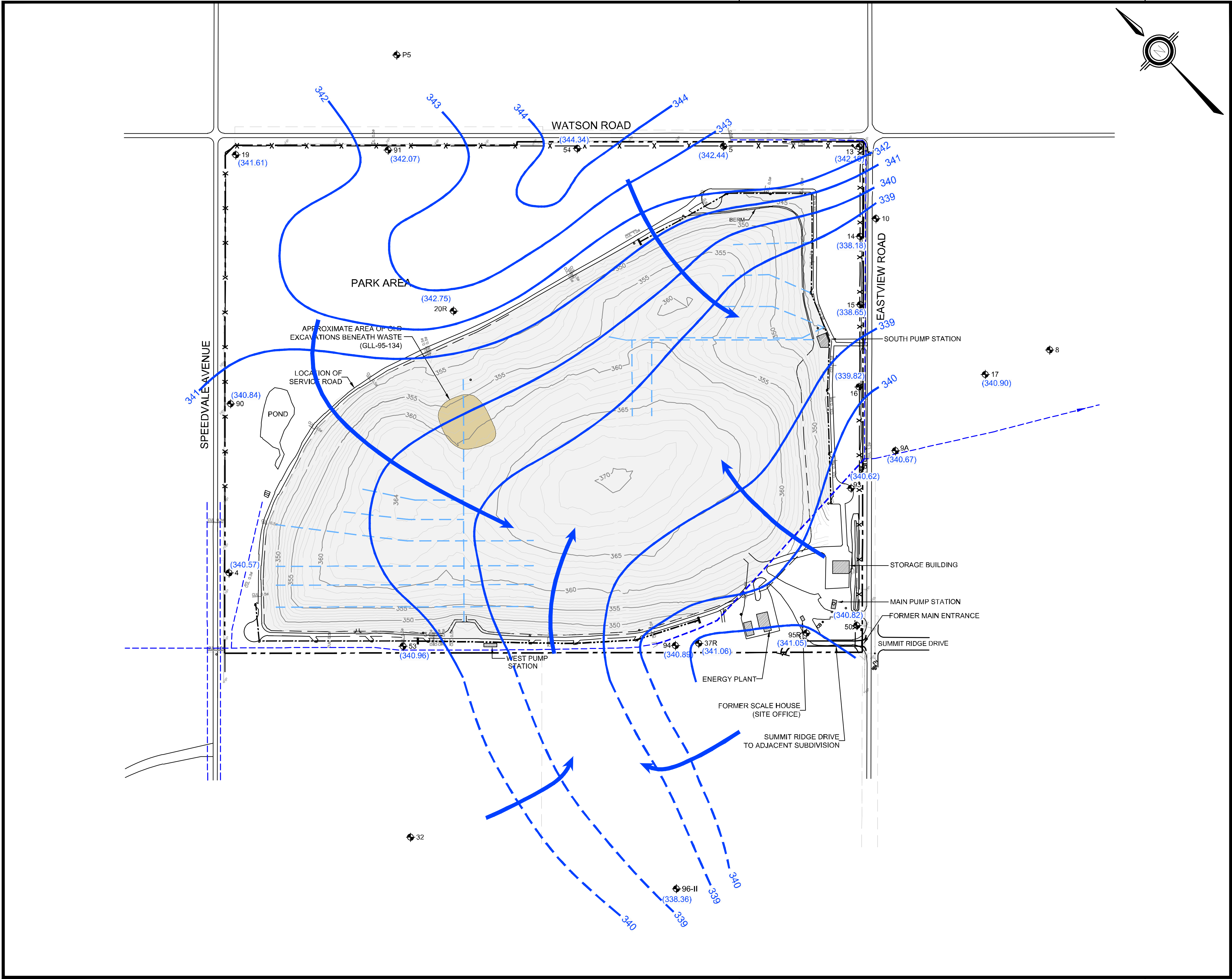
PROJECT NUMBER	DATE	FIGURE
60565850	April, 2018	13

B SIZE 11" x 17" (279.4mm x 431.8mm)

PLOT: 4/17/2018 10:38:03 PM

BY:----

FILE NAME: 60565850-2017AMR-F14.DWG



Legend

- PROPERTY BOUNDARY
- FENCE LINE
- APPROXIMATE EXTENT OF LANDFILL WASTES
- PERIMETER LEACHATE COLLECTION AND CONTAINMENT SYSTEM (PLCCS)
- PLCCS WITH SHEET PILE WALL PRESENT
- SURFACE DRAINAGE AND STORM DITCHES
- BURIED SURFACE WATER CULVERT
- 7 GROUND WATER MONITOR LOCATION
- (338.68) BEDROCK GROUNDWATER ELEVATION (mASL)
- 343 ELEVATION CONTOUR OF WATER LEVEL IN BEDROCK
- INFERRED DIRECTION OF BEDROCK GROUNDWATER FLOW

0 30 60 120 180 240 m

1 : 6000

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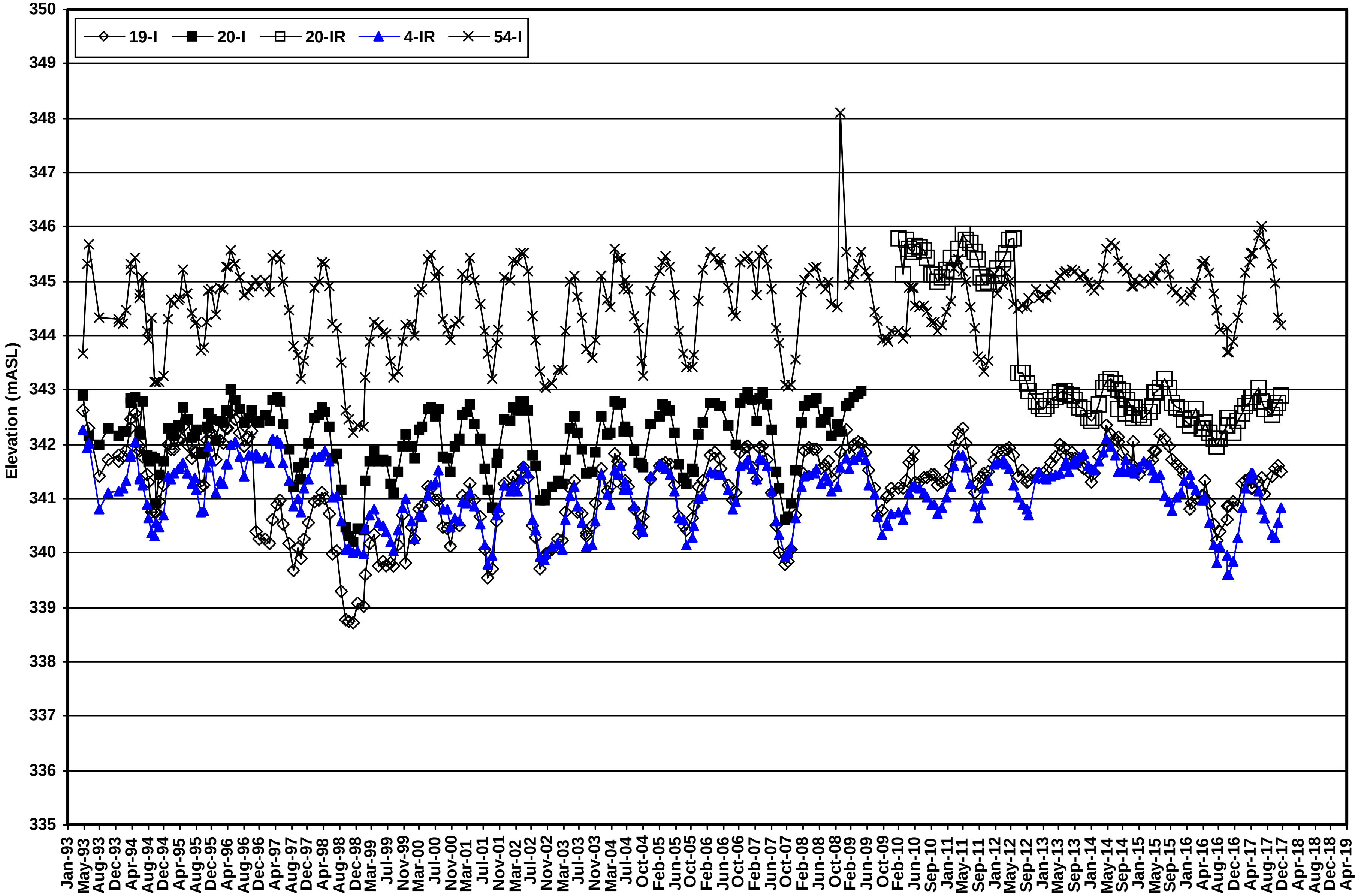
AECOM

Eastview Road Landfill
City of Guelph

Piezometric Heads and Groundwater Flow in Shallow Bedrock (Nov. 2017)

PROJECT NUMBER	DATE	FIGURE
60565850	April, 2018	14

P:\60565850\900-CAD_GIS\910-CAD\25-SKETCHES\2017AMR\60565850-2017AMR-F14.dwg Layout:Fig 14 Plotted: Apr 17, 2018 @ 10:38pm by WangV



AECOM

Closed Eastview Road Landfill Site

Bedrock Groundwater Elevations

Locations in the Northeast Area of the Landfill Property

FIGURE 15

60565850

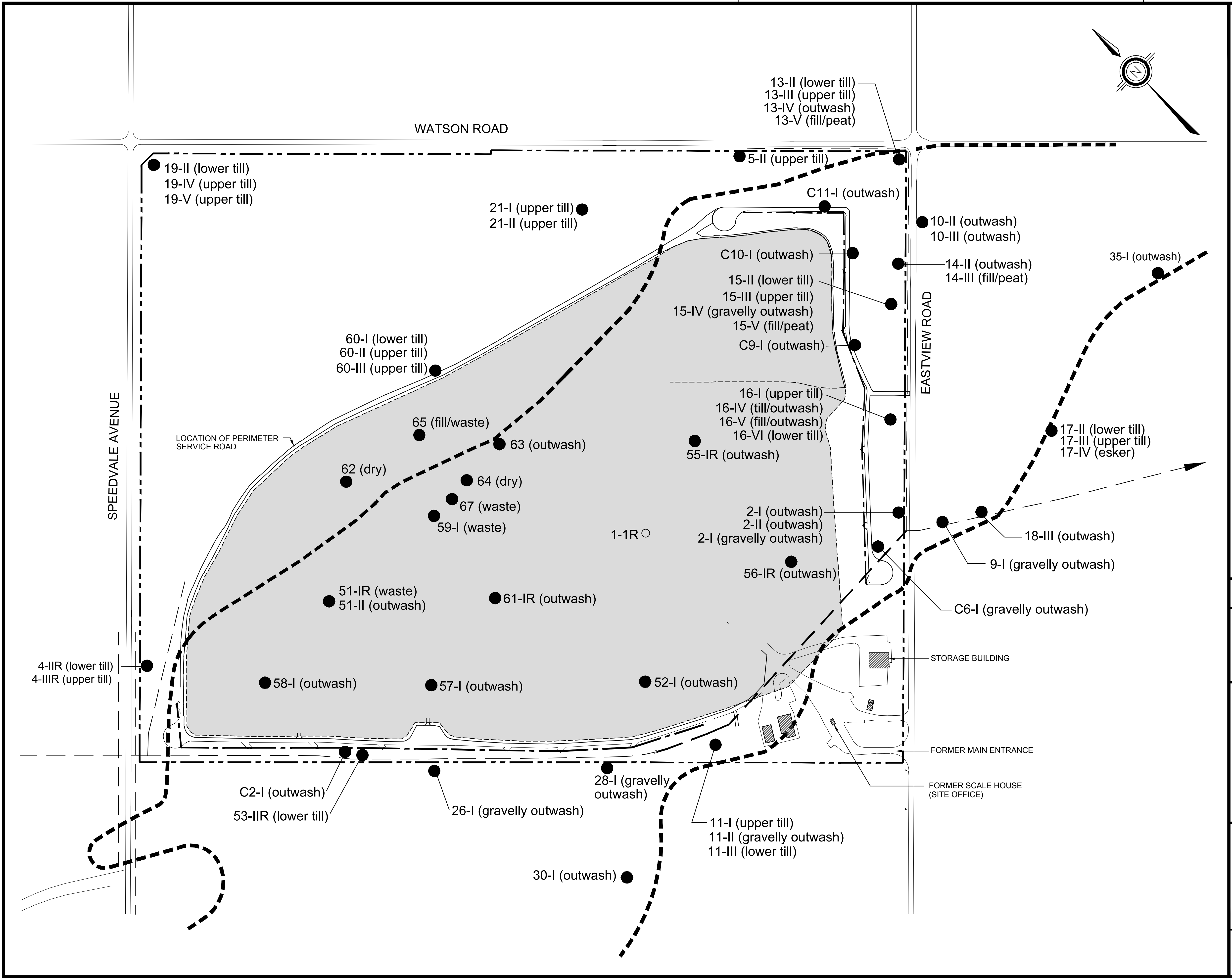
12e Rpt Bedrock Groundwater Elv in NE

B SIZE 11" x 17" (279.4mm x 431.8mm)

PLOT: 4/17/2018 10:40:01 PM

BY:----

FILE NAME: 60565850-2017AMR-F16.DWG



Legend

— · · —	PROPERTY BOUNDARY
▨	APPROXIMATE EXTENT OF LANDFILL WASTES
— · —	PERIMETER LEACHATE COLLECTION AND CONTAINMENT SYSTEM (PLCCS)
— — —	SURFACE DRAINAGE AND STORM DITCHES
— —	BURIED STORM SEWER
- - - -	PERIMETER OF SURFICIAL OUTWASH INTERPRETED FROM 1966 AIR PHOTOGRAPHS, BOREHOLE LOGS AND OTHER SITE INFORMATION. (REVISED JULY 1995)
● 5-II	LOCATION AND DESIGNATION OF MONITORS

NOTES:
- Existing base information taken from BRAUN CONSULTING ENGINEERING LTD. drawing (Number 88.15-1e, Rev. B, dated June 20/1990).

0 25 50 100 150 200 m
1 : 5000

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AECOM

Eastview Road Landfill
City of Guelph

Routine Groundwater Monitors Monitored in Waste, Outwash and Till During 2017

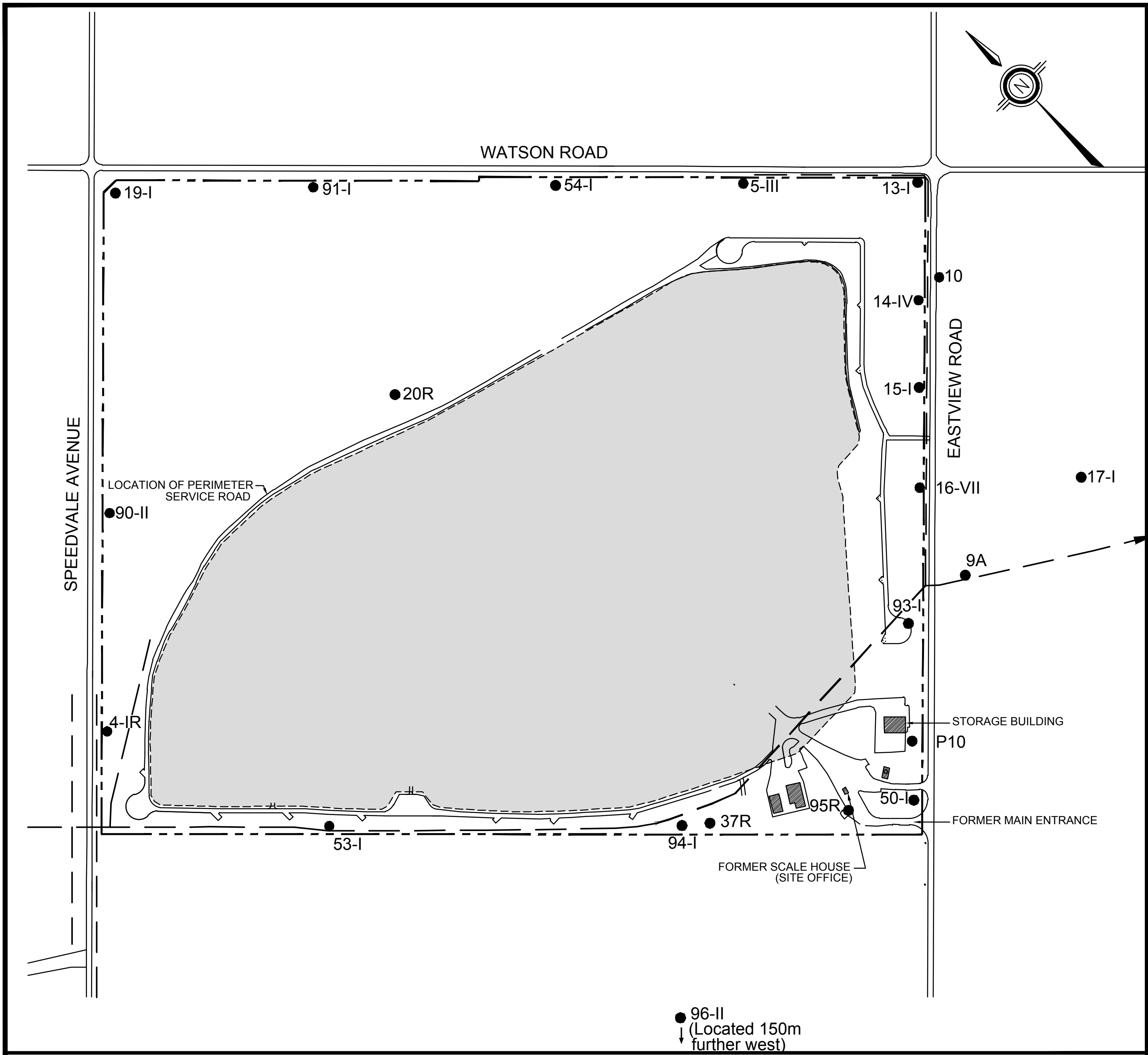
PROJECT NUMBER	DATE	FIGURE NUMBER
60565850	April 2018	16

P:\60565850\900-CAD_GIS\910-CAD\25-SKETCHES\2017AMR\60565850-2017AMR-F16.dwg Layout:Fig 15 Plotted: Apr 17, 2018 @ 10:40pm by WangV

PLOT: 4/17/2018 10:43:28 PM ANSI SIZE 8.5" x 11" (215.9mm x 279.4mm)

BY:----

FILE NAME: 60565850-2017AMR-F17.DWG



Legend

— - —	PROPERTY BOUNDARY
▨	APPROXIMATE EXTENT OF LANDFILL WASTES
— — —	SURFACE DRAINAGE AND STORM DITCHES
— — —	BURIED STORM SEWER
● 19-I	LOCATION AND DESIGNATION OF SHALLOW BEDROCK MONITORS

NOTES:

- Existing base information taken from BRAUN CONSULTING ENGINEERING LTD. drawing (Number 88.15-1e, Rev. B, dated June 20/1990).

0 50 100 200 300 m

1 : 7500

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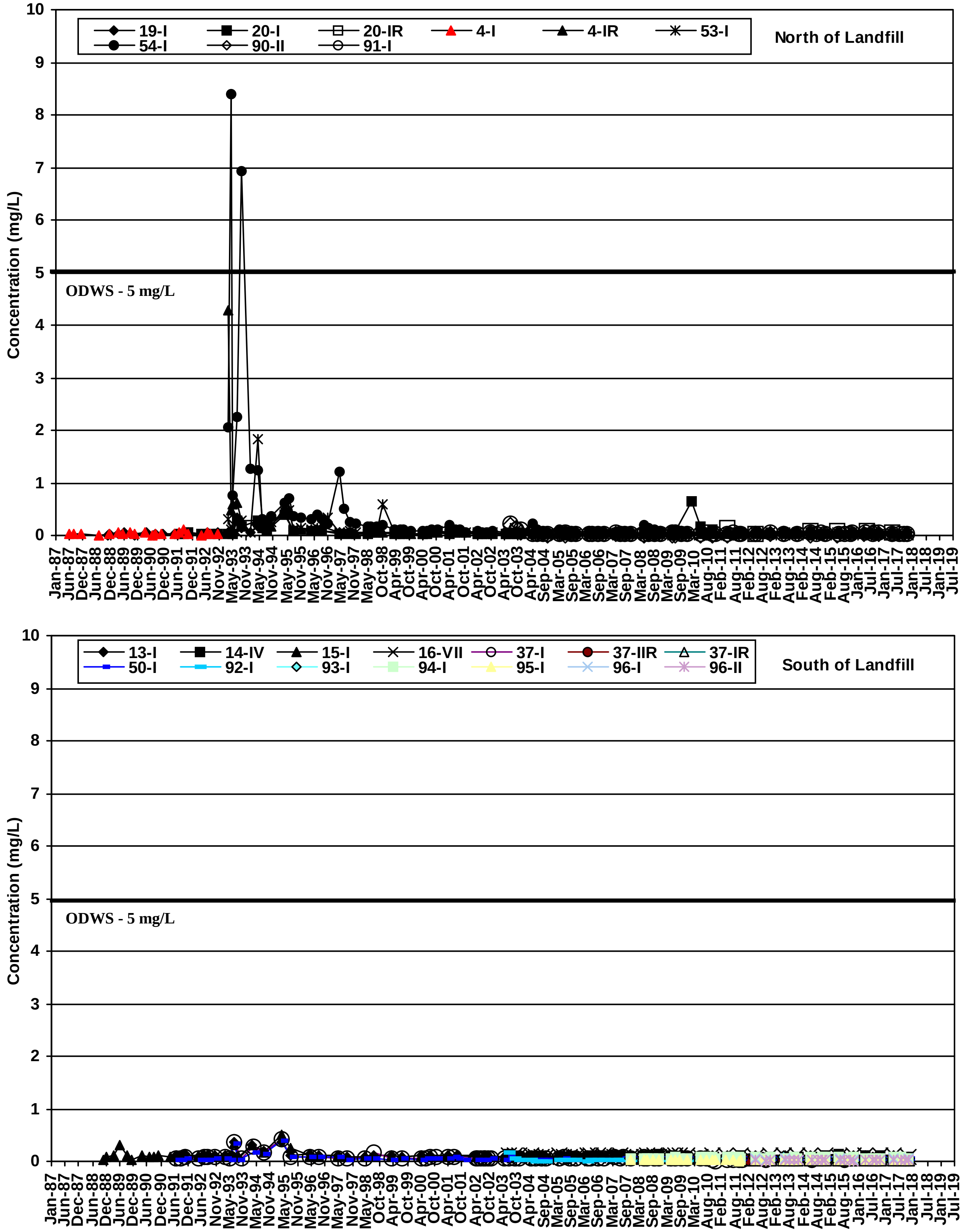
AECOM

Eastview Road Landfill
City of Guelph

Routine Groundwater Monitors Monitored in Bedrock During 2017

PROJECT NUMBER	DATE	FIGURE NUMBER
60565850	**April 2018**	**17**



Closed Eastview Road Landfill Site

Ground Water Chemistry Trends

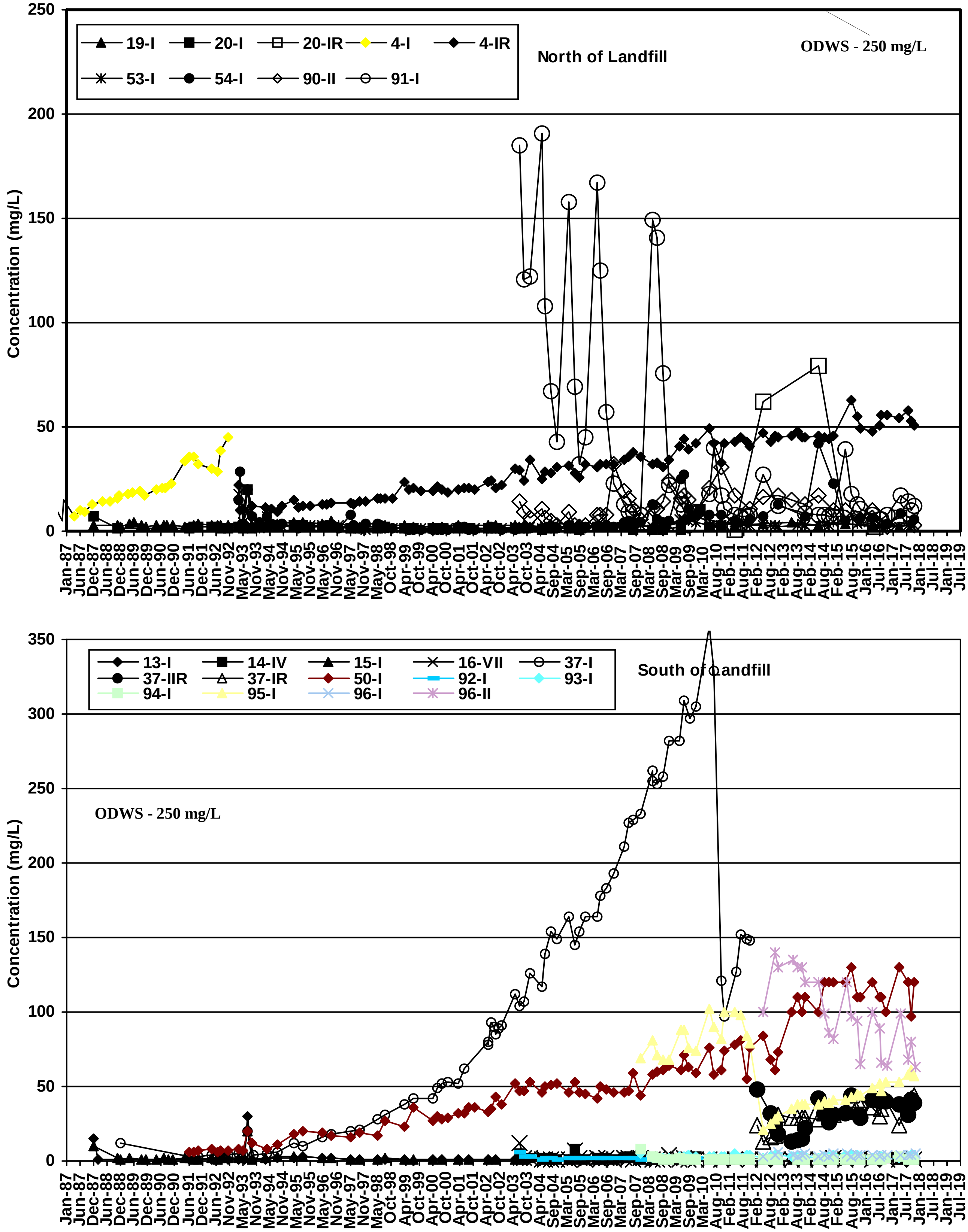
Boron Concentrations in Bedrock

FIGURE

18

60565850

12a Detailed Boron Concentrations in Bed



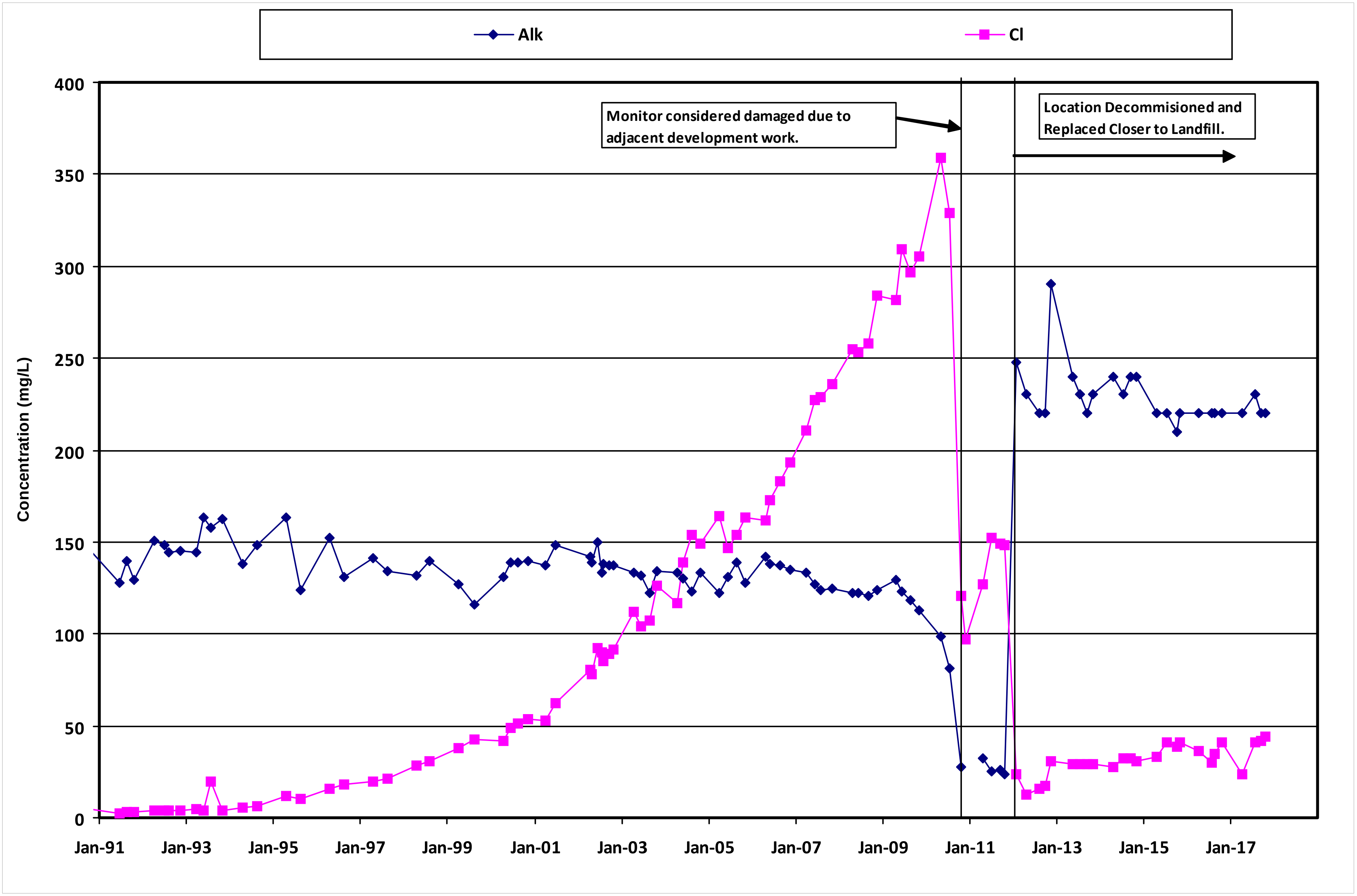
AECOM

Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Chloride Concentrations in Bedrock

FIGURE
19

60565850
12a Detailed Chloride Concentrations in



AECOM

Closed Eastview Road Landfill Site

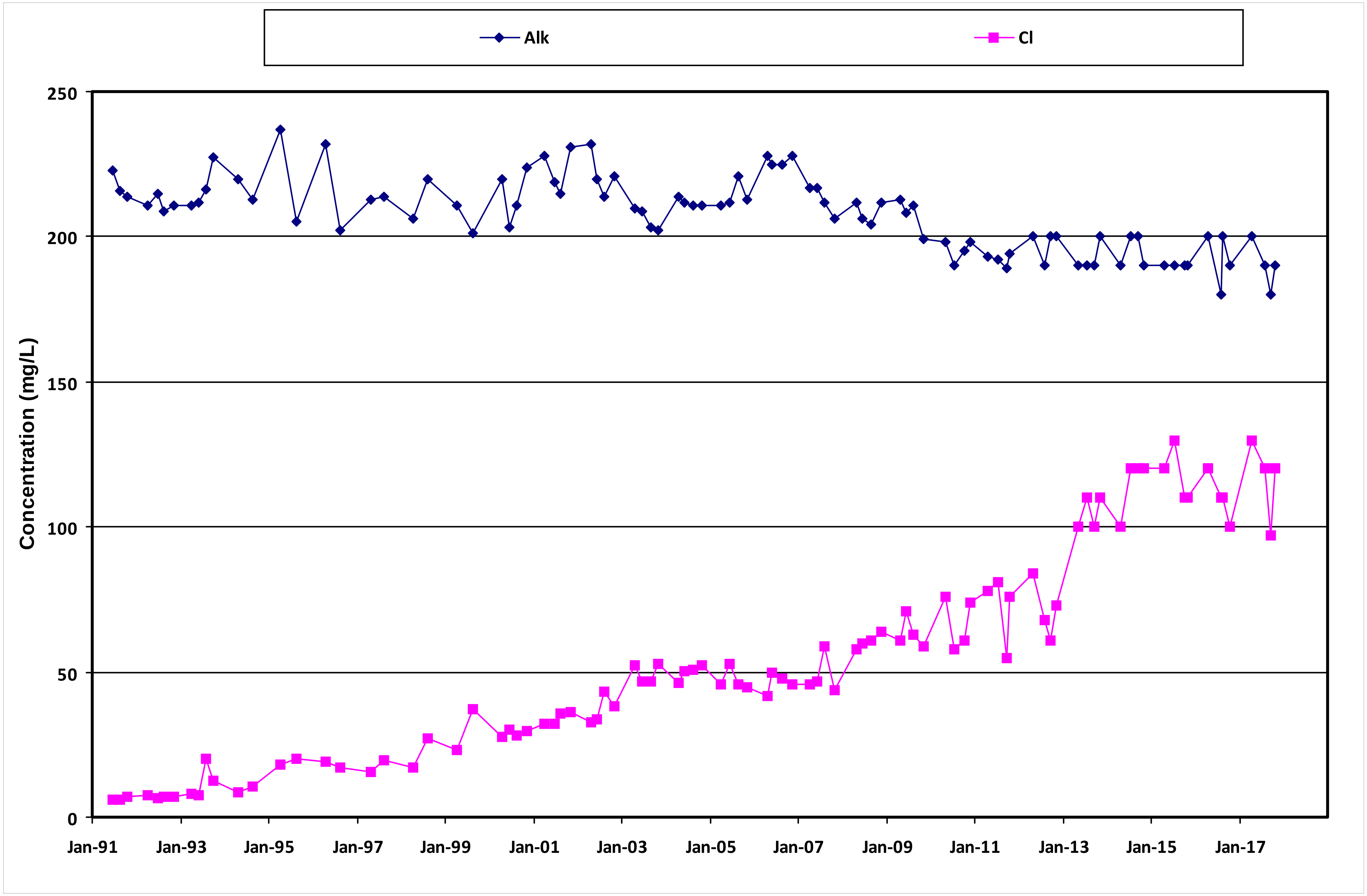
Groundwater Quality Trends

Comparison of Chloride and Alkalinity at Location 37/37R

FIGURE
20

60565850

12a Graph37-I-37--IR_ALK_CLtrend - For R



AECOM

Closed Eastview Road Landfill Site

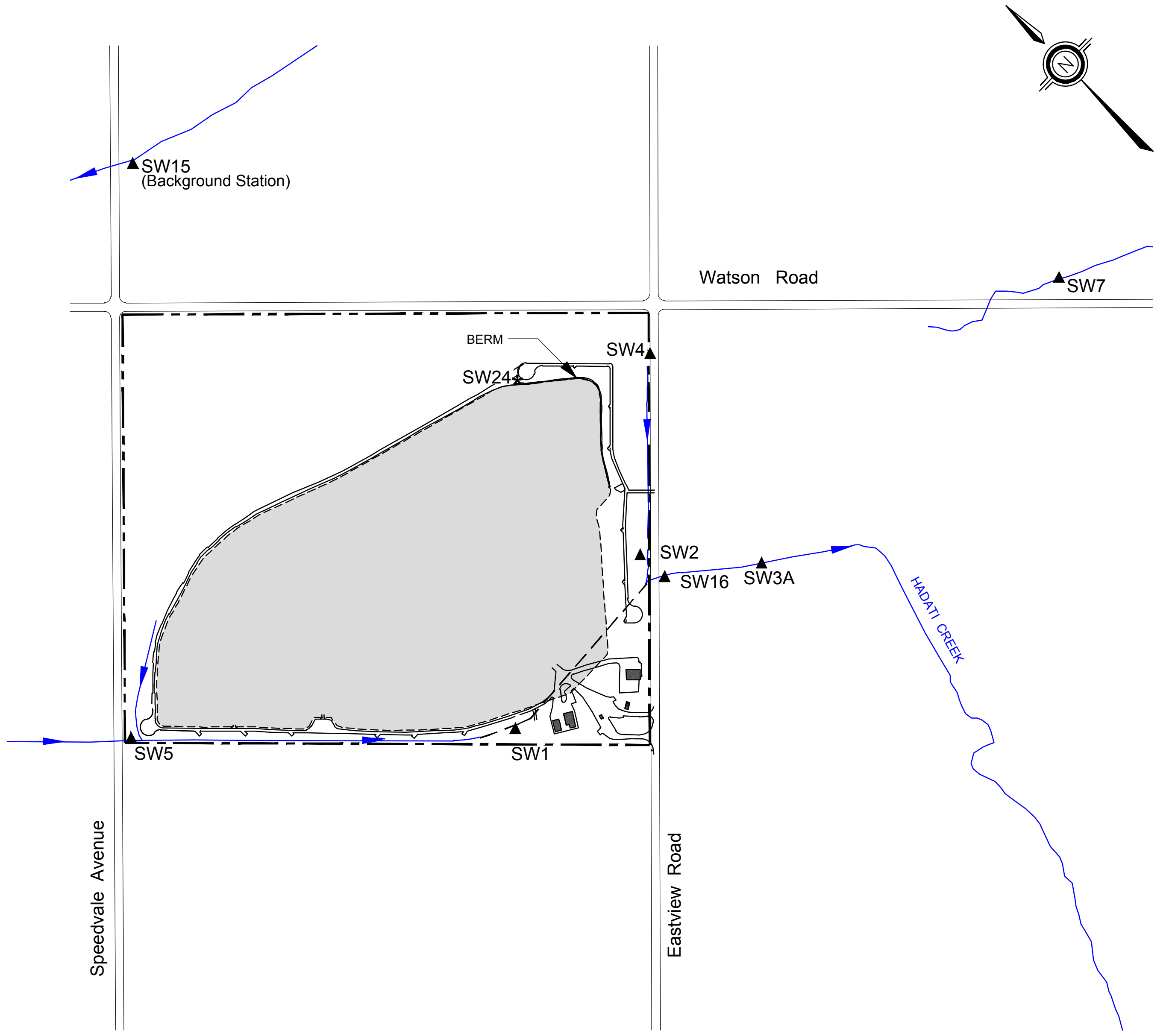
Groundwater Quality Trends

Comparison of Chloride and Alkalinity at Location 50

FIGURE
21

60565850

12a Graph50-I_ALK_CLtrend For Rpt



Legend

— - - —	PROPERTY BOUNDARY
▨	APPROXIMATE EXTENT OF LANDFILL WASTES
▲ SW5	ROUTINE SURFACE WATER SAMPLING STATIONS
* SW24	SEDIMENT SAMPLING STATIONS
— — —	UNDERGROUND PIPE
──►	DIRECTION OF FLOW

NOTES:
- Existing base information taken from BRAUN CONSULTING ENGINEERING LTD. drawing (Number 88.15–1e, Rev. B, dated June 20/1990).

0 50 100 200 300 400 500 m

1 : 12,500

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AECOM

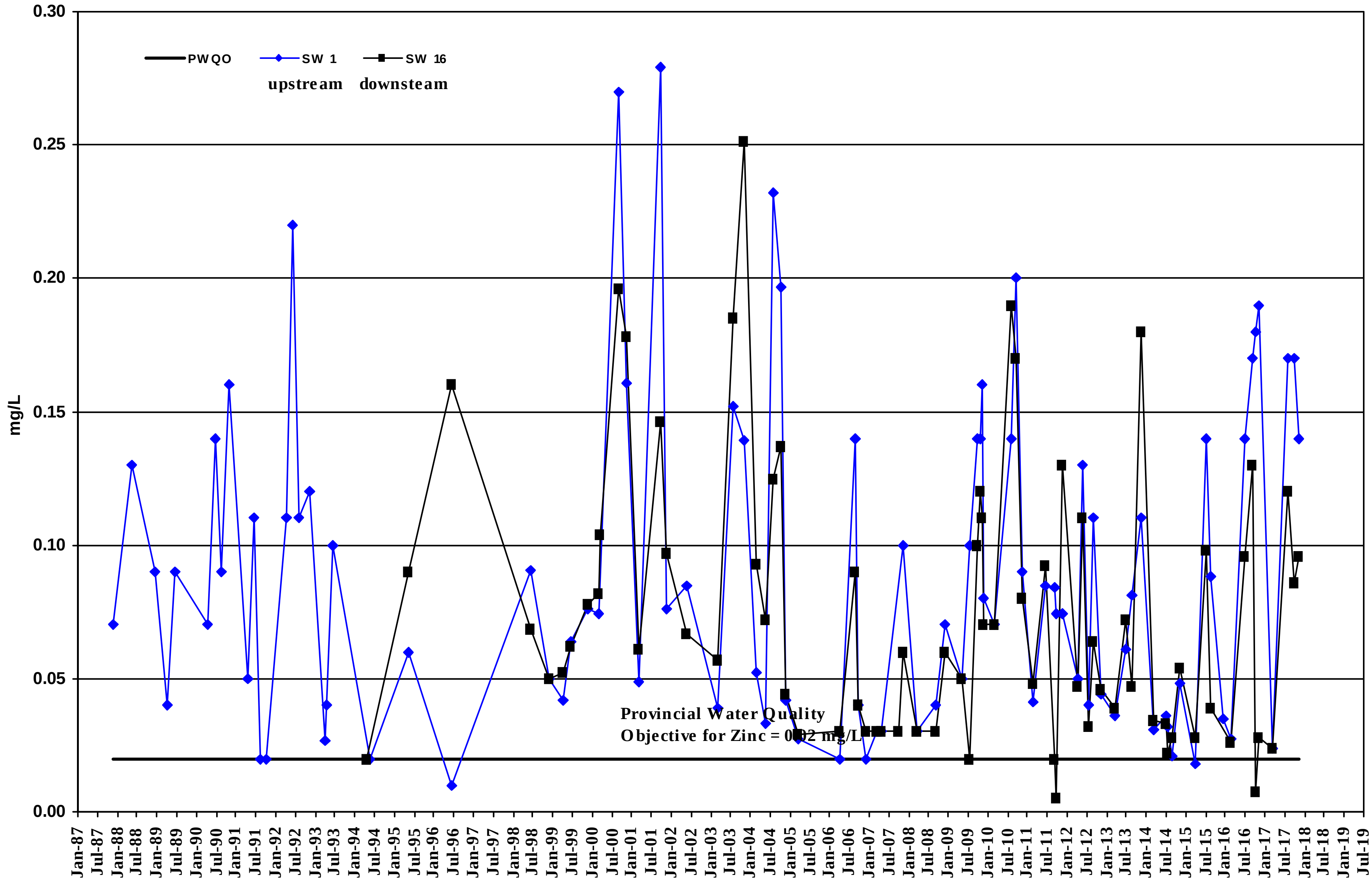
Eastview Road Landfill
City of Guelph

Surface Water Monitoring Locations

PROJECT NUMBER	DATE	FIGURE NUMBER
60565850	April, 2018	22

FILE NAME: 60565850-2017AMR-F22.DWG BY:---- PLOT: 4/17/2018 10:45:39 AM SIZE 8.5" x 11" (215.9mm x 279.4mm)

P:\60565850\900-CAD_GIS\910-CAD\25-SKETCHES\2017AMR\60565850-2017AMR-F22.dwg Layout:Fig 22 Plotted: Apr 17, 2018 @ 10:45pm by WangV



AECOM

Closed Eastview Road Landfill Site

Surface Water Quality Trends

Comparison of Zinc at Locations SW 1 and SW 16

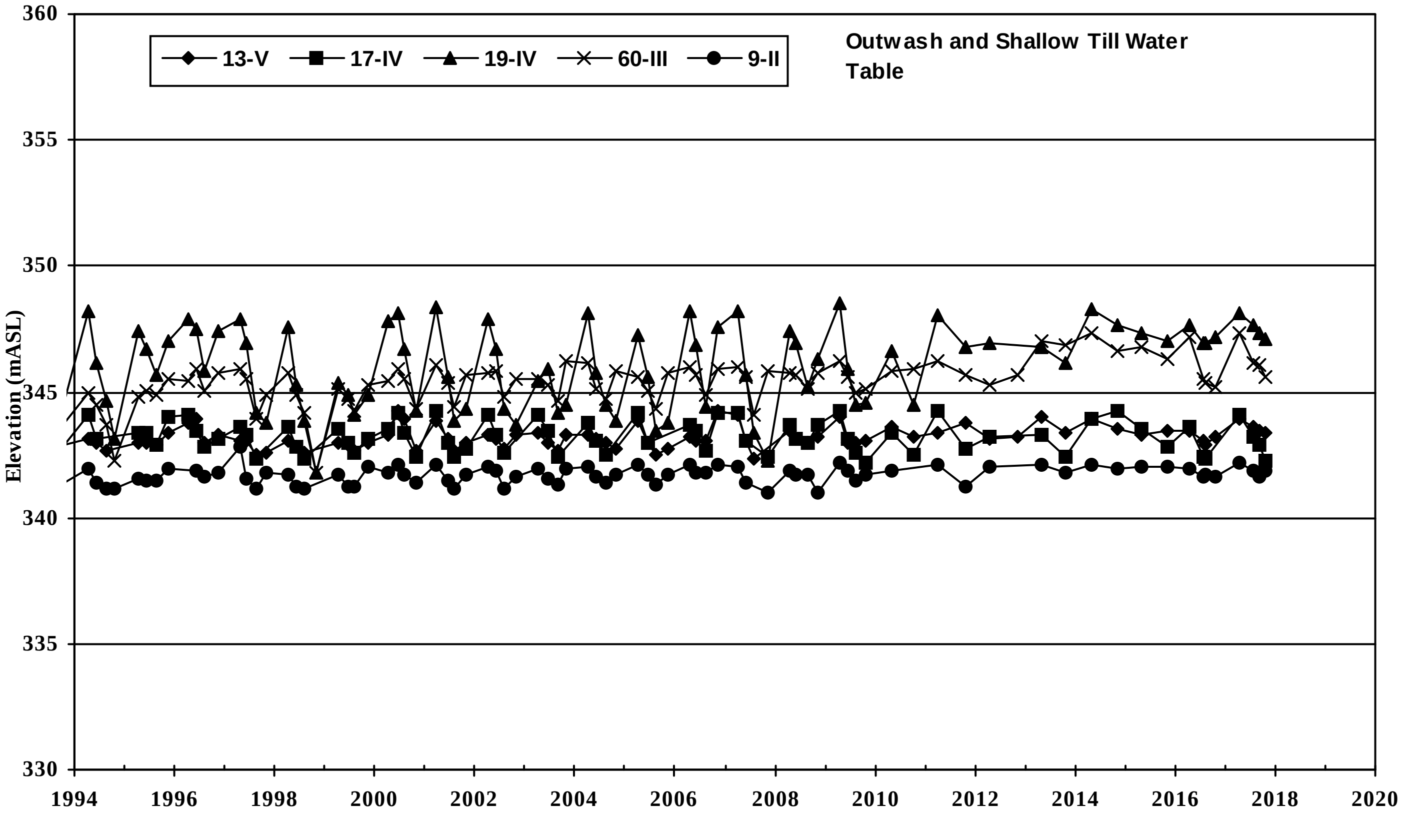
FIGURE
23

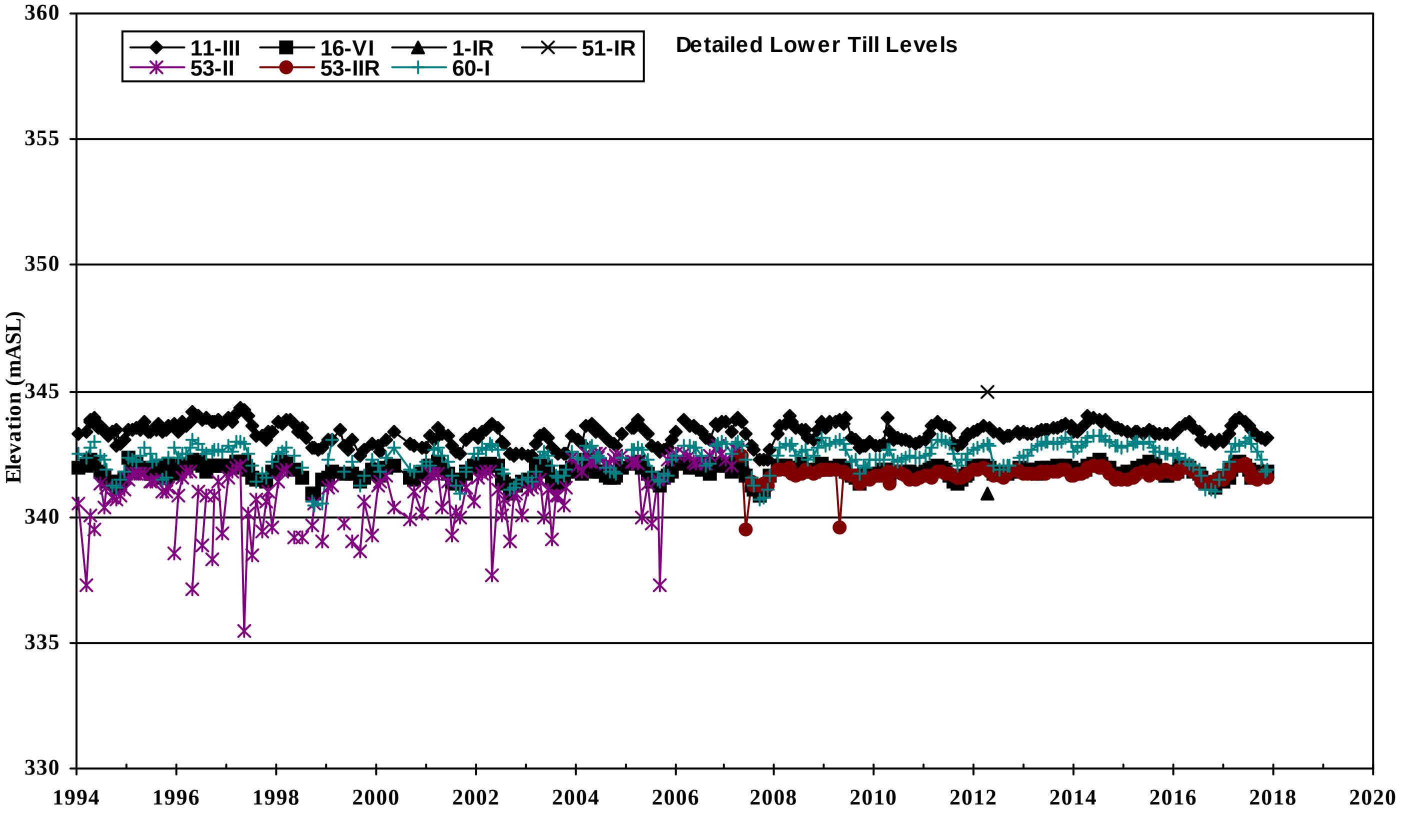
60565850
12d SW Chem Zn Conc SW1 and SW16

Appendix A

Groundwater Monitoring Data and Elevation Trends

- A1. Monitor Construction Details
- A2. Routine Groundwater Elevations
- A3. Collection System Elevations (C and D Series Monitors)
- A4. Detailed Bedrock and Lower Till Elevations
- A5. Detailed Leachate Elevations
- A6. Water Temperatures Taken at Time of Sampling from Groundwater Monitors in 2017
- Groundwater Elevation Trends (Figures A1 – A7)





AECOM

Closed Eastview Road Landfill Site

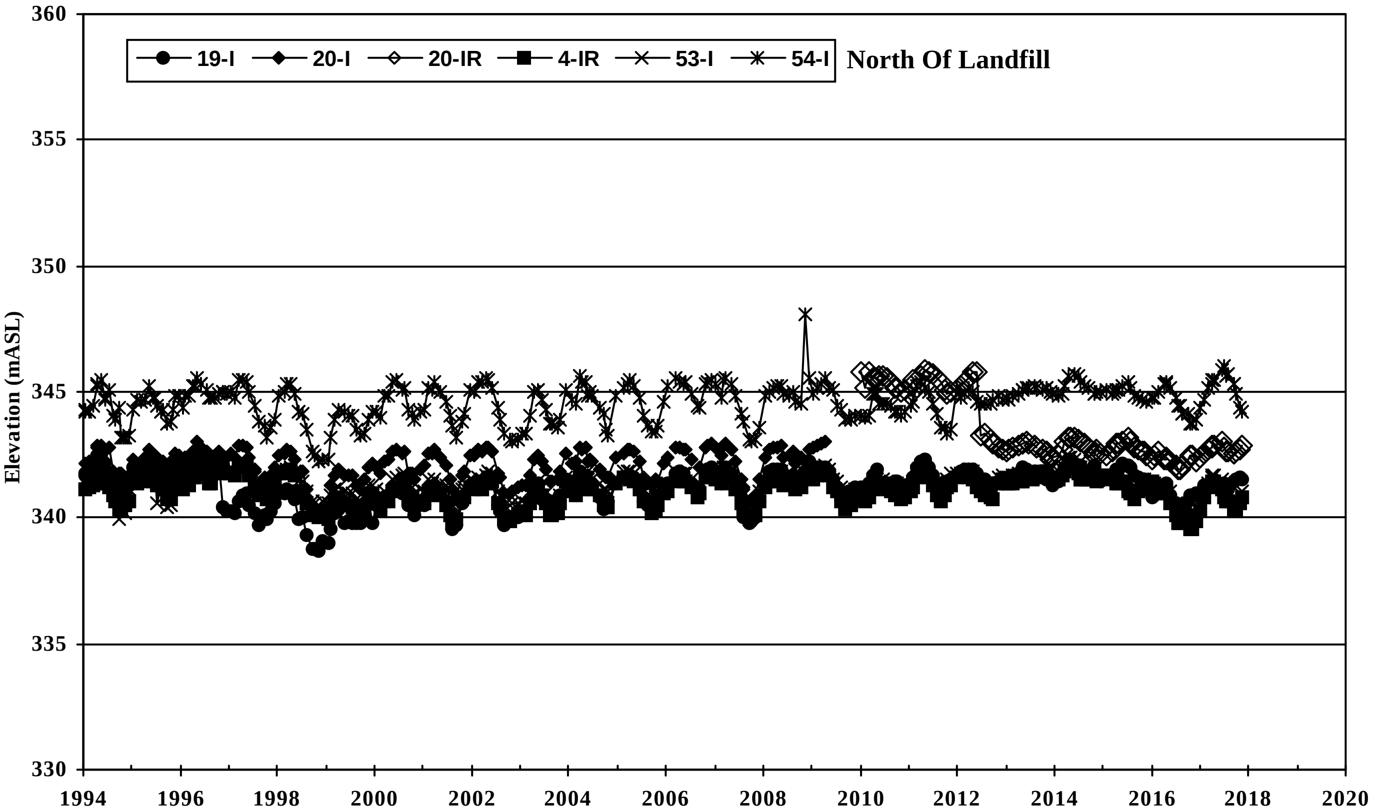
Groundwater Elevation Trends
Outwash/Shallow Till and Detailed Lower Till Levels Around the Landfill

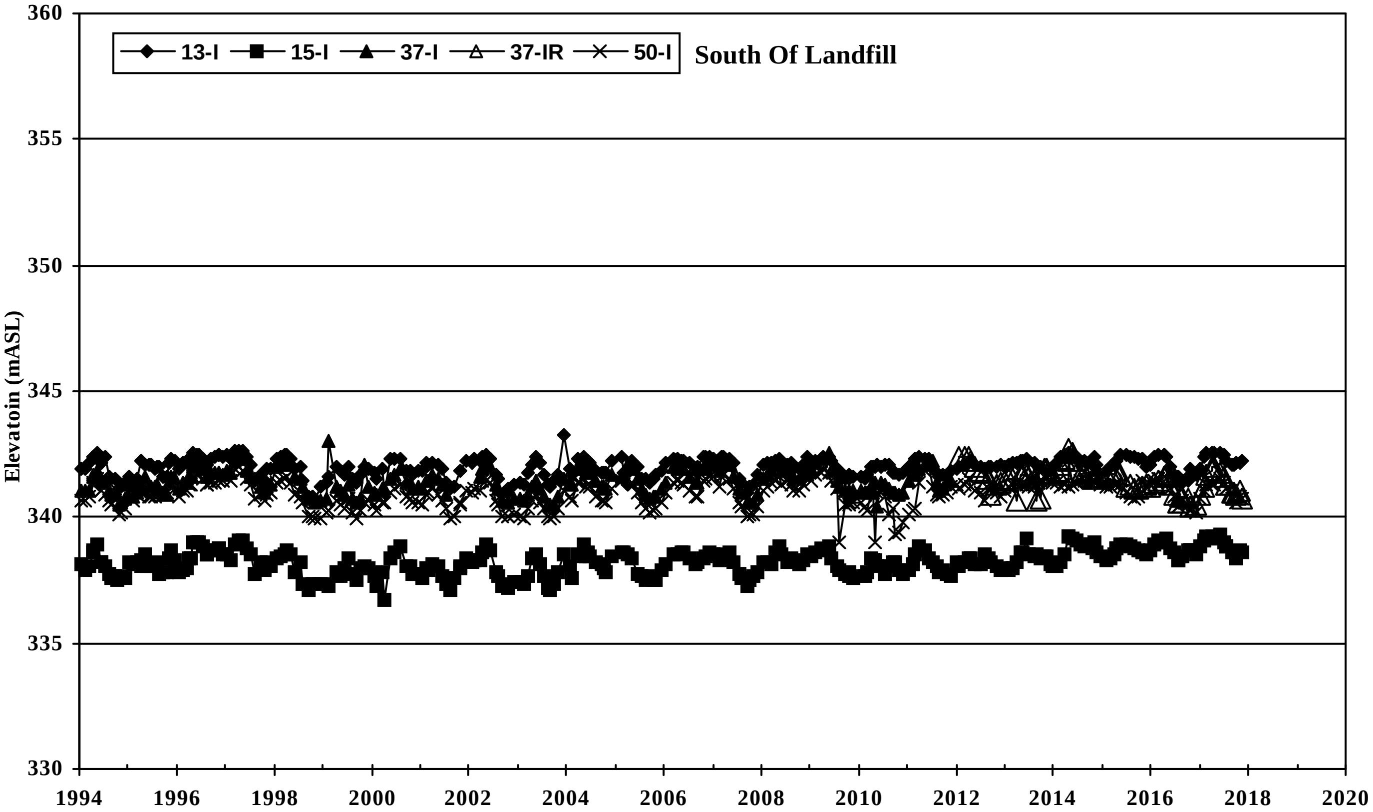
FIGURE

A1

60565850

10a Shallow and Detailed Till GW





AECOM

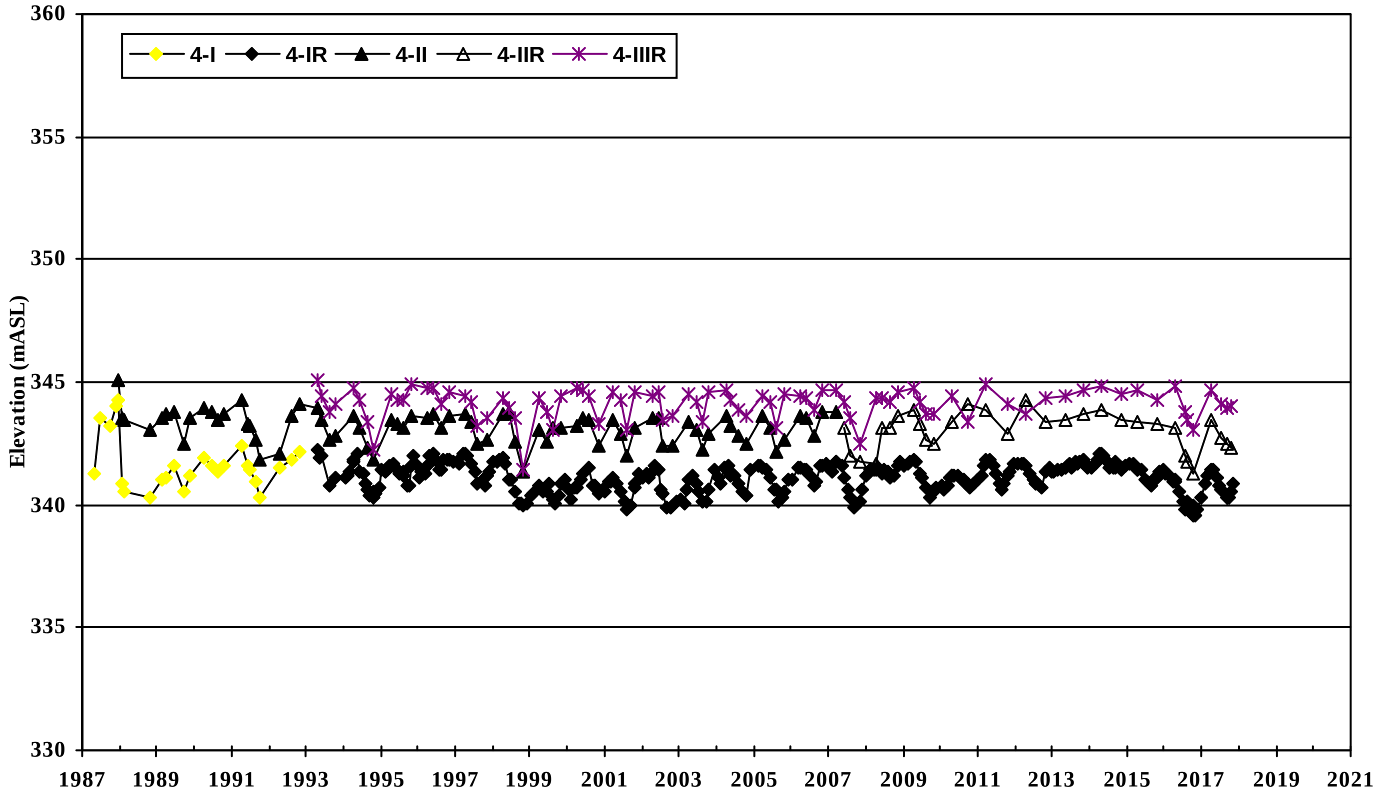
Closed Eastview Road Landfill Site

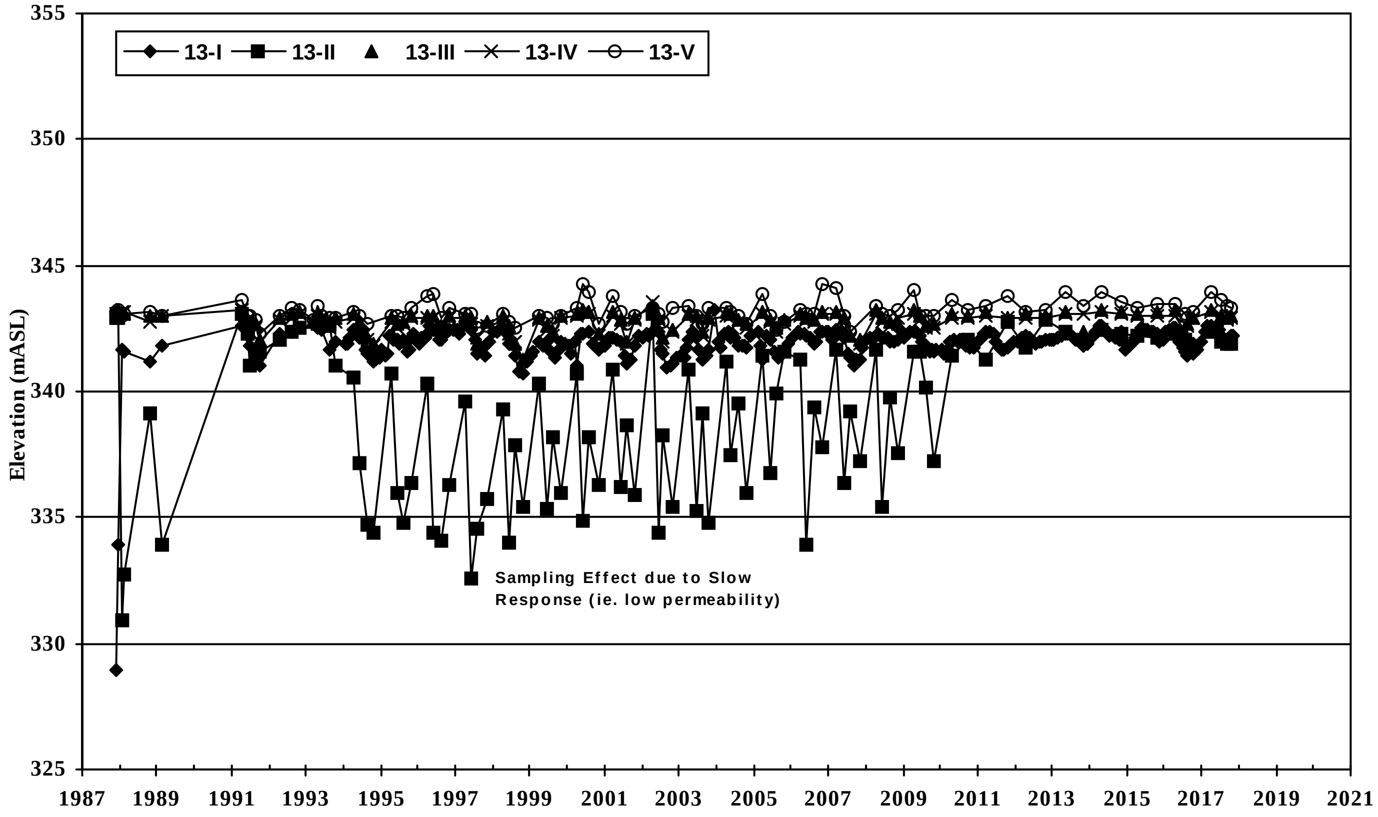
Groundwater Elevation Trends
Detailed Bedrock Levels North and South of the Landfill

FIGURE

A2

60565850
10a Detailed Bedrock WL





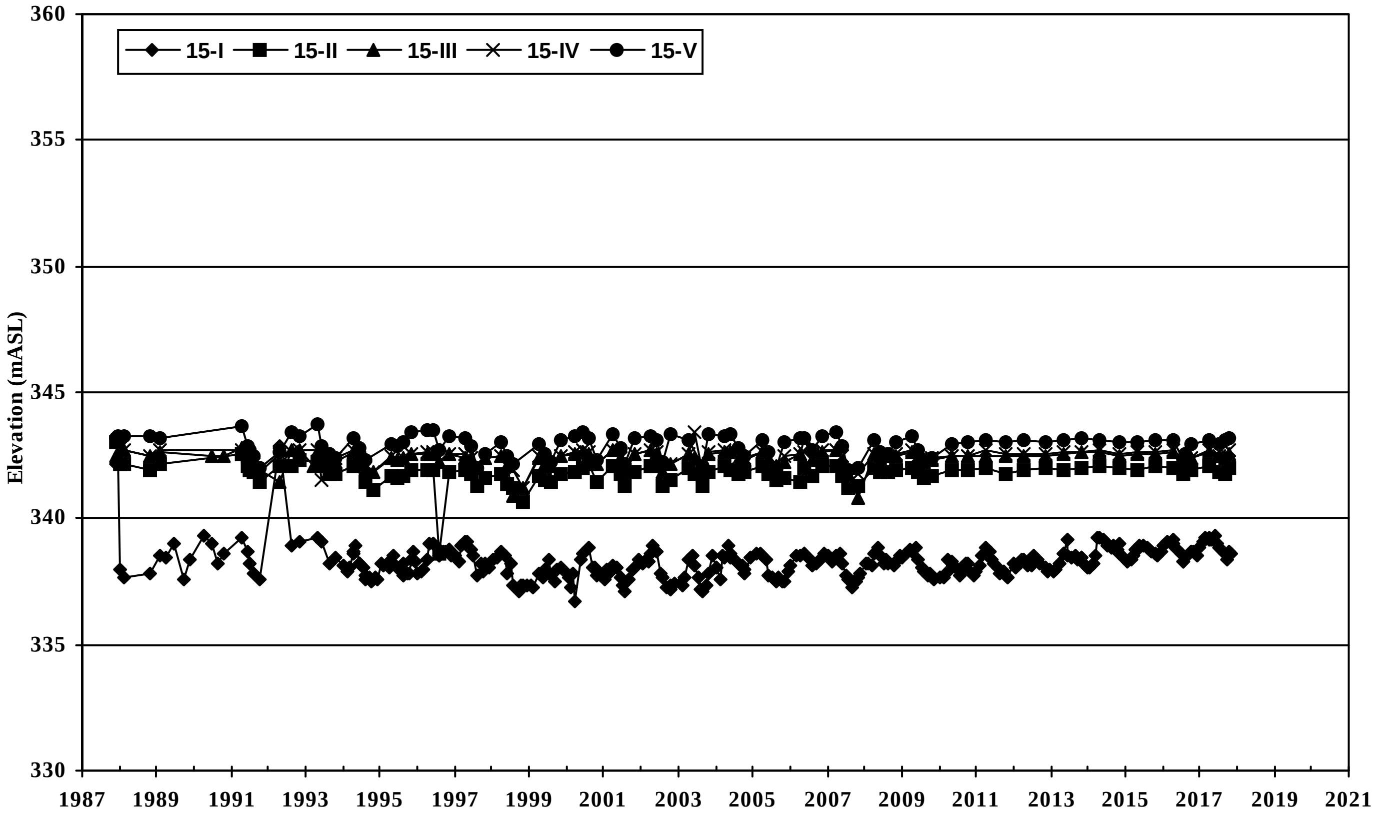
AECOM

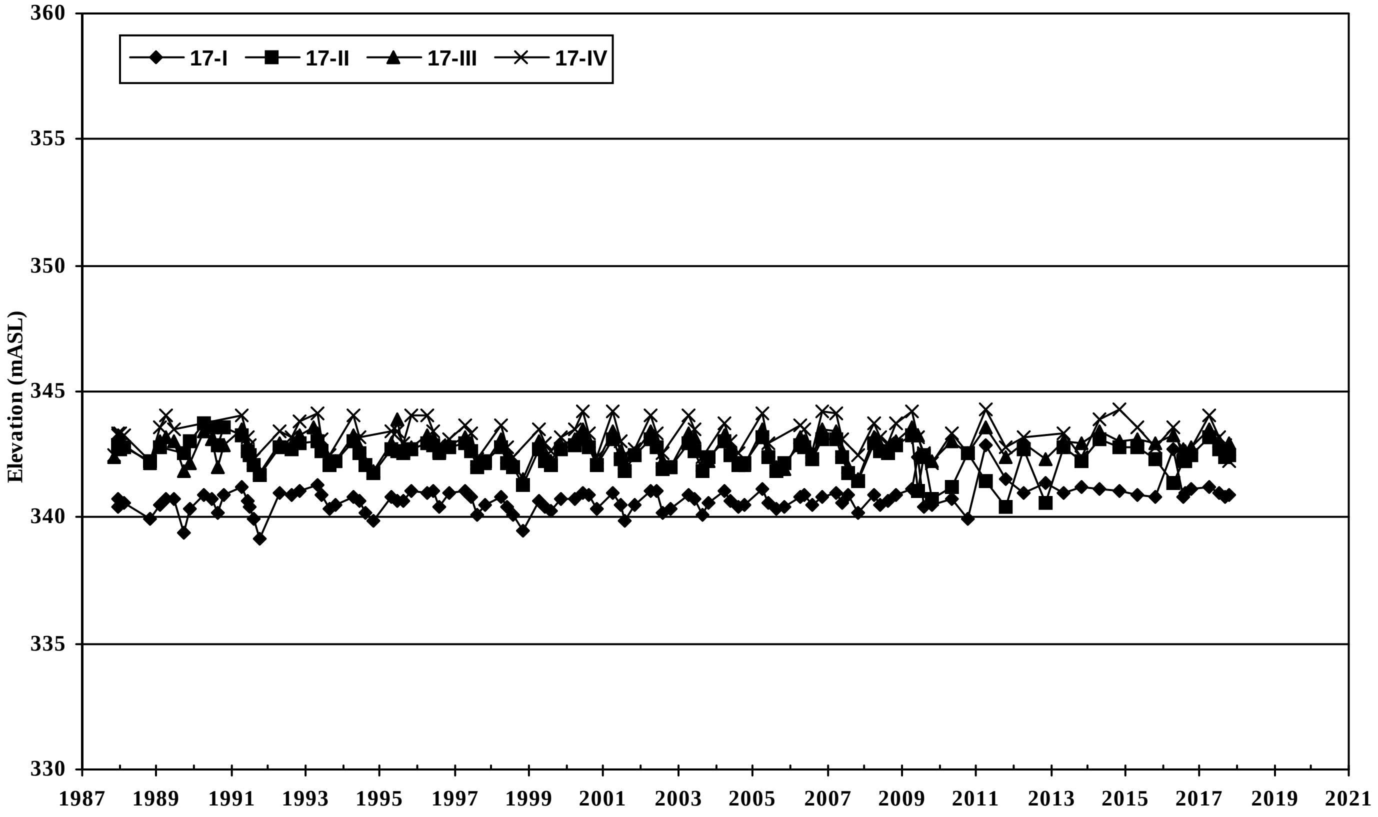
Closed Eastview Road Landfill Site

Groundwater Elevation Trends
Vertical Profiles at Locations 4 and 13

FIGURE
A3

60565850
10b Profile 4-13





AECOM

Closed Eastview Road Landfill Site

Groundwater Elevation Trends

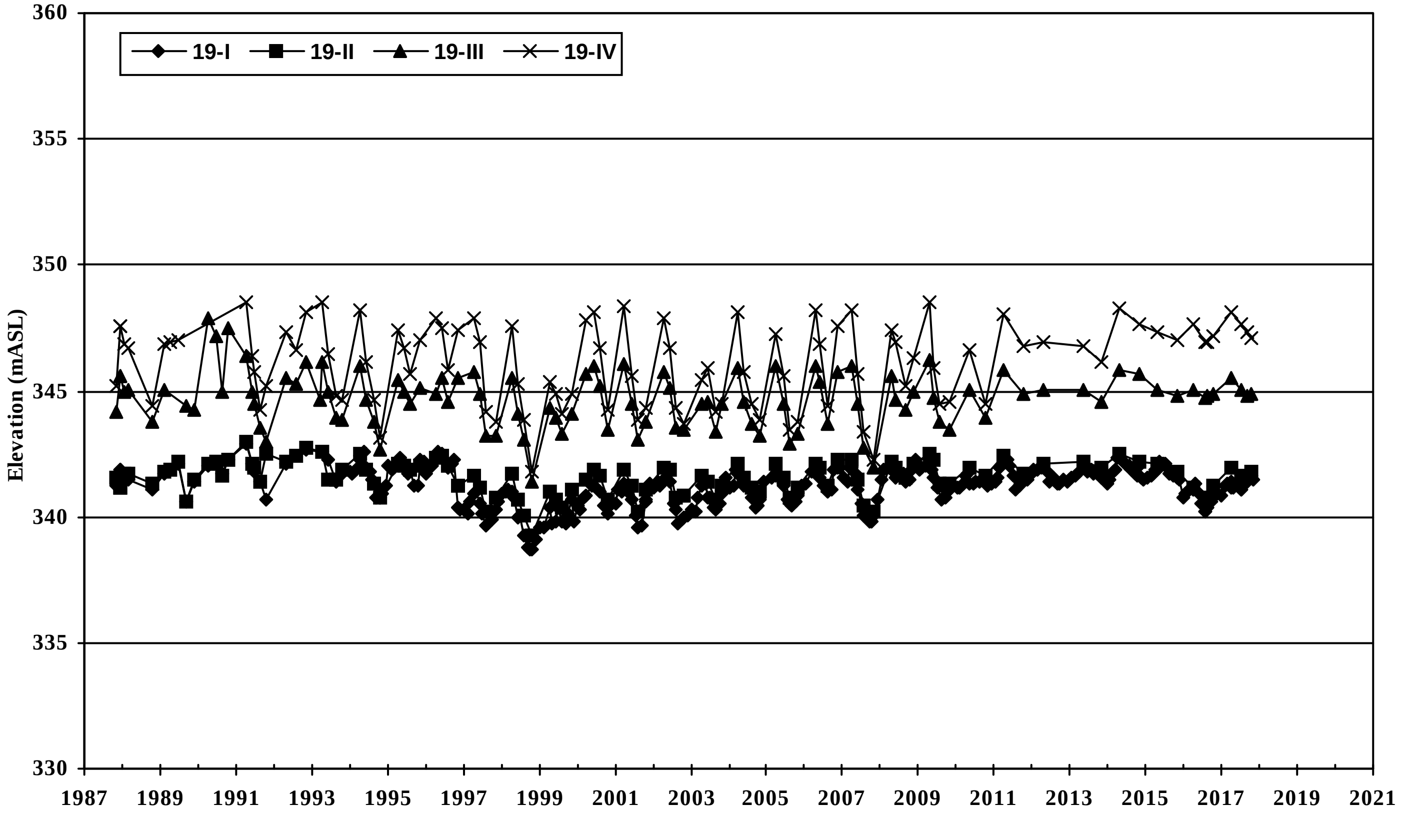
Vertical Profiles at Locations 15 and 17

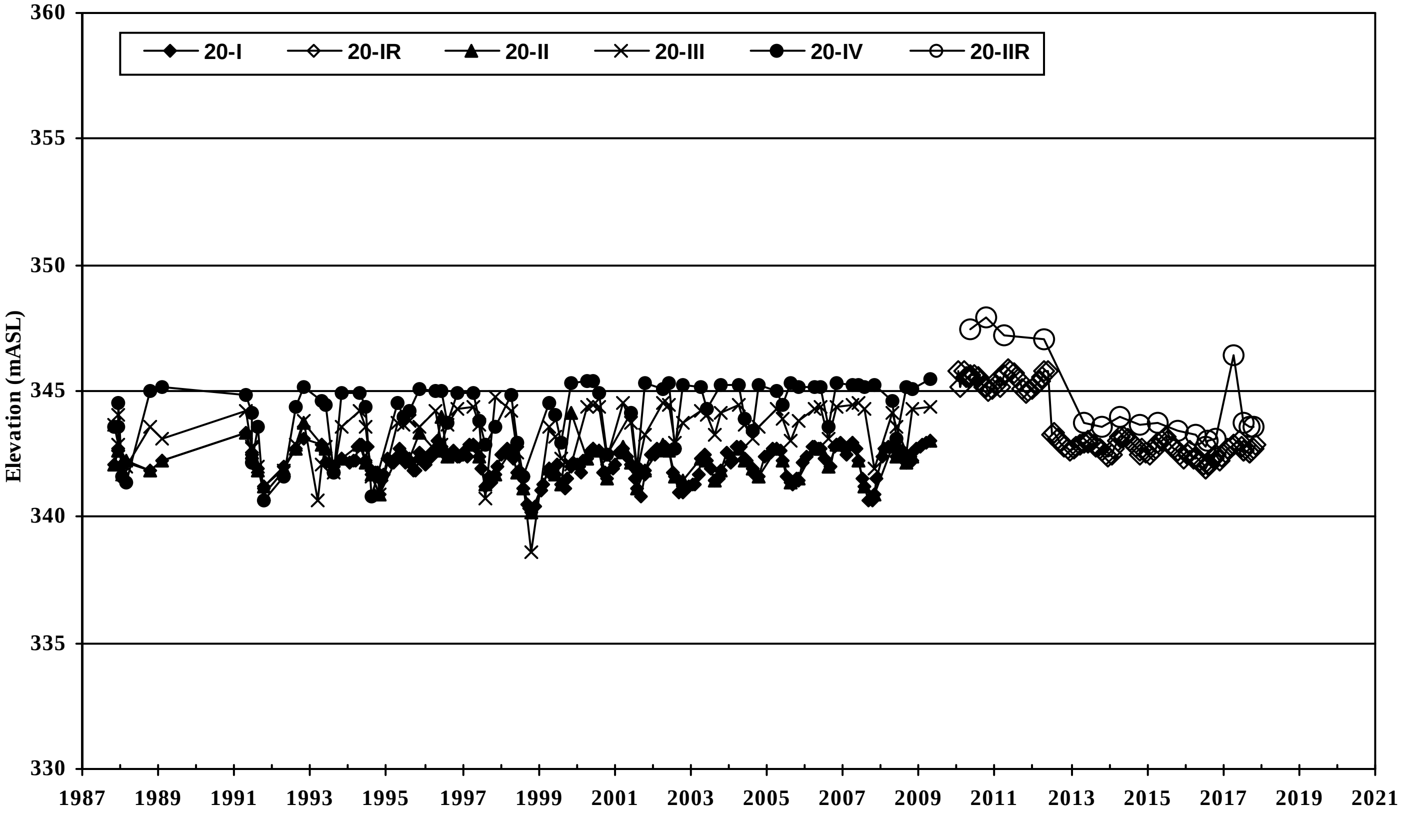
FIGURE

A4

60565850

10b Profile 15-17





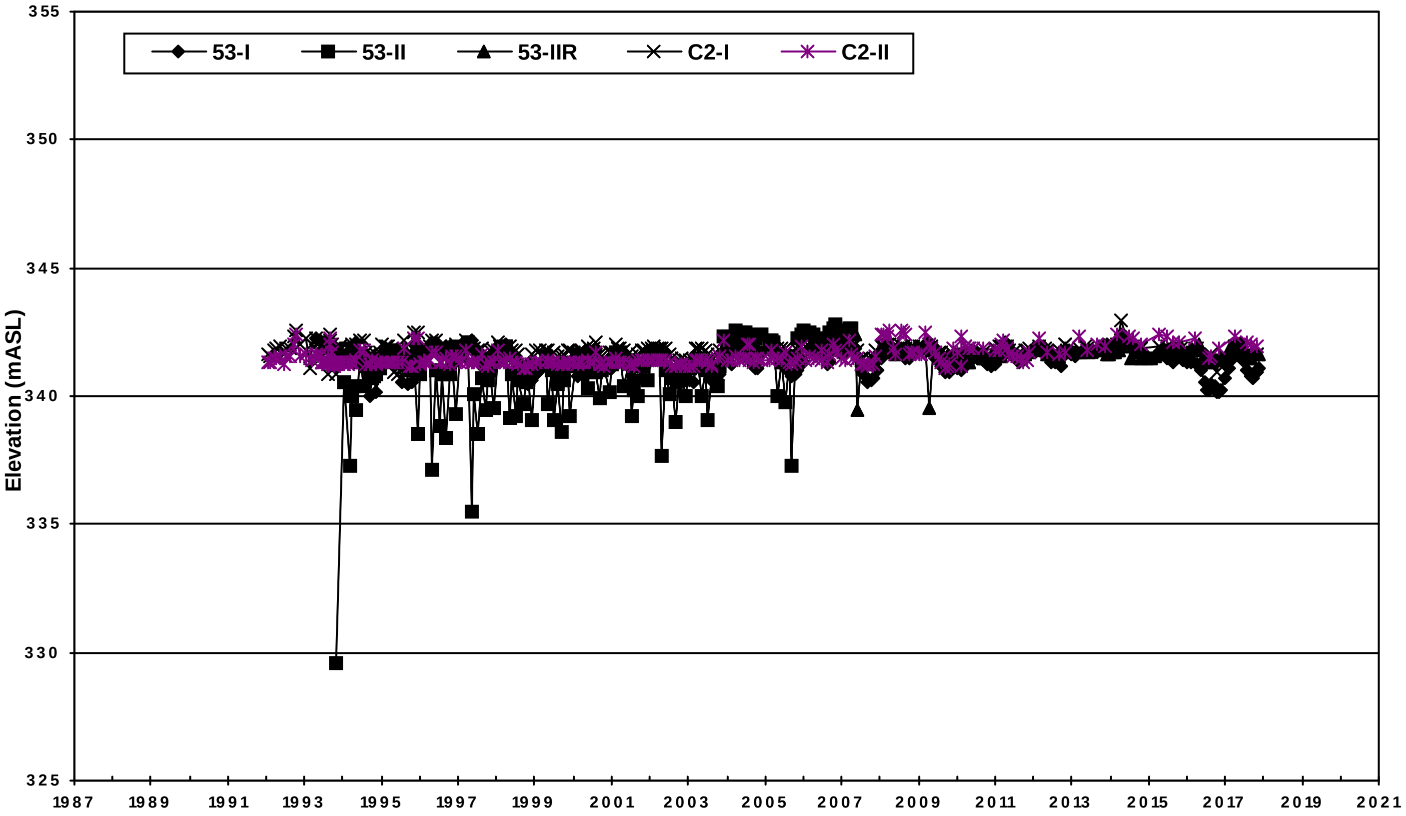
AECOM

Closed Eastview Road Landfill Site

Groundwater Elevation Trends
Vertical Profiles at Locations 19 and 20

FIGURE
A5

60565850
10b Profile 19-20



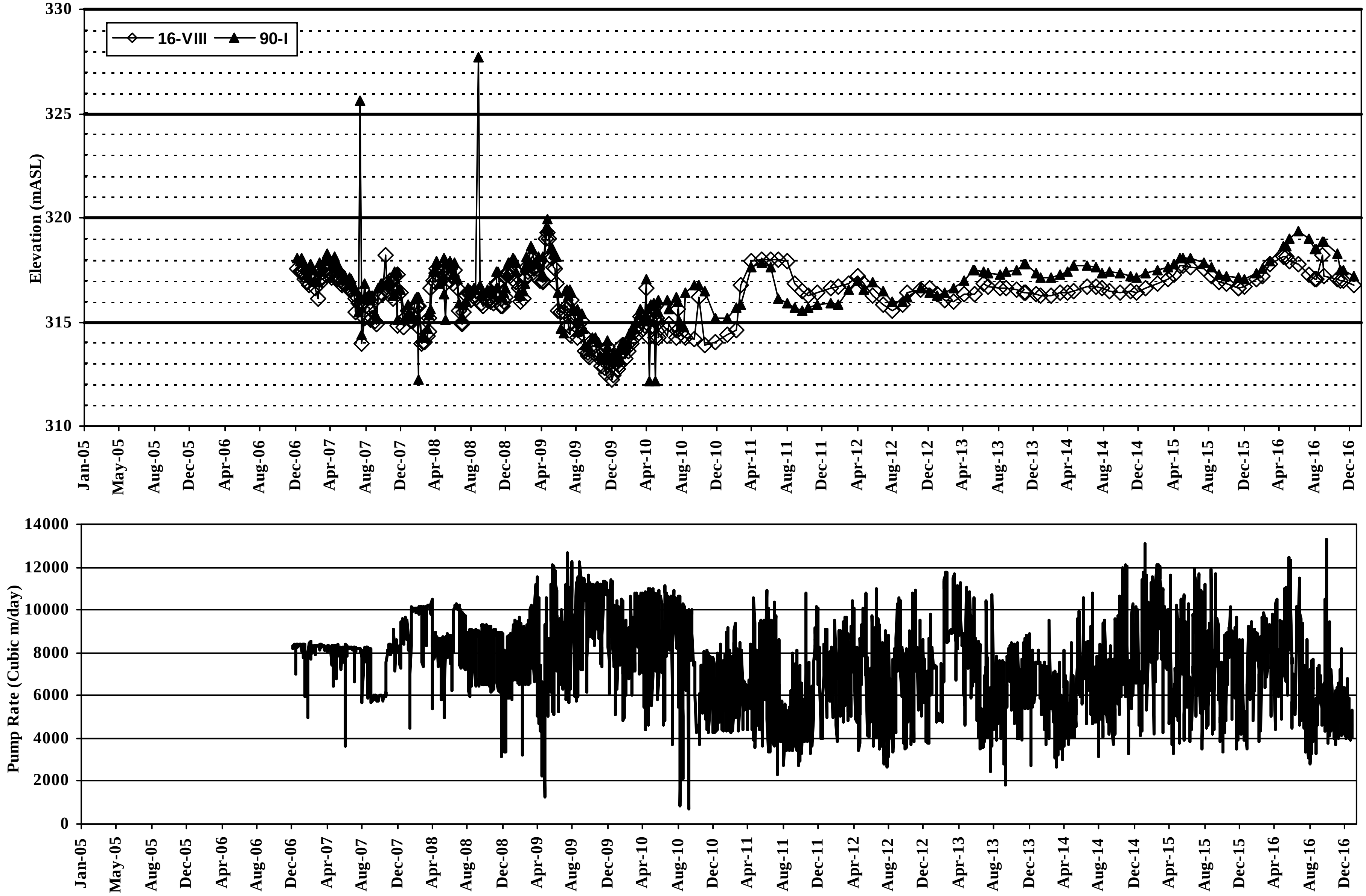
AECOM

Closed Eastview Road Landfill Site

Groundwater Elevation Trends
Vertical Profiles at Locations C2/53

FIGURE
A6

60565850
10b Profile C2/53



AECOM

Closed Eastview Road Landfill Site

Bedrock Groundwater Elevations Trends
In Deep Bedrock Aquifer

FIGURE
A7

60536557
12f Rpt DeepBedrockGWTrends-16/90

A1: Monitor Construction Details

Borehole		Monitor				Monitor Installation Details			
Monitor	Diameter (mm)	Type	Diameter (mm)	Stick Up (m)	Elevation (mASL)	Screened Interval (m)	Filter Pack (m)	Sealed Interval (m)	Backfilled Interval (m)
2-I		P	32	0.66	343.75	9.8 - 10.4	-	0.1 - 0.3 -	- -
2-II		S	32	0.37	343.50	0.2 - 4.6	-	0.1 - 0.2 -	- -
3-I		S	32	0.79	344.35	0.3 - 6.1	-	0.1 - 0.3 -	- -
4-IR		P	50	0.76	346.17	19.4 - 20.9	19.10 - 20.90	0.0 - 19.1 -	- -
4-II		P	32	0.54	345.90	13.6 - 14.0	-	11.3 - 12.2 -	- -
4-IIR	203	P	51	0.82	345.93	11.9 - 13.7	11.90 - 13.70	0.0 - 11.9 -	- -
4-IIIR		S	50	0.76	345.97	1.1 - 4.1	0.60 - 4.10	0.0 - 0.6 -	- -
5-I		P	50	0.33	346.11	19.5 - 20.0	-	0.0 - 5.2 -	- -
5-II		S	50	0.63	346.63	1.7 - 7.8	-	0.0 - 1.0 -	- -
5-III	96	P	51	0.76	346.96	19.8 - 21.3	19.78 - 25.02	21.3 - 32.5 0 - 25.02	- -
7-I		P	50	0.56	344.53	10.2 - 10.7	-	9.8 - 10.1 -	- -
7-II		S	32	0.43	344.40	0.8 - 6.9	-	0.0 - 0.5 -	- -
8-I		P	50	0.59	344.26	9.9 - 10.3	-	7.0 - 9.6 -	- -
8-II		S	32	0.54	344.21	0.3 - 6.4	-	0.0 - 0.3 -	- -
9A-I	101	P	98	0.60	344.38	25.1 - 25.9	25.00 - 25.90	23.8 - 25.0 -	0.00 - 23.80 -
9-I	203.2	P	49	0.35	344.02	5.5 - 6.8	5.38 - 7.97	2.0 - 5.4 -	0.35 - 2.03 -
9-II	203.2	S	49	0.50	344.16	0.1 - 2.8	0.25 - 3.12	- -	0.00 - 0.25 -
10-I	203.2	P	49	0.35	343.84	4.5 - 5.7	-	0.0 - 4.4 -	4.42 - 6.10 -
10-II	203.2	P	49	0.35	343.79	3.0 - 3.6	2.59 - 3.81	0.0 - 2.6 -	- -
10-III	203.2	S	49	0.41	343.82	0.3 - 1.5	0.25 - 1.78	- -	0.00 - 0.25 -
11-I	203.2	P	49	0.40	345.80	4.6 - 5.8	4.18 - 6.10	3.9 - 4.2 -	3.00 - 3.88 -
11-II	203.2	S	49	0.43	345.84	0.2 - 2.9	0.00 - 3.22	- -	- -
11-III	203.2	P	51	0.74	346.56	17.0 - 18.5	16.55 - 18.52	0.0 - 16.6 -	- -
12-I	203.2	P	49	0.57	345.34	5.5 - 6.7	5.44 - 7.04	4.7 - 5.4 -	0.15 - 4.70 -
12-II	203.2	P	49	0.58	345.34	3.2 - 3.8	3.10 - 3.78	1.5 - 3.1 -	0.30 - 1.52 -
12-III	203.2	S	49	0.55	345.43	0.9 - 2.1	0.30 - 2.29	0.0 - 0.3 -	- -
13-I	76	P	49	0.30	344.63	24.4 - 25.6	23.47 - 25.91	0.0 - 23.5 -	- -
13-II	203.2	P	49	0.48	344.81	19.5 - 20.1	19.00 - 20.09	0.0 - 19.0 -	- -
13-III	203.2	P	49	0.58	344.98	7.6 - 8.8	7.47 - 9.09	6.4 - 7.5 -	5.94 - 6.40 -
13-IV	203.2	P	49	0.55	344.84	4.1 - 5.3	3.96 - 5.59	0.3 - 4.0 -	- -
13-V	203.2	S	49	0.52	344.84	0.1 - 2.2	0.10 - 2.24	- -	- -

Notes: Top of Pipe Elevations for Monitor 37-I and 37-II where fixed on the Table in 2009

A1: Monitor Construction Details

Borehole		Monitor				Monitor Installation Details			
Monitor	Diameter (mm)	Type	Diameter (mm)	Stick Up (m)	Elevation (mASL)	Screened Interval (m)	Filter Pack (m)	Sealed Interval (m)	Backfilled Interval (m)
14-I	203.2	P	49	0.50	344.66	7.6 - 8.9	7.26 - 9.14	0.0 - 7.3 -	- -
14-II	203.2	P	49	0.47	344.67	4.5 - 5.1	4.14 - 5.13	0.0 - 4.1 -	- -
14-III	203.2	S	49	0.59	344.66	0.2 - 2.3	0.15 - 2.29	0.0 - 0.2 -	- -
14-IV	96	P	51	0.76	344.66	25.6 - 27.2	25.63 - 25.02	27.2 - 34.0 0 - 25.02	- -
15-I	76	P	49	0.40	344.43	25.9 - 27.1	24.99 - 27.43	0.0 - 25.0 -	- -
15-II	73	P	49	0.54	344.55	19.8 - 21.0	19.20 - 21.94	0.0 - 19.2 -	- -
15-III	203.2	P	49	0.20	344.18	9.0 - 10.2	8.48 - 10.67	0.0 - 8.5 -	- -
15-IV	203.2	P	49	0.47	344.43	5.6 - 6.8	5.44 - 7.31	0.0 - 5.4 -	- -
15-V	203.2	S	49	0.26	344.27	0.1 - 2.3	0.13 - 2.26	0.0 - 0.1 -	- -
16-I	203.2	P	49	0.58	344.34	13.0 - 15.1	12.60 - 15.11	0.0 - 12.6 -	- -
16-II	203.2	P	49	0.58	344.52	7.8 - 8.4	7.47 - 8.38	6.9 - 7.5 -	3.66 - 6.86 -
16-III	203.2	P	49	0.47	344.38	5.8 - 6.4	5.18 - 6.40	0.0 - 5.2 -	- -
16-IV	203.2	P	49	0.57	344.44	3.8 - 4.4	3.76 - 4.57	2.1 - 3.8 -	0.30 - 2.13 -
16-V	203.2	S	49	0.43	344.46	0.3 - 2.4	0.15 - 2.44	- -	- -
16-VI	203.2	P	49	0.76	344.63	17.6 - 19.2	17.07 - 19.20	0.0 - 17.1 -	- -
16-VII	96	P	51	0.76	344.22	25.5 - 27.0	25.48 - 19.47	27.0 - 33.8 0 - 19.47	- -
16-VIII	200	P	150	0.60	344.11	40.0 - 54.9	-	- 0 - 40	- -
17-I	76	P	49	0.42	346.64	24.4 - 25.6	23.46 - 25.90	0.0 - 23.5 -	- -
17-II	73	P	49	0.50	346.97	18.6 - 19.2	17.83 - 19.20	0.0 - 17.8 -	- -
17-III	203.2	P	49	0.27	346.43	5.9 - 7.1	5.84 - 7.42	2.0 - 5.8 -	0.00 - 2.00 -
17-IV	203.2	S	49	0.64	346.88	0.5 - 4.2	1.22 - 4.20	- -	0.00 - 1.22 -
18-I	203.2	P	49	0.63	344.26	8.4 - 9.6	8.92 - 9.91	8.3 - 8.9 -	2.80 - 8.32 -
18-II	203	P	49	0.46	344.10	4.5 - 5.7	4.37 - 5.97	3.6 - 4.4 -	3.00 - 3.60 -
18-III	203.2	S	49	0.63	344.22	0.1 - 2.9	0.15 - 2.88	- -	- -
18-IV	203.2	S	49	0.40	344.12	0.5 - 1.7	0.30 - 2.00	- -	- -
19-I	76	P	49	0.34	349.70	24.6 - 25.8	23.77 - 26.14	1.0 - 23.8 -	- -
19-II	127	P	49	0.41	349.76	19.8 - 21.0	19.20 - 21.34	5.8 - 19.2 -	0.30 - 5.79 -
19-III	127	P	49	0.46	349.78	13.7 - 15.0	12.95 - 15.24	7.7 - 13.0 -	0.30 - 7.71 -
19-IV	127	S	49	0.46	349.76	6.1 - 8.9	2.68 - 9.14	0.0 - 0.3 -	0.30 - 2.68 -
20-I	76	P	49	0.45	345.71	17.6 - 18.8	16.77 - 19.13	0.0 - 16.8 -	- -
20-IR	96	P	51	1.17	349.36	20.6 - 22.1	19.97 - 22.09	0.0 - 20.0 -	- -

Notes: Top of Pipe Elevations for Monitor 37-I and 37-II where fixed on the Table in 2009

A1: Monitor Construction Details

Borehole		Monitor				Monitor Installation Details			
Monitor	Diameter (mm)	Type	Diameter (mm)	Stick Up (m)	Elevation (mASL)	Screened Interval (m)	Filter Pack (m)	Sealed Interval (m)	Backfilled Interval (m)
20-II	191	P	49	0.56	345.70	13.9 - 15.1	13.72 - 15.39	0.0 - 12.8 -	12.80 - 13.72 -
20-III	203.2	P	49	0.54	345.73	9.5 - 10.7	9.60 - 10.97	0.0 - 9.6 -	- -
20-IV	127	S	49	0.57	345.76	0.0 - 4.3	0.30 - 4.57	0.0 - 0.3 -	- -
20-IIR	203	S	51	1.20	349.38	3.5 - 8.1	2.93 - 8.10	0.0 - 2.9 -	- -
21-I	175	P	50	0.40	348.59	11.0 - 12.5	10.90 - 12.50	8.5 - 10.9 0.2 - 7	7.00 - 8.50 -
21-IR	203	P	51	1.02	348.57	11.0 - 12.5	10.40 - 12.50	0.0 - 10.4 -	- -
21-II	175	P	50	0.40	348.60	7.0 - 8.5	-	4.0 - 6.4 -	6.40 - 9.00 0.15 - 4
21-IIR	203	P	51	1.29	348.56	7.0 - 8.5	6.40 - 8.50	0.0 - 6.4 -	- -
21-III	175	S	50	0.50	348.66	0.2 - 4.8	0.20 - 4.80	- -	- -
21-IIIR	203	S	51	0.96	348.47	0.2 - 4.8	0.20 - 4.80	0.0 - 0.2 -	- -
22-I	175	P	50	0.50	345.75	7.9 - 9.4	7.70 - 9.40	6.6 - 7.7 -	0.00 - 6.60 -
22-II	175	S	50	0.30	345.52	0.6 - 5.3	0.20 - 5.30	- -	- -
23-I	175	P	50	0.60	345.74	8.5 - 10.0	8.40 - 10.00	5.0 - 8.4 -	0.30 - 5.00 -
23-II	175	S	50	0.60	345.73	3.2 - 4.7	0.60 - 5.00	0.0 - 0.6 -	5.40 - 9.60 -
26-I	38	S	25	0.92	344.00	0.8 - 2.3	-	- -	0.00 - 2.28 -
26-II	38	S	25	0.41	344.00	0.0 - 1.2	-	- -	0.00 - 1.20 -
27-I	38	S	25	0.87	344.39	0.8 - 2.4	-	- -	0.00 - 2.40 -
27-II	38	S	25	0.54	344.39	0.0 - 1.6	-	- -	0.00 - 1.60 -
28-I	38	S	25	0.91	343.97	0.8 - 2.3	-	- -	0.00 - 2.29 -
28-II	38	S	25	0.32	343.97	0.0 - 1.2	-	- -	0.00 - 1.20 -
29-I	32	S	32	0.10	344.08	0.1 - 2.1	-	- -	0.00 - 2.10 -
30-I	38	S	25	0.94	346.17	0.6 - 2.3	-	- -	0.00 - 2.26 -
31-I	38	S	25	0.91	344.65	0.6 - 2.3	-	- -	0.00 - 2.29 -
32-I	38	S	25	0.78	344.52	0.8 - 2.5	-	- -	0.00 - 2.50 -
33-I	38	S	25	0.76	344.36	0.8 - 2.5	-	- -	0.00 - 2.50 -
34-I	38	S	25	1.07	344.53	0.6 - 2.2	-	- -	0.00 - 2.20 -
35-I	38	S	25	1.00	343.75	5.6 - 5.9	-	- -	0.00 - 3.90 -
35-II	38	S	25	1.34	344.13	0.2 - 1.9	-	- -	0.00 - 1.86 -
36-I	101	P	50	0.90	345.98	21.9 - 23.4	21.20 - 23.40	20.0 - 21.2 -	0.00 - 20.00 -
37-I	101	P	98		346.41	23.0 - 27.5	-	0.0 - 23.0 -	- -
37-II	101	P	98		346.15	24.4 - 33.7	-	0.0 - 24.4 -	- -

Notes: Top of Pipe Elevations for Monitor 37-I and 37-II where fixed on the Table in 2009

A1: Monitor Construction Details

Borehole		Monitor				Monitor Installation Details			
Monitor	Diameter (mm)	Type	Diameter (mm)	Stick Up (m)	Elevation (mASL)	Screened Interval (m)	Filter Pack (m)	Sealed Interval (m)	Backfilled Interval (m)
37-IR	96	P	51		346.85	23.7 - 27.3	23.40 - 27.28	0.0 - 23.4 -	- -
37-IIR	96	P	51		347.18	31.1 - 32.6	30.77 - 32.60	0.0 - 30.8 -	- -
50-I	203	P	51	0.90	361.89	39.8 - 41.2	38.60 - 41.90	0.0 - 38.6 -	- -
53-I	96	P	51	0.76	344.41	21.0 - 22.6	20.60 - 22.60	0.0 - 20.6 -	- -
53-II	203	P	51	0.76	344.31	13.9 - 15.4	13.45 - 15.39	0.0 - 13.5 -	- -
53-IIR	203	P	51	1.02	344.40	13.7 - 15.2	13.40 - 15.20	0.0 - 13.4 -	- -
54-I	96	P	51	0.76	354.06	25.9 - 27.4	25.60 - 27.40	0.0 - 25.6 -	- -
60-I	203	P	51	0.76	346.74	13.3 - 14.8	13.00 - 14.83	14.8 - 15.4 0 - 13	- -
60-II	203	P	51	0.76	346.84	10.7 - 12.2	10.39 - 12.19	0.0 - 10.4 -	- -
60-III	203	S	51	0.76	346.79	0.6 - 5.2	0.30 - 5.18	0.0 - 0.3 -	- -
90-I	200	P	150	0.60	355.82	51.2 - 67.1	-	- 0 - 51.2	- -
90-II	96	P	51	0.76	355.46	31.4 - 32.9	31.42 - 30.81	32.9 - 38.6 0 - 30.81	- -
91-I	96	P	51	0.76	351.16	25.5 - 27.0	25.47 - 24.86	27.0 - 41.6 0 - 24.86	- -
92-I	96	P	51	0.83	349.56	32.0 - 33.5	31.98 - 31.37	33.5 - 40.5 0 - 31.37	- -
93-I	203	P	51	0.80	345.99	24.2 - 28.7	23.47 - 28.73	0.0 - 23.5 -	- -
94-I	203	P	51	0.83	345.07	20.9 - 25.2	20.55 - 25.20	0.0 - 20.6 -	- -
95-I	203	P	51	0.71	358.86	36.5 - 41.4	35.97 - 41.40	0.0 - 36.0 -	- -
96-I	96	P	51	0.85	348.15	36.3 - 36.6	36.30 - 38.08	0.0 - 36.3 -	- -
96-II	96	P	51		348.62	29.4 - 34.0	28.95 - 33.98	0.0 - 29.0 -	- -
C1-I	203	P	51	0.84	344.78	11.3 - 12.8	10.52 - 11.73	0.0 - 10.4 -	11.73 - 14.15 -
C1-II	203	S	51	0.78	344.63	0.8 - 3.8	0.40 - 3.05	0.0 - 0.4 -	3.05 - 4.27 -
C2-I	203	P	51	0.74	344.36	7.5 - 9.0	7.16 - 7.92	0.0 - 7.0 -	7.92 - 9.42 -
C2-II	203	S	51	0.72	344.37	0.9 - 3.7	0.76 - 2.44	0.0 - 0.8 -	2.44 - 4.27 -
C3-I	203	S	51	0.74	344.68	1.4 - 4.4	0.46 - 3.05	0.0 - 0.5 -	3.05 - 5.03 -
C5-I	203	S	51	0.55	346.84	2.5 - 5.6	2.03 - 4.57	0.0 - 0.5 -	4.57 - 6.55 -
C6-I	203	P	51	0.73	345.65	10.0 - 11.5	8.89 - 10.67	0.0 - 0.3 -	10.67 - 12.77 0.3 - 2.52
C6-II	203	S	51	0.71	345.67	1.5 - 4.6	0.91 - 3.35	0.0 - 0.3 -	3.35 - 4.57 0.3 - 0.91
C7-I	203	S	51	0.82	345.53	1.5 - 4.6	1.22 - 2.98	0.0 - 0.3 -	2.98 - 5.03 -
C8-I	203	S	51	0.80	345.82	1.4 - 4.4	0.91 - 3.05	0.8 - 0.9 0 - 0.3	3.05 - 5.03 0.3 - 0.76
C9-I	203	P	51	0.74	345.03	5.8 - 7.3	5.18 - 6.10	0.0 - 5.2 -	6.10 - 7.90 -
C9-II	203	S	51	0.75	345.06	1.2 - 4.3	0.18 - 3.35	0.0 - 0.8 -	3.35 - 4.32 -

Notes: Top of Pipe Elevations for Monitor 37-I and 37-II where fixed on the Table in 2009

A1: Monitor Construction Details

Borehole		Monitor				Monitor Installation Details			
Monitor	Diameter (mm)	Type	Diameter (mm)	Stick Up (m)	Elevation (mASL)	Screened Interval (m)	Filter Pack (m)	Sealed Interval (m)	Backfilled Interval (m)
C10-I	203	P	51	0.72	345.02	6.9 - 8.5	-	0.0 - 6.1 -	6.10 - 8.76 -
C10-II	203	S	51	0.74	344.82	1.5 - 4.6	1.22 - 3.05	0.9 - 1.2 0 - 0.22	3.05 - 4.57 0.22 - 0.91
C11-I	203	P	51	0.70	344.88	5.9 - 7.4	-	0.0 - 5.1 -	5.11 - 7.87 -
C11-II	203	S	51	0.75	344.94	1.2 - 4.3	0.76 - 2.74	0.0 - 0.8 -	2.74 - 4.27 -
C12-I	203	S	51	0.79	345.41	1.3 - 4.3	0.76 - 3.05	0.0 - 0.8 -	3.05 - 5.03 -
C13-I	203	S	51	0.74	345.51	1.3 - 4.4	0.76 - 3.05	0.0 - 0.8 -	3.05 - 5.03 -
C14-I	203	S	51	0.76	345.97	1.1 - 4.1	0.61 - 4.10	0.0 - 0.6 -	- -
D1-I	203	S	51	0.75	345.46	1.4 - 4.4	0.53 - 3.96	0.0 - 0.5 -	3.96 - 5.03 -
D2-I	203	S	51	0.57	346.00	2.4 - 5.4	1.52 - 4.52	0.0 - 1.5 -	4.52 - 5.79 -
D3-I	203	S	51	0.72	344.62	2.3 - 5.4	1.52 - 3.51	1.2 - 1.5 0 - 0.3	3.51 - 5.63 0.3 - 1.2
D4-I	203	S	51	0.76	344.65	1.2 - 4.3	0.91 - 3.05	0.0 - 0.9 -	3.05 - 4.57 -
D5-I	203	S	51	0.63	345.96	1.0 - 4.8	0.61 - 4.81	0.0 - 0.6 -	- -
1-I		S	32	0.76	356.04	4.3 - 16.6	-	0.9 - 1.2 -	- -
1-IR	203	P	51	0.76	370.70	28.1 - 29.7	27.76 - 30.20	0.0 - 27.8 -	- -
51-I	203	S	51	0.76	365.80	7.3 - 22.6	-	0.0 - 0.9 -	0.90 - 25.55 -
51-IR	203	S	51	0.76	365.19	15.9 - 22.0	15.29 - 15.90	0.0 - 15.3 -	- -
51-II	203	P	51	0.77	365.87	23.6 - 26.7	27.28 - 23.24	10.0 - 23.2 0 - 0.3	0.30 - 10.00 -
52-I	203	S	51	0.76	362.13	8.2 - 20.4	-	0.0 - 1.0 -	1.00 - 20.50 -
55-I	203	P	51	0.76	355.06	11.2 - 15.8	11.00 - 15.80	0.0 - 11.0 -	15.80 - 17.06 -
56-I	203	P	51	0.76	354.34	12.0 - 18.1	11.40 - 18.05	0.0 - 11.4 -	18.05 - 18.95 -
57-I	203	P	51	0.76	360.66	18.5 - 26.1	17.70 - 26.10	12.0 - 17.7 0 - 0.3	26.10 - 27.28 0.3 - 12
58-I	203	P	51	0.92	360.98	20.4 - 18.9	20.42 - 18.00	18.0 - 17.5 -	20.42 - 21.18 0 - 17.45
59-I	203	S	51	0.76	362.63	10.8 - 20.0	11.00 - 19.97	0.0 - 0.6 -	19.97 - 20.73 0.6 - 11
61-I	203	P	51	0.76	365.44	23.8 - 25.3	23.10 - 35.30	25.3 - 26.5 0 - 23.1	- -
61-IR	203	P	51	0.52	363.59	25.1 - 26.7	24.70 - 26.70	0.0 - 24.7 -	- -
62-I	203	S	51	0.90	361.97	8.3 - 15.9	8.45 - 15.92	0.0 - 1.5 -	1.52 - 8.45 -
63-I	203	P	51	0.76	359.76	15.1 - 16.6	14.78 - 17.98	0.0 - 14.8 -	- -
64-I	203	S	51	0.76	347.66	10.3 - 13.4	9.75 - 13.39	8.8 - 9.8 0 - 0.61	0.61 - 8.84 -
65-I	203	S	51	0.76	353.41	5.7 - 10.3	5.44 - 10.26	0.0 - 0.9 -	0.91 - 5.40 -
66-I	203	P	51	0.76	362.00	14.3 - 19.6	13.51 - 19.61	12.7 - 13.5 -	0.91 - 12.70 -
66-IR	203	P	51	0.87	368.09	19.1 - 20.6	18.40 - 20.60	0.0 - 18.4 -	- -

Notes: Top of Pipe Elevations for Monitor 37-I and 37-II where fixed on the Table in 2009

A1: Monitor Construction Details

Borehole		Monitor				Monitor Installation Details			
Monitor	Diameter (mm)	Type	Diameter (mm)	Stick Up (m)	Elevation (mASL)	Screened Interval (m)	Filter Pack (m)	Sealed Interval (m)	Backfilled Interval (m)
67-I	203	S	51	0.95	362.34	16.2 - 20.7	15.57 - 20.73	15.1 - 15.6 0 - 0.91	0.91 - 15.09 -
68-I	203	S	51	0.76	353.28	10.7 - 12.2	10.36 - 12.19	10.0 - 10.4 0.91 - 0	0.91 - 9.75 -
69-I	203	S	51	0.76	352.42	11.7 - 14.8	10.09 - 15.09	0.0 - 10.9 -	- -
P10	130	P				37.2 - 74.7	-	- -	- -

Notes: Top of Pipe Elevations for Monitor 37-I and 37-II where fixed on the Table in 2009

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	2-I	2-II	4-IR	4-II	4-IIR	4-IIIR	5-II	5-III	9A-I	9-I	9-II	10-I	10-II	10-III	11-I	11-II	11-III	12-I	12-II	12-III
Geologic Unit	Outwash	Outwash	Bedrock	Lower Till	Lower Till	Upper Till	Upper Till	Bedrock	Bedrock	Outwash	Outwash	Upper Till	Outwash	Outwash	Upper Till	Outwash	Lower Till	Upper Till	Upper Till	Fill
Date																				
28-Apr-1992	339.43	341.87		342.12			342.60		341.00	342.01	341.86	342.86	342.86	342.87	343.82	343.92		343.44	343.42	343.24
14-Aug-1992	341.94	342.17		343.65			345.34		341.12	342.29	342.11	342.99	342.86	343.02	344.16	344.15		343.49	343.44	343.33
10-Nov-1992	341.88	341.87		344.11			345.37		341.42	342.12	341.81	343.09	342.94	343.02	343.80	343.74		343.49	343.45	343.34
22-Mar-1993															343.35	343.28			343.30	343.21
22-Apr-1993	341.83	342.17	342.27	343.93		345.05	345.72		341.49	342.12	341.88	343.05	342.84	343.05	343.89	343.83		343.44	343.37	343.33
25-May-1993			341.94																	
08-Jun-1993	341.98	341.57	342.01	343.50		344.44	344.63		341.28	341.62	341.46	342.84	342.70	342.94	343.43	343.31		343.35	343.38	343.28
23-Aug-1993	341.65	341.42	340.80	342.61		343.80	344.29		340.59	341.20	341.12	342.46	342.28	342.46	343.07	343.00		343.19	343.19	343.14
26-Oct-1993	341.88	341.62	341.11	342.85		344.12	344.57		340.86	341.52	341.40	342.75	342.59	342.69	343.32	343.27	341.93	342.91	342.89	342.82
16-Mar-1994																	343.40			
20-Apr-1994	342.06	341.85	341.83	343.64		344.74	345.44		341.24	342.09	341.93	343.02	342.95	343.04	344.13	344.10	343.85	343.40	343.39	343.30
18-Jun-1994	341.73	341.55	341.38	343.15		344.25	344.64		340.87	341.56	341.40	342.64	342.46	342.63	343.31	343.37	343.52	343.27	343.24	343.20
24-Aug-1994	341.33	341.28	340.63	342.30		343.39	343.87		340.44	341.20	341.14	342.12	341.97	342.94	343.15	342.92	343.20	342.72	342.64	342.70
26-Oct-1994	341.60	341.22	340.57	341.86		342.28	343.20		340.20	341.21	341.19	341.94	341.79	342.34	342.07	342.63	343.49	342.42	342.38	DRY
18-Apr-1995	341.87	341.65	341.58	343.45		344.52	344.76		340.94	341.76	341.59	342.76	342.61	342.91	343.50	343.42	343.49	343.43	343.33	343.26
16-Jun-1995	341.78	341.59	341.46	343.26		344.24	344.68		340.87	341.63	341.44	342.59	342.41	342.66	343.53	343.39	343.37	343.16	343.10	343.06
21-Aug-1995	341.77	341.64	341.17	343.11		344.29	344.49		340.88	341.62	341.47	342.64	342.46	342.68	343.69	343.66	343.66	343.16	343.15	343.13
13-Nov-1995	342.02	342.45	341.59	343.65		344.92	345.64		341.14	342.19	341.93	341.92	342.78	342.85	344.48	344.51	343.56	343.49	343.42	343.35
15-Apr-1996	341.81	341.93	341.62	343.58		344.79	345.68		341.13	342.07		342.90	342.76	343.12	343.95	343.96	343.81	343.52	343.38	343.28
13-Jun-1996	341.95	341.90	342.05	343.71		344.75	345.53		341.37	342.15	341.91	342.91	342.74	342.97	344.04	344.00	344.02	343.53	343.39	343.42
15-Aug-1996	341.85	341.79	341.40	343.12		344.08	344.51		340.99	341.77	341.63	342.49	342.44	342.43	343.22	343.16	343.96	343.11	343.02	343.03
12-Nov-1996	341.96	341.80	341.82	343.63		344.57	345.26		341.21	341.97	341.78	342.87	342.69	342.94	343.83	343.77	343.84	343.48	343.39	343.33
21-Apr-1997	341.79	341.77	342.07	343.73		344.43	345.23		342.43	342.16	342.85	342.98	342.65	342.97	343.97	343.88	344.29	343.46	343.33	343.29
09-Jun-1997	341.83	341.67	341.66	343.35		344.18	344.73		341.24	341.77	341.52	342.68	342.54	342.77	343.54	343.43	343.98	343.31	343.21	343.21
18-Aug-1997	341.71	341.64	340.87	342.47		343.23	343.55		340.60	341.35	341.18	342.14	341.97	342.37	342.91	342.76	343.22	342.52	342.40	DRY
10-Nov-1997	341.97	341.89	341.20	342.67		343.52	344.05		340.85	341.93	341.80	342.57	342.43	342.57	343.39	343.28	343.38	342.09	342.98	343.00
14-Apr-1998	341.88	341.70	341.89	343.68		344.36	345.28		341.20	342.04	341.70	342.77	342.60	342.90	343.71	343.60	343.89	343.45	343.32	343.24
10-Jun-1998	341.70	341.49	341.04	343.77		343.95	344.25		340.73	341.47	341.26	342.33	342.18	342.49	343.14	343.01	343.41	342.78	342.67	342.70
10-Aug-1998	341.47	341.34	340.58	342.55		343.53	343.71		340.43	341.27	341.16	342.02	341.86	342.37	342.99	342.84	343.15	342.37	342.24	Dry
09-Nov-1998	341.08	341.06	340.00	341.34		341.46	341.99		339.90	340.96	Dry	341.34	341.20	Dry	342.58	342.41	342.64	341.36	341.24	
16-Apr-1999	341.76	341.65	340.82	343.08		344.35	344.89		340.72	341.86	341.68	342.84	342.68	342.86	344.00	343.91	343.42	343.39	343.31	343.23
23-Jun-1999	341.63	341.50	340.52	342.60		343.82	344.36		340.56	341.43	341.26	342.42	342.28	342.48	343.03	343.01	342.67	342.81	342.78	343.02
16-Aug-1999	341.12	341.44	340.20	343.12		343.08	343.89		340.38	341.33	341.24	342.18	342.05	342.37	342.87	342.86	342.47	342.68	342.74	342.77
16-Nov-1999	341.77	341.68	340.85	343.11		344.43	345.07		340.75	341.84	342.02	342.78	342.65	342.78	343.65	343.67	342.95	343.38	343.38	343.45
12-Apr-2000	341.92	341.80	340.67	343.22		344.77	345.40		340.73	341.95	341.77	342.87	342.72	342.92	343.65	343.67	342.97	343.54	343.57	343.61
19-Jun-2000	342.17	342.07	341.25	343.56		344.70	345.64		341.10	342.49	342.09	343.02	342.88	343.00	344.54	344.64	343.44	343.63	343.62	343.65
14-Aug-2000	341.95	341.85	341.52	343.48		344.43	344.90		341.12	341.92	341.72	342.94	342.80	342.98	343.98	344.00	343.46	343.57	343.56	343.54
06-Nov-2000	341.62	341.53	340.48	342.37		343.29	342.13		340.52	341.48	341.39	342.20	342.07	342.41	342.87	342.86	342.74	342.78	342.82	342.90
02-Apr-2001	341.95	341.85	341.10	343.48		344.63	345.78		341.13	342.61	342.12	342.91	342.77	Frozen	344.44	344.52	343.51	343.64	343.63	343.63
25-Jun-2001	341.67	341.65	340.54	342.92		344.25	344.51		340.70	341.63	341.48	342.62	342.48	342.67	343.48	343.50	343.22	343.20	343.22	343.24
13-Aug-2001	341.33	341.33	339.79	342.00		343.06	344.41		340.20	341.18	341.15	341.93	341.81	342.10	342.85	342.85	342.61	342.33	342.35	342.81
05-Nov-2001	341.85	341.73	340.83	343.13		344.60	345.29		340.73	341.83	341.72	342.70	342.58	342.66	343.99	344.04	343.07	343.56	343.57	343.50
22-Apr-2002	342.04	341.90	341.37	343.52		344.46	345.47		341.21	342.37	342.03	342.95	342.97	342.92	344.54	344.63	343.58	343.54	343.66	342.20
17-Jun-2002	341.95	341.86	341.47	343.52		344.58	345.27		341.18	342.12	341.90	342.75	342.62	342.80	343.74	343.75	343.54	343.61	343.60	343.45
12-Aug-2002	341.39	341.34	340.43	342.43		343.44	343.90		340.49	341.24	341.19	342.01	341.90	342.26	342.90	342.88	342.87	342.54	342.56	342.83
04-Nov-2002	341.75	342.51	339.99	341.84		342.61	343.25		340.27	341.93	341.95	342.63	342.54	342.32	342.93	343.10	342.48	343.58	343.58	N/R

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	2-I	2-II	4-IR	4-II	4-IIR	4-IIIR	5-II	5-III	9A-I	9-I	9-II	10-I	10-II	10-III	11-I	11-II	11-III	12-I	12-II	12-III
Geologic Unit	Outwash	Outwash	Bedrock	Lower Till	Lower Till	Upper Till	Upper Till	Bedrock	Bedrock	Outwash	Outwash	Upper Till	Outwash	Outwash	Upper Till	Outwash	Lower Till	Upper Till	Upper Till	Fill
Date																				
22-Apr-2003	341.95	341.80	341.06	343.35		344.54	345.48		340.93	342.21	341.94	342.88	342.79	342.92	344.53	344.63	343.18	343.60	343.54	343.52
23-Jun-2003	341.86	341.70	340.87	343.08		344.16	344.91	345.02	340.86	341.80	341.59	342.76	342.66	342.79	343.64	343.64	343.14	343.38	343.37	343.36
02-Sep-2003	341.34	341.36	340.11	342.26		343.41	343.77	344.56	340.24	341.31	341.29	342.06	341.97	342.21	342.85	342.84	342.52	N/A	N/A	N/A
03-Nov-2003	341.75	342.51	340.60	342.92		344.63	344.95	344.43	340.60	341.93	341.95	342.63	342.54	342.66	343.10	343.10	342.54	343.58	343.58	343.62
19-Apr-2004	342.01	342.04	341.44	343.64		344.69	345.68	344.31	341.17	342.31	342.05	342.92	342.81	342.91	344.07	344.08	343.64	343.66	343.65	343.65
07-Jun-2004	341.89	341.76	341.17	343.19		344.23	344.64	344.29	340.94	341.78	341.64	342.82	342.72	342.74	343.34	343.43	343.35	343.55	343.52	343.49
23-Aug-2004	341.76	341.65	340.87	342.78		343.88	344.11	344.24	340.77	341.49	341.39	342.63	342.53	342.62	343.26	343.24	343.16	343.11	343.10	343.11
01-Nov-2004	341.78	341.75	340.41	342.49		343.62	343.92	344.21	340.69	341.73	341.73	342.48	342.38	342.56	343.15	343.13	342.85	343.17	343.17	343.19
11-Apr-2005	341.95	342.00	341.55	343.63		344.47	345.65	342.71	341.27	342.38	342.12	342.95	342.86	343.00	344.83	344.95	343.89	343.59	343.60	343.57
21-Jun-2005	341.82	341.73	341.15	343.13		344.19	344.60	342.36	340.91	341.81	341.68	342.66	342.56	342.74	343.50	343.55	343.26	343.17	343.21	343.22
31-Aug-2005	341.48	341.52	340.63	342.20		343.16	343.66	341.89	340.50	341.36	341.30	342.24	342.20	342.26	343.04	343.04	342.76	342.73	342.69	Dry
15-Nov-2005	341.70	341.60	340.51	342.61		344.49	344.24	342.17	340.59	341.73	341.70	342.78	342.40	342.65	343.32	343.33	342.77	343.23	343.20	343.23
24-Apr-2006	342.03	342.80	341.48	343.59		344.47	345.42	342.64	341.03	342.05	342.09	342.74	342.66	342.68	344.17	344.10	343.61	343.56	343.65	343.64
07-Jun-2006	342.03	341.90	341.43	343.50		344.31	345.13	342.83	341.13	341.85	341.78	342.84	342.57	342.67	343.69	343.97	343.56	343.60	343.58	343.55
30-Aug-2006	341.79	N/A	340.81	342.80		343.87	344.45	342.31	340.78	341.59	341.80	342.61	342.54	342.62	343.27	343.30	343.13	343.14	343.15	343.16
24-Nov-2006	342.30	342.31	341.63	343.77		344.68	345.63	342.83	341.22	342.10	342.10	342.99	342.87	343.00	344.60	344.78	343.61	343.68	343.64	343.61
10-Apr-2007	342.13	342.10	341.72	343.80		344.68	345.65	342.90	341.23	342.03	342.02	342.96	342.88	342.97	344.87	345.01	343.94	343.76	343.68	343.64
18-Jun-2007	342.01	341.78	341.14		343.10	344.16	344.54	342.20	340.85	341.68	341.36	342.65	342.57	342.65	343.35	343.04	343.31	343.46	343.41	343.38
13-Aug-2007	341.35	341.43	340.33		342.01	343.51	343.21	341.42	340.30	340.89	Dry	341.99	341.90	Dry	342.65	Dry	342.63	342.45	342.43	Dry
15-Nov-2007	341.23	341.18	340.12		341.75	342.48	341.77	342.36	340.20	341.00	341.00	341.84	341.81	341.97	342.48	Dry	342.29	342.76	342.76	Dry
29-Apr-2008	342.07	341.92	341.47		341.68	344.31	345.27	342.78	341.13	341.94	341.89	342.89	342.82	342.88	344.42	344.54	343.98	343.64	343.63	343.64
18-Jun-2008	341.90	341.76	341.27		343.17	344.37	344.81	342.43	340.95	341.72	341.70	342.66	342.62	342.76	343.11	342.17	343.54	343.20	343.20	343.22
11-Sep-2008	342.01	341.94	341.13		343.13	344.16	344.55	342.24	340.77	341.80	341.75	342.57	342.51	342.62	343.15	343.19	343.15	343.17	343.16	343.17
20-Nov-2008			341.57					342.60									343.45			
24-Nov-2008	341.97	341.91			343.59	344.58	345.35		340.30	341.06	341.04	341.74	341.86	341.89	344.15	344.23		342.44	342.70	342.92
27-Apr-2009	342.27	342.80	341.85		343.85	344.73	346.05	342.77	341.25	342.13	342.18	342.95	342.83	342.94	344.54	344.76	343.85	343.66	342.72	343.73
22-Jun-2009	341.91	341.97	341.24		343.27	344.20	344.75	342.46	341.05	341.83	341.86	342.67	342.67	342.82	343.14	344.50	343.91	343.12	343.27	343.22
20-Aug-2009	342.10	342.65			342.65	343.73	344.25		340.63	341.58	341.51	342.46	342.43	342.59	343.05	342.98		342.99	342.91	343.02
24-Aug-2009			340.67					342.13									343.03			
10-Nov-2009	341.87	341.70	340.51		342.46	343.72	344.38	342.21	340.42	341.76	341.74	342.57	342.49	342.62	342.98	343.06	342.81	342.99	342.91	343.02
20-May-2010	342.10	341.99	341.23		343.40	344.43	345.23	342.62	340.79	341.85	341.85	342.84	342.81	342.92	343.88	344.01	343.38	343.08	342.81	343.14
20-Oct-2010	342.02	341.93	340.88		344.09	343.37	345.07	342.67	340.73	341.95		342.74	342.82	342.86	343.48	343.88	342.99	343.08	342.81	343.14
18-Apr-2011	342.09	342.44	341.81		343.84	344.90	345.52	342.75	341.26	342.23	342.08	342.78	342.83	342.93	343.97	344.13	343.75	343.20	343.28	343.27
01-Nov-2011	342.02	341.93	341.20		342.89	344.09	344.67		340.38	341.19	341.24	342.73	342.77	342.87	343.64	343.73	343.14	343.00	343.20	343.14
07-May-2012	341.79	342.02	341.56		344.31	343.69	345.37	342.40	341.06	341.89	342.04	342.81	342.77	342.89	343.15	343.29	342.98	343.25	343.26	343.29
21-Nov-2012	341.95	341.87	341.38		343.39	344.38	345.16	342.38	NA	NA	NA	342.63	342.69	342.83	343.49	343.62	343.35	343.07	342.99	343.08
21-May-2013	341.67	342.06	341.48		343.45	344.41	345.65	343.35	341.09	342.01	342.11	342.92	342.85	342.92	343.52	343.62	343.43	343.32	343.35	343.36
13-Nov-2013	342.08	341.96	341.83		343.73	344.67	345.47	343.52	340.58	341.72	341.83	342.91	342.85	342.63	343.95	343.92	343.72	343.08	343.13	343.10
10-May-2014	342.14	342.17	342.11		343.84	344.83	345.63	343.05	341.35	342.16	342.13	342.93	342.87	342.94	344.23	344.42	343.99	343.50	343.49	343.39
20-Nov-2014	341.92	342.01	341.54		343.48	344.50	346.03		341.25	341.86	341.97	342.94	342.95	342.96	344.76	344.88	344.22			
11-May-2015	342.02	341.93	341.40		343.38	344.68	345.13	343.15	341.05	341.99	342.07	342.89	342.83	342.93	343.52	343.69	343.36	343.27	343.45	343.27
19-Nov-2015	342.00	341.99	341.12		343.26	344.30	344.88	342.56	340.97	341.70	342.04	342.87	342.84	342.92	344.02	344.10	343.27	343.37	343.45	343.47
01-May-2016	342.05	342.12	340.97		343.17	344.83	345.30	343.36	341.16	342.10	341.96	342.92	342.88	342.95	344.31	344.54	343.66	343.00	343.23	343.33
10-Aug-2016	341.42	341.21	339.81		341.99	343.80	344.19	342.33	340.39	341.59	341.62	342.55	342.61	342.73	343.29	343.29	343.04	342.95	343.17	dry
01-Sep-2016	341.71	341.34	340.11		341.78	343.44	344.24	342.31	340.34	341.70	341.74	342.65	342.75	342.75	343.19	343.46	342.97	342.87	343.22	343.04
03-Nov-2016	342.08	341.58	339.59		341.25	343.05	344.45	342.27	340.31	341.54	341.62	342.71	342.70	342.80	342.91	343.40	342.83	342.82	343.29	343.02

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	2-I	2-II	4-IR	4-II	4-IIR	4-IIIR	5-II	5-III	9A-I	9-I	9-II	10-I	10-II	10-III	11-I	11-II	11-III	12-I	12-II	12-III
Geologic Unit	**Outwash**	**Outwash**	**Bedrock**	**Lower Till**	**Lower Till**	**Upper Till**	**Upper Till**	**Bedrock**	**Bedrock**	**Outwash**	**Outwash**	**Upper Till**	**Outwash**	**Outwash**	**Upper Till**	**Outwash**	**Lower Till**	**Upper Till**	**Upper Till**	**Fill**
Date																				
25-Apr-2017	342.28	342.66	341.47		343.47	344.65	345.74	343.02	341.41	342.28	342.21	342.96	342.94	342.96	344.44	344.74	343.96	343.37	343.59	343.47
10-Aug-2017	341.98	342.06	340.64		342.74	344.07	345.16	343.20	340.75	342.12	341.87				343.94	344.19	343.48	343.25	343.44	343.32
28-Sep-2017	341.89	341.81	340.33		342.52	343.92	344.97	343.02	340.52	341.69	341.66				343.71	344.10	343.20	343.09	343.29	343.13
14-Nov-2017	342.04	341.49	340.57		342.36	343.99	344.90	342.44	340.67	341.75	341.84	removed	removed	removed	343.58	343.97	343.08	343.27	343.33	343.29

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	13-I	13-II	13-III	13-IV	13-V	14-I	14-II	14-III	14-IV	15-I	15-II	15-III	15-IV	15-V	16-I	16-II	16-III	16-IV	16-V	16-VI
Geologic Unit	Bedrock	Lower Till	Upper Till	Outwash	Outwash	Upper Till	Outwash	Outwash	Bedrock	Bedrock	Lower Till	Upper Till	Upper Till	Outwash	Lower Till	Lower Till	Upper Till	Upper Till	Fill	Lower Till
Date																				
28-Apr-1992	342.28	342.08	342.93	342.88	343.01	342.72	342.77	342.99		342.88	342.04	341.41	342.57	342.61	341.57	342.39	342.54	342.07	342.57	
14-Aug-1992	342.38	342.34	343.05	342.96	343.29	342.86	342.89	343.28		338.93	342.09	342.68	342.64	343.46	342.24	342.28	342.38	342.28	342.91	
10-Nov-1992	342.51	342.51	343.13	343.06	343.24	342.96	342.98	343.11		339.04	342.28	342.70	342.71	343.27	342.39	342.29	342.30	342.19	342.76	
22-Mar-1993			342.85	342.76	342.86	342.53						342.09					341.74			
22-Apr-1993	342.54	342.71	343.02	343.00	343.43	342.84	342.84	343.45		339.22	342.23	342.60	342.75	343.72	342.28	342.13	342.32	342.20	343.21	
25-May-1993																				
08-Jun-1993	342.43	342.75	342.96	342.86	343.01	342.67	342.72	342.61		339.11	342.04	342.44	341.50	342.87	341.99	341.94	342.04	341.89	342.06	
23-Aug-1993	341.64	342.70	342.63	342.49	342.91	341.73	342.35	342.32		338.20	341.77	342.20	342.22	342.53	341.66	341.71	341.78	341.68	341.81	341.76
26-Oct-1993	341.98	341.01	342.90	342.80	342.90	342.54	342.63	342.41		338.44	341.74	342.23	342.38	342.38	341.84	341.89	341.96	341.87	341.94	341.91
16-Mar-1994																				
20-Apr-1994	342.42	340.53	343.07	342.92	343.13	342.82	342.90	343.05		338.69	342.10	342.60	342.68	343.20	341.64	342.16	342.22	342.05	342.90	342.37
18-Jun-1994	342.12	337.18	342.78	342.65	342.97	342.41	342.47	342.36		338.21	342.13	342.28	342.36	342.77	341.72	341.77	341.94	341.91	341.99	341.73
24-Aug-1994	341.51	334.74	342.13	342.04	342.65	341.94	341.97	DRY		337.60	341.48	341.96	341.97	342.30	341.27	341.47	341.56	341.52	DRY	341.33
26-Oct-1994	341.16	334.37	341.93	341.82	DRY	341.74	341.79	DRY		337.56	341.15	341.81	341.82	DRY	341.15	341.31	341.50	341.43	DRY	341.25
18-Apr-1995	342.21	340.68	342.89	342.78	342.99	342.57	342.10	342.77		338.31	341.67	342.38	342.46	342.94	341.74	341.82	341.99	341.85	342.25	341.86
16-Jun-1995	342.06	335.94	342.65	342.55	343.00	342.38	342.41	342.54		338.03	341.59	342.29	342.31	342.85	341.56	341.73	341.90	341.79	341.96	341.73
21-Aug-1995	341.97	334.79	342.73	342.65	342.94	342.50	342.53	342.54		337.73	341.66	342.36	342.39	343.02	341.64	341.86	342.00	341.87	342.18	341.75
13-Nov-1995	342.15	336.33	343.03	342.94	343.34	342.80	342.84	343.51		338.34	341.95	342.59	342.57	343.45	342.12	342.19	342.33	342.14	343.04	342.21
15-Apr-1996	342.28	340.34	343.01	342.92	343.80	342.71	342.73	343.48		338.34	341.89	342.58	342.61	343.53	342.02	342.10	342.25	341.87	342.96	342.13
13-Jun-1996	342.44	334.38	343.00	342.93	343.90	342.69	342.74	343.53		339.00	341.95	342.56	342.61	343.49	342.11	342.07	342.24	342.08	342.95	342.21
15-Aug-1996	342.09	334.04	342.60	342.48	342.95	342.28	342.33	342.36		338.51	338.63	342.24	342.26	342.72	341.70	341.76	341.87	341.74	341.88	341.78
12-Nov-1996	342.45	336.30	343.01	342.89	343.29	342.66	342.69	343.18		338.75	341.85	342.53	342.58	343.26	341.95	342.10	342.23	342.07	342.79	342.06
21-Apr-1997	342.66	339.60	343.03	342.89	343.08	342.61	342.67	342.93		339.04	341.93	342.42	342.58	343.18	342.04	342.02	342.16	341.99	342.78	342.16
09-Jun-1997	342.43	332.55	342.94	342.70	343.06	342.46	342.49	342.60		338.74	341.73	342.38	342.41	342.90	341.81	341.85	341.97	341.82	342.14	341.91
18-Aug-1997	341.47	334.55	341.92	342.11	342.50	341.86	341.93	DRY		337.72	341.29	341.98	342.18	342.03	341.41	341.55	341.74	341.62	341.65	341.50
10-Nov-1997	341.89	335.71	342.79	342.62	342.61	342.40	342.48	342.30		338.25	341.61	342.36	342.39	342.54	341.69	341.81	342.03	341.86	341.91	341.78
14-Apr-1998	342.50	339.32	342.99	342.79	343.05	342.51	342.55	342.79		338.72	341.77	342.44	342.49	343.03	341.86	341.97	342.12	341.94	342.47	341.98
10-Jun-1998	341.91	334.01	342.59	342.29	342.80	342.06	342.09	342.14		337.81	341.35	342.10	342.09	342.48	341.43	341.59	341.76	341.64	341.74	341.88
10-Aug-1998	341.42	337.85	341.93	341.96	342.56	341.76	341.78	Dry		337.36	341.18	340.91	341.91	342.14	341.23	341.43	341.60	341.50	341.56	341.31
09-Nov-1998	340.69	335.45	341.26	341.23	Dry	341.12	341.15	Dry		337.31	340.62	341.24	341.23	Dry	340.82	340.88	341.05	341.02	Dry	340.89
16-Apr-1999	341.98	340.31	342.95	342.87	342.98	342.53	342.58	342.76		337.83	341.65	342.39	342.44	342.95	341.77	341.96	342.13	342.24	342.26	341.87
23-Jun-1999	341.71	335.34	342.62	342.48	342.89	342.33	342.32	342.28		337.98	341.55	342.16	342.18	342.51	341.48	341.78	341.83	341.82	342.18	341.50
16-Aug-1999	341.49	338.16	342.39	342.22	342.70	342.10	342.09	342.04		337.72	341.42	342.05	342.06	342.24	341.39	341.71	341.75	341.77	341.79	341.35
16-Nov-1999	341.97	335.97	343.03	342.93	343.02	342.75	342.76	342.98		338.06	341.79	342.45	342.51	343.09	341.77	342.07	342.14	342.09	342.36	341.74
12-Apr-2000	341.00	340.68	343.08	342.98	343.32	342.76	342.77	342.95		336.70	341.87	342.53	342.61	343.29	341.93	342.18	342.26	342.20	342.46	341.89
19-Jun-2000	342.30	334.88	343.27	343.17	344.28	343.00	343.01	343.62		338.57	342.01	342.65	342.71	343.43	342.06	342.40	342.39	342.32	342.55	342.06
14-Aug-2000	342.35	338.19	343.16	343.09	343.95	342.89	342.90	343.34		338.83	342.17	342.59	342.64	343.18	342.00	342.31	342.29	342.27	342.49	342.00
06-Nov-2000	341.69	336.33	342.31	342.20	342.66	342.12	342.11	342.14		337.71	341.49	342.13	342.14	342.35	341.48	341.72	341.80	341.81	341.81	341.46
02-Apr-2001	342.15	340.85	343.13	343.02	343.82	342.83	342.82	343.18		338.16	342.09	342.70	342.73	343.36	342.19	342.45	342.45	342.34	342.67	342.15
25-Jun-2001	341.95	336.25	342.86	342.72	343.14	342.54	342.53	342.64		337.69	341.74	342.37	342.41	342.82	341.72	341.93	341.96	341.93	341.98	341.69
13-Aug-2001	341.11	338.70	342.00	341.89	342.70	341.83	341.82	Dry		337.07	341.26	341.81	341.82	342.19	341.32	341.50	341.52	341.51	Dry	341.28
05-Nov-2001	341.83	335.86	342.96	342.85	343.01	342.67	342.68	342.99		338.02	341.85	342.52	342.57	343.17	341.82	342.23	342.28	342.22	342.52	341.79
22-Apr-2002	342.38	343.08	343.38	343.56	343.32	343.44	342.98	343.03		338.60	342.09	342.71	342.75	343.29	342.11	342.44	342.46	342.36	342.68	342.12
17-Jun-2002	342.34	334.42	342.95	342.81	343.12	342.62	342.61	342.66		338.67	342.06	342.59	342.63	343.14	341.99	342.24	342.32	342.25	342.48	341.99
12-Aug-2002	341.49	338.23	342.14	342.00	342.76	341.92	341.89	Dry		337.68	341.29	341.85	341.85	342.22	341.34	341.63	341.65	341.65	Dry	341.31
04-Nov-2002	341.10	334.83	342.92	342.80	Dry	341.77	342.50	Dry		337.36	341.27	341.74	342.62	343.30	341.22	342.13	342.30	341.58	342.51	341.20

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	13-I	13-II	13-III	13-IV	13-V	14-I	14-II	14-III	14-IV	15-I	15-II	15-III	15-IV	15-V	16-I	16-II	16-III	16-IV	16-V	16-VI
Geologic Unit	Bedrock	Lower Till	Upper Till	Outwash	Outwash	Upper Till	Outwash	Outwash	Bedrock	Bedrock	Lower Till	Upper Till	Upper Till	Outwash	Lower Till	Lower Till	Upper Till	Upper Till	Fill	Lower Till
Date																				
22-Apr-2003	342.09	340.87	343.08	342.98	343.37	342.77	342.75	342.13		338.34	341.97	342.53	342.58	343.08	342.02	342.35	342.34	342.26	342.62	342.02
23-Jun-2003	342.16	335.23	342.98	342.86	343.00	342.65	342.63	342.72	339.32	338.16	341.80	342.39	343.44	Dry	341.78	342.09	342.10	342.05	342.26	341.77
02-Sep-2003	341.24	339.10	342.35	342.18	342.65	341.94	341.91	Dry	336.07	337.11	341.26	341.80	341.81	342.10	341.34	341.59	341.65	341.65	Dry	341.30
03-Nov-2003	341.65	334.83	342.92	342.80	343.30	342.52	342.50	342.32	336.59	337.79	341.81	342.57	342.62	343.30	341.81	342.13	342.30	342.23	342.51	341.77
19-Apr-2004	342.27	341.20	343.18	342.98	343.31	342.82	342.80	342.89	337.56	338.47	342.05	342.65	342.70	343.26	342.03	342.30	342.32	342.24	342.48	342.03
07-Jun-2004	342.12	337.44	343.07	342.98	343.17	342.80	342.79	342.64	337.66	338.45	341.90	342.60	342.65	343.31	341.79	342.02	342.04	342.01	342.06	341.77
23-Aug-2004	341.84	339.50	342.86	342.75	342.99	342.57	342.64	342.53	337.91	338.23	341.73	342.35	342.39	342.78	341.67	341.91	341.92	341.90	341.93	341.64
01-Nov-2004	341.73	335.94	342.70	342.56	342.71	342.35	342.34	342.30	337.74	337.84	341.82	342.35	342.38	342.45	341.66	341.91	341.93	341.91	341.91	341.62
11-Apr-2005	341.27	341.44	343.15	343.04	343.89	342.82	342.81	343.11	338.36	338.56	342.08	342.61	342.65	343.14	342.19	342.55	342.52	342.40	342.84	342.19
21-Jun-2005	342.04	336.74	342.88	342.73	343.02	342.50	342.49	342.43	338.16	337.73	341.77	342.34	342.39	342.62	341.73	341.97	341.96	341.93	342.03	341.70
31-Aug-2005	341.49	339.93	342.52	342.38	342.48	342.18	342.12	Dry	337.65	337.51	341.53	342.11	342.13	341.97	341.41	341.73	341.80	341.70	341.73	341.47
15-Nov-2005	341.65	341.58	342.82	342.69	342.75	342.61	342.42	342.23	337.50	337.48	341.61	342.28	342.50	342.99	341.69	341.97	341.99	341.95	341.96	341.64
24-Apr-2006	342.31	341.25	343.05	342.99	343.25	342.75	342.73	342.97	338.49	338.53	341.46	342.54	342.59	343.15	342.01	342.28	342.27	342.08	342.28	341.97
07-Jun-2006	342.24	333.91	342.91	342.81	343.06	342.74	342.58	342.59	338.95	338.58	341.97	343.15	342.61	343.16	341.97	342.22	342.21	342.15	342.32	341.98
30-Aug-2006	341.88	339.40	342.83	342.73	343.06	342.55	342.53	342.48	338.46	338.16	341.72	342.34	342.37	342.68	341.65	N/A	342.00	N/A	342.07	342.10
24-Nov-2006	342.37	337.81	343.15	343.11	344.23	342.86	342.85	343.84	338.61	338.41	342.11	342.67	342.74	343.29	342.13	342.51	342.47	342.39	342.52	342.12
10-Apr-2007	342.42	341.63	343.17	343.06	344.11	342.87	343.37	342.82	338.60	338.51	342.09	342.68	342.75	343.39	342.07	342.36	342.43	342.39	342.61	342.07
18-Jun-2007	342.16	336.35	342.90	342.75	343.03	342.57	342.55	342.55	338.24	338.20	341.71	342.36	342.45	342.83	341.89	342.95	342.14	342.35	342.01	341.61
13-Aug-2007	341.35	339.22	342.24	342.09	342.38	341.85	341.82	Dry	337.63	337.59	341.21	341.73	341.73	341.95	341.26	341.34	341.53	341.55	Dry	341.08
15-Nov-2007	341.29	337.28	342.09	341.90	Dry	341.71	341.67	Dry	337.63	337.62	341.27	340.80	341.75	341.99	341.18	341.49	341.52	341.53	Dry	341.12
29-Apr-2008	342.25	341.63	343.28	343.07	343.43	342.77	342.74	342.81	338.39	338.63	342.00	342.55	342.59	343.08	341.93	342.20	342.21	342.16	342.37	341.97
18-Jun-2008	342.14	335.39	342.89	342.77	343.11	342.52	342.52	342.54	338.13	338.49	341.82	342.41	342.01	342.61	341.81	342.15	342.05	342.01	342.06	341.83
11-Sep-2008	341.94	339.78	342.78	342.63	342.99	342.45	342.41	342.45	338.16	338.21	341.83	342.49	342.51	342.51	341.79	342.05	342.18	341.99	342.09	341.77
20-Nov-2008	342.05								338.23	338.32										341.87
24-Nov-2008		337.59	342.67	342.92	343.25	342.64	342.65	342.87			341.95	342.50	342.55	343.03	341.90	342.23	342.24	342.15	342.37	
27-Apr-2009	342.40	341.60	343.25	343.05	343.99	342.84	342.78	342.59	338.16	338.67	342.02	342.65	342.71	343.25	342.06	342.38	342.38	342.28	342.45	342.06
22-Jun-2009	342.24	341.56	343.02	342.85	343.01	342.69	342.72	342.58	338.10	338.35	341.83	342.39	342.51	342.72	341.80	342.07	342.08	342.04	342.10	341.80
20-Aug-2009		340.14	342.64	342.53	342.98	342.26	342.23	342.55			341.63	342.25	342.26	342.28	341.62	341.95	341.96	341.93	341.91	
24-Aug-2009	341.85								337.66	337.90										341.53
10-Nov-2009	341.55	337.23	342.66	342.55	343.04	342.45	342.53	342.71	336.66	337.64	341.71	342.35	342.38	342.39	341.69	341.98	342.02	342.10	341.98	341.67
20-May-2010	341.97	341.43	343.10	342.92	343.63	342.72	342.71	342.96	337.31	338.25	341.91	342.47	342.51	342.97	341.90	342.16	342.18	342.09	342.32	341.89
20-Oct-2010	341.78	342.05	343.00	342.90	343.24	342.68	342.63	341.87	338.16	338.17	341.91	342.47	342.51	343.00	341.80	342.16	342.16	342.07	342.16	341.82
18-Apr-2011	342.36	341.28	343.14	343.02	343.39	342.70	342.67	342.93	338.30	338.82	341.99	342.51	342.68	343.09	341.99	342.35	342.39	342.26	342.43	342.00
01-Nov-2011	341.72	342.74	342.96	342.88	343.81	342.53	342.62	342.76	338.07	337.76	341.80	342.45	342.55	343.03	341.85	342.28	342.33	342.07	342.27	341.63
07-May-2012	342.23	341.73	343.05	342.93	343.16	342.67	342.63	342.80	338.10	338.90	341.91	342.45	342.58	343.09	341.95	342.44	342.47	342.14	342.29	341.91
21-Nov-2012	342.03	342.81	342.97	342.91	343.21	342.57	342.63	342.84	337.81	338.04	342.00	342.50	342.58	343.06	341.92	342.33	342.38	342.11	342.32	341.82
21-May-2013	342.26	342.36	343.15	343.07	343.98	344.77	344.74	343.18		338.60	341.92	342.53	342.61	343.09	341.97	342.15	342.21	342.11	342.17	341.94
13-Nov-2013	341.82	342.03	342.38	343.04	343.38	342.72	342.75	342.99	338.34	338.43	341.98	342.61	342.66	343.15	342.04	342.22	342.29	342.26	342.30	342.05
10-May-2014	342.57	342.42	343.25	343.15	343.95	342.87	342.86	343.25		339.21	342.06	342.61	342.73	343.13	342.05	342.28	342.28	342.22	343.06	342.04
20-Nov-2014	342.39	342.28	343.16	343.06	343.55	342.93	342.95	343.33		338.96	342.00	342.45	342.56	343.03	341.71	342.05	342.18	342.11	341.83	341.78
11-May-2015	342.24	342.25	343.09	342.97	343.32	342.68	342.63	342.80	338.32	338.77	341.96	342.55	342.61	343.02	341.95	342.11	342.19	342.08	342.26	341.92
19-Nov-2015	342.29	342.14	343.14	342.98	343.44	342.62	342.70	343.01	337.77	338.60	342.06	342.52	342.61	343.07	341.78	342.10	341.93	342.10	341.99	341.66
01-May-2016	342.50	342.30	343.22	343.03	343.45	342.79	342.72	343.02	338.43	339.03	342.04	342.63	342.70	343.14	342.05	342.24	342.34	342.25	342.36	342.05
10-Aug-2016	341.57	342.09	342.33	342.37	343.07	342.25	341.99	342.22	337.24	338.26	341.73	341.94	342.08	342.33	341.58	341.92	341.55	341.71	341.88	341.53
01-Sep-2016	341.40	341.78	342.68	342.59	342.94	342.39	342.16	342.40	337.15	338.44	341.90	342.16	342.15	342.53	341.53	341.90	341.63	341.98	342.00	341.28
03-Nov-2016	341.92	341.71	342.94	342.92	343.19	342.71	342.64	342.60	337.49	338.69	341.92	342.39	342.41	342.98	341.66	342.01	341.69	341.92	341.93	341.16

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	13-I	13-II	13-III	13-IV	13-V	14-I	14-II	14-III	14-IV	15-I	15-II	15-III	15-IV	15-V	16-I	16-II	16-III	16-IV	16-V	16-VI
Geologic Unit	Bedrock	Lower Till	Upper Till	Outwash	Outwash	Upper Till	Outwash	Outwash	Bedrock	Bedrock	Lower Till	Upper Till	Upper Till	Outwash	Lower Till	Lower Till	Upper Till	Upper Till	Fill	Lower Till
Date																				
25-Apr-2017	342.54	342.35	343.25	343.12	343.95	342.95	342.85	343.11	338.22	339.18	342.10	342.66	342.72	343.14	342.14	342.35	342.34	342.50	342.30	342.22
10-Aug-2017	342.25	341.99	343.00	342.97	343.60	342.67	342.67	342.85	338.65	338.81	341.87	342.46	342.45	342.98	341.87	342.22	341.80	342.24	342.28	341.58
28-Sep-2017	342.05	341.86	342.93	342.84	343.42	342.45	342.54	342.73	338.48	338.57	341.77	342.37	342.54	343.10	341.65	341.85	341.70	342.17	342.08	341.66
14-Nov-2017	342.19	341.93	343.04	342.94	343.35	342.53	342.70	342.90	338.18	338.65	341.99	342.53	342.70	343.20	341.76	342.17	341.90	342.11	342.03	341.71

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	16-VII	16-VIII	17-I	17-II	17-III	17-IV	18-I	18-II	18-III	18-IV	19-I	19-II	19-III	19-IV	20-IR	20-IIR	21-IR	21-IIR	21-IIIR
Geologic Unit Date	Bedrock	Lower Bedrock	Bedrock	Lower Till	Upper Till	Outwash	Upper Till	Outwash	Outwash	Fill/ Outwash	Bedrock	Lower Till	Upper Till	Upper Till	Bedrock	Upper Till	Upper Till	Upper Till	Upper Till
28-Apr-1992			340.94	342.78	342.98	343.40	342.06	341.99	341.87	341.92	342.10	342.22	345.54	347.36	341.99	341.64	344.23	344.52	344.19
14-Aug-1992			340.89	342.75	342.83	343.17	342.36	342.28	342.01	342.04	342.40	342.41	345.28	346.64	342.73	344.35	345.86	346.15	347.31
10-Nov-1992			341.07	342.96	343.23	343.83	342.22	342.12	341.99	342.02	342.68	342.73	346.13	348.11	343.11	345.12	346.51	346.97	347.91
22-Mar-1993					343.60								344.67				345.41	344.82	
22-Apr-1993			341.27	343.04	343.32	344.13	342.16	342.13	342.11	342.13	342.62	342.61	346.11	348.53	342.89	344.63	346.52	347.10	347.75
25-May-1993																			
08-Jun-1993			340.89	342.62	342.97	343.07	341.67	341.50	341.46	341.45	342.30	341.50	344.99	346.46	342.16	344.46	345.92	346.42	347.20
23-Aug-1993			340.37	342.09	342.21	342.50	341.27	341.21	341.03	340.50	341.42	341.50	343.91	344.83	341.99	341.80	345.18	345.30	344.89
26-Oct-1993			340.47	342.26	342.23		341.57	341.50	341.35	341.62	341.72	341.84	343.83	344.61	342.30	344.93	345.01	345.50	346.21
16-Mar-1994																			
20-Apr-1994			340.85	342.99	343.28	344.06	342.28	342.17	342.04	342.06	342.46	342.51	345.98	348.19	342.84	344.95	346.81	346.96	347.67
18-Jun-1994			340.69	342.55	342.76	343.16	341.65	341.56	341.36	DRY	341.88	341.89	344.67	346.16	342.17	344.33	345.74	346.36	346.79
24-Aug-1994			340.18	342.05	342.18	DRY	341.25	341.18	341.18	DRY	341.31	341.33	343.74	344.64	341.69	340.81	344.52	345.08	346.06
26-Oct-1994			339.90	341.75	341.81	DRY	341.27	341.20	341.17	DRY	340.75	340.76	342.65	343.14	340.91	DRY	343.76	344.25	344.54
18-Apr-1995			340.80	342.70	342.93	343.40	341.84	341.76	341.75	341.76	342.12	342.14	345.40	347.44	342.36	344.50	345.43	346.08	346.70
16-Jun-1995			340.69	342.62	343.91	343.39	341.70	341.62	341.33	DRY	341.99	342.06	344.98	346.70	342.46	343.94	345.65	346.38	347.43
21-Aug-1995			340.66	342.52	342.64	342.94	341.71	341.60	341.48	341.64	341.86	341.86	344.51	345.64	342.27	344.19	345.01	345.65	345.72
13-Nov-1995			341.07	342.73	342.81	344.05	342.32	342.25	342.04	341.62	342.07	342.06	345.15	347.00	342.32	345.04	344.93	345.55	346.53
15-Apr-1996			340.96	342.97	343.30	344.06	342.15	342.08	342.02	342.05	342.30	342.37	344.88	347.85	342.63	344.99	346.31	347.16	347.57
13-Jun-1996			341.03	342.89	343.08	343.43	342.18	342.16	342.02	342.08	342.47	342.45	345.54	347.49	342.82	344.99	346.44	347.33	347.76
15-Aug-1996			340.46	342.60	342.58	342.83	341.80	341.75	341.55	DRY	341.96	342.05	344.60	345.82	342.41	343.77	345.37	346.30	346.20
12-Nov-1996			340.96	342.77	342.88	343.13	342.13	342.05	341.98	342.02	340.40	341.22	345.48	347.39	342.42	344.91	345.52	346.28	347.01
21-Apr-1997			341.07	342.92	343.20	343.64	342.30	342.20	342.16	341.90	340.90	341.64	345.74	347.91	342.86	344.89	346.78	348.12	347.68
09-Jun-1997			340.83	342.63	342.89	343.31	341.87	341.76	341.51	341.72	340.53	341.15	344.91	346.90	342.37	343.80	345.98	347.70	347.37
18-Aug-1997			340.11	341.98	342.12	342.35	341.44	341.29	341.10	DRY	339.69	340.23	343.23	344.16	341.21	342.87	343.92	344.37	344.04
10-Nov-1997			340.49	342.25	342.15	Dry	341.97	341.90	341.91	341.97	340.26	340.73	343.23	343.76	341.65	343.56	343.78	344.98	344.23
14-Apr-1998			340.84	342.79	343.10	343.63	342.15	342.04	341.91	341.98	341.01	341.69	345.50	347.57	342.60	344.86	346.27	347.73	347.49
10-Jun-1998			340.39	342.15	342.43	342.79	341.54	342.03	341.23	342.05	339.98	340.67	344.07	345.28	341.74	342.91	344.65	345.82	345.36
10-Aug-1998			340.12	341.97	342.12	342.38	341.32	341.23	341.12	Dry	339.30	340.08	343.08	343.88	341.16	341.60	343.61	344.26	343.77
09-Nov-1998			339.48	341.29	341.51	Dry	340.98	340.97	340.90	Dry	338.72	339.26	341.40	341.76	340.21	Dry	342.50	Dry	Dry
16-Apr-1999			340.69	342.75	343.04	343.53	341.97	341.90	341.70	341.80	340.33	341.00	344.36	345.34	341.89	344.56	344.66	346.73	346.27
23-Jun-1999			340.45	342.27	342.57	342.95	341.54	341.45	341.16	Dry	339.83	340.65	343.90	344.87	341.70	344.04	345.03	345.52	345.24
16-Aug-1999			340.30	342.07	342.27	342.61	341.41	341.35	342.16	341.60	339.80	340.35	343.29	344.09	341.26	342.95	344.36	344.36	344.23
16-Nov-1999			340.72	342.73	342.84	343.18	341.92	341.88	341.66	341.72	340.69	341.10	344.08	344.90	341.96	345.31	344.96	346.59	346.31
12-Apr-2000			340.70	342.86	343.11	343.53	342.05	341.99	342.01	341.98	340.87	341.48	345.65	347.80	342.33	345.39	346.30	347.83	347.69
19-Jun-2000			340.98	343.07	343.46	344.18	342.65	342.57	342.09	342.07	341.20	341.85	345.96	348.14	342.68	345.39	347.08	347.87	347.80
14-Aug-2000			340.91	342.82	343.02	343.35	342.10	342.00	341.86	341.89	340.97	341.67	345.20	346.72	342.64	344.94	346.27	347.23	347.02
06-Nov-2000			340.33	342.10	342.16	342.41	341.54	341.50	341.40	341.59	340.12	340.69	343.49	344.28	341.49	342.51	344.49	344.51	344.37
02-Apr-2001			340.95	343.07	343.45	344.24	342.73	342.68	342.10	342.10	341.28	341.88	346.08	348.39	342.72	Frozen	347.35	347.90	347.83
25-Jun-2001			340.48	342.35	342.63	343.00	341.70	341.64	341.38	341.66	340.67	341.25	344.46	345.63	342.11	344.15	345.59	346.24	345.98
13-Aug-2001			339.84	341.88	342.13	342.46	341.22	341.20	341.03	N/A	339.54	340.21	343.05	343.86	341.15	341.91	344.06	N/A	343.87
05-Nov-2001			340.47	342.51	342.52	342.72	341.78	341.70	341.67	341.70	340.71	341.11	343.74	344.34	341.82	345.31	344.86	347.44	346.74
22-Apr-2002			341.02	343.07	343.44	344.09	342.49	342.35	342.03	342.04	341.46	341.99	345.77	347.89	342.79	345.05	347.31	347.73	347.74
17-Jun-2002			341.02	342.80	342.98	343.33	342.15	342.15	342.00	342.00	341.38	341.84	345.14	346.70	342.62	345.33	346.55	347.72	347.55
12-Aug-2002			340.16	341.89	342.20	342.57	341.26	341.24	341.06	N/A	340.29	340.76	343.51	344.36	341.59	342.74	344.59	344.78	344.50
04-Nov-2002			340.11	342.37	342.24	Dry	341.86	341.95	341.31	N/R	339.98	341.24	344.52	342.91	341.07	345.26	343.96	344.40	343.91

Note: All Water Level in mASL

Location 20 was decommissioned in 2009. 20-I was replaced by 20-IR and 20-IV was replaced by 20-IIR. Location 21 was decommissioned in 2009 and replaced by 21-IR,21-IIR and 21-IIR.

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	16-VII	16-VIII	17-I	17-II	17-III	17-IV	18-I	18-II	18-III	18-IV	19-I	19-II	19-III	19-IV	20-IR	20-IIR	21-IR	21-IIR	21-IIIR
Geologic Unit	Bedrock	Lower Bedrock	Bedrock	Lower Till	Upper Till	Outwash	Upper Till	Outwash	Outwash	Fill/ Outwash	Bedrock	Lower Till	Upper Till	Upper Till	Bedrock	Upper Till	Upper Till	Upper Till	Upper Till
Date																			
22-Apr-2003			340.90	342.96	343.37	344.07	342.30	342.24	342.01	342.04	341.20	341.61	344.48	345.40	342.30	345.13	346.24	346.54	346.35
23-Jun-2003	338.63		340.75	342.66	343.20	343.49	341.90	341.81	341.48	341.59	340.74	341.42	344.60	345.87	342.20	344.30	345.80	346.32	346.02
02-Sep-2003	337.42	313.51	340.08	341.81	342.06	342.40	341.32	341.32	341.17	Dry	340.31	340.72	343.36	344.14	341.46	Dry	344.33	344.68	344.29
03-Nov-2003	339.45	316.43	340.58	342.37	342.24	Dry	341.86	341.95	341.87	341.99	340.92	341.24	344.52	344.46	341.85	345.27	344.68	347.33	345.48
19-Apr-2004	339.66	317.47	341.04	343.02	343.28	343.77	342.35	342.35	342.06	342.07	341.68	342.08	345.93	348.09	342.74	345.23	347.06	347.23	346.99
07-Jun-2004	339.60	317.81	340.68	342.46	342.71	343.03	341.81	341.79	341.54	Dry	341.21	341.56	344.55	345.75	342.23	343.89	345.72	345.85	345.70
23-Aug-2004	339.65	317.95	340.41	342.11	342.19	342.52	341.52	341.49	341.27	341.58	340.80	341.12	343.71	344.48	341.88	343.39	344.72	344.97	344.75
01-Nov-2004	339.23	316.18	340.47	342.15	342.07	Dry	341.69	341.73	341.61	341.60	340.66	340.97	343.24	343.83	341.58	345.22	344.45	344.55	344.61
11-Apr-2005	339.17	317.05	341.11	343.18	343.50	344.17	342.49	342.42	342.07	342.09	341.67	342.08	345.98	347.25	342.69	345.03	347.17	346.96	346.77
21-Jun-2005	339.58	317.05	340.60	342.41	342.63	342.98	341.85	341.81	341.54	341.59	341.25	341.54	344.45	345.57	342.21	344.48	345.63	345.61	345.45
31-Aug-2005	338.99	314.96	340.34	341.88	342.00	Dry	341.39	341.35	341.18	341.70	340.51	340.73	342.93	343.46	341.38	345.31	344.19	N/A	343.95
15-Nov-2005	339.37	314.57	340.45	342.15	341.95	Dry	341.76	341.71	341.61	Dry	340.86	341.13	343.27	343.74	341.48	345.12	344.40	344.65	344.40
24-Apr-2006	339.95	316.81	340.85	342.87	343.18	343.70	341.99	342.03	342.02	342.02	341.84	342.11	345.97	348.24	342.75	345.13	346.85	347.57	347.25
07-Jun-2006	340.07	316.98	340.86	342.79	343.05	343.50	341.90	341.85	341.67	341.74	341.56	341.99	345.33	346.88	342.71	345.13	346.46	346.52	346.36
30-Aug-2006	339.70	316.39	340.47	342.31	342.43	342.66	341.59	341.54	341.37	341.62	340.96	341.24	343.73	344.42	N/A	343.58	345.02	N/A	344.98
24-Nov-2006	340.13	317.13	340.81	343.10	343.46	344.19	342.17	342.10	342.06	342.09	341.93	342.23	345.77	347.58	342.84	345.28	346.52	347.11	346.86
10-Apr-2007	340.28	317.49	340.98	343.10	343.44	344.17	342.07	342.03	342.02	342.04	341.96	342.27	346.00	348.24	342.95	345.25	347.27	347.10	346.95
18-Jun-2007	340.10	316.81	340.54	342.40	342.63	343.09	341.56	341.47	341.23	341.62	341.11	341.50	344.46	345.70	342.25	345.27	345.57	346.51	345.31
13-Aug-2007	339.67	315.81	340.93	341.76	341.97	Dry	340.93	340.87	Dry	Dry	340.01	340.44	342.78	343.39	341.18	345.14	343.94	Dry	Dry
15-Nov-2007	339.69	316.47	340.22	341.48	341.54	342.45	340.99	340.98	340.90	Dry	340.06	340.23	341.97	342.28	340.91	345.21	343.63	Dry	Dry
29-Apr-2008	340.26	317.58	340.90	342.97	343.22	343.71	341.99	341.94	341.95	341.96	341.90	342.16	345.57	347.45	342.77	344.64	347.11	346.90	346.75
18-Jun-2008	340.24	317.21	340.47	342.66	342.84	343.18	341.76	341.75	341.61	Dry	341.54	341.99	344.66	346.91	342.39	343.09	345.91	345.91	345.69
11-Sep-2008	339.80	316.08	340.69	342.54	342.70	342.99	341.82	341.79	341.60	341.59	341.38	341.53	344.22	345.22	342.16	345.12	345.21	345.29	345.03
20-Nov-2008	340.02	316.84									341.86				342.23				
24-Nov-2008			340.90	342.87	343.02	343.71	342.00	341.94	341.94	341.96		342.11	345.00	346.27		345.04	345.78	346.44	345.18
27-Apr-2009	340.37	316.90	341.11	343.25	343.56	344.25	342.17	342.13	342.08	342.11	342.01	342.51	346.26	348.50	342.99	345.45	347.27	347.52	347.35
22-Jun-2009	339.99	314.58	342.37	341.02	343.25	343.16	341.76	341.55	341.55	341.64	341.53	342.29	344.73	345.90	Decom	N/A	N/A	N/A	N/A
20-Aug-2009			340.45	342.47	342.37	342.59	341.61	341.52	341.31	341.59		341.35	343.78	344.50		N/A	N/A	N/A	N/A
24-Aug-2009	337.98	314.26									340.70				Decom				
10-Nov-2009	339.64	313.67	340.48	340.74	342.27	342.19	341.78	341.78	341.66	341.67	341.06	341.31	343.49	344.54	N/A	N/A	N/A	N/A	N/A
20-May-2010	340.04	314.25	340.73	341.22	343.06	343.35	341.96	341.90	341.88	341.15	341.89	341.98	345.06	346.61	345.53	347.48	345.72	346.53	346.67
20-Oct-2010	339.65	316.20	339.97	342.57	342.52	342.53	341.96	341.30	342.01	341.98	341.45	341.60	343.93	344.52	345.13	347.90	344.73	345.55	345.59
18-Apr-2011	339.73	317.93	342.84	341.47	343.60	344.26	342.25	342.21	342.18	342.23	342.20	342.40	345.81	348.05	345.59	347.23	346.22	346.59	346.98
01-Nov-2011		316.29	341.56	340.43	342.41	342.76	341.48	341.85	341.73	341.99	341.46	341.71	344.87	346.75	344.96	N/A	344.38	345.44	344.71
07-May-2012	339.71	316.80	340.94	342.69	342.91	343.20	341.98	341.92	341.82		341.94	342.13	345.01	346.92	345.76	347.04	346.37	346.68	347.03
21-Nov-2012	339.65	316.52	341.40	340.56	342.31	dry	341.50	341.93	341.82	341.95					342.79		344.87	345.57	344.86
21-May-2013			340.98	342.77	343.05	343.34	342.23	342.19	342.07	342.14	341.98	342.19	345.03	346.81	342.96	343.72	346.10	347.11	347.09
13-Nov-2013	340.07	316.42	341.21	342.25	342.95	342.43	341.89	341.82	341.98	342.01	341.55	341.94	344.57	346.11	342.64	343.57	345.97	346.99	347.02
10-May-2014			341.16	343.07	343.39	343.93	342.14	342.15	342.04	342.72	342.34	342.47	345.83	348.27	343.16	343.95	343.31	345.24	345.29
20-Nov-2014			341.03	342.81	343.01	344.28	341.97	341.94	342.14	342.40	342.04	342.15	345.64	347.62	342.49	343.63	345.51	345.28	345.45
11-May-2015	339.86	317.68	340.90	342.83	343.11	343.57	341.98	342.04	341.91	341.93	341.89	342.11	345.05	347.31	342.96	343.75	346.14	346.95	346.91
19-Nov-2015	339.75	316.59	340.81	342.34	342.98	342.83	341.63	341.73	341.95	341.95	341.56	341.79	344.84	347.03	342.65	343.43	345.06	346.27	346.45
01-May-2016	339.92	318.12	342.67	341.39	343.25	343.62	341.91	341.92	341.96	341.98	341.04	341.17	345.03	347.63	342.30	343.27	347.04	347.62	347.52
10-Aug-2016	339.25	317.02	340.85	342.26	342.68	342.42	341.69	341.61	341.65	dry	340.22	340.74	344.73	346.95	341.96	342.77	345.49	346.42	346.38
01-Sep-2016	339.32	318.17	340.96	342.20	342.61	342.34	341.77	341.72	341.90	341.64	340.39	340.77	344.80	346.93	342.09	343.01	345.59	346.45	346.35
03-Nov-2016	339.56	316.95	341.12	342.45	342.81	dry	342.00	341.73	341.95	341.76	340.87	341.22	344.87	347.17	342.49	343.10	345.89	346.52	346.47

Note: All Water Level in mASL

Location 20 was decommissioned in 2009. 20-I was replaced by 20-IR and 20-IV was replaced by 20-IIR. Location 21 was decommissioned in 2009 and replaced by 21-IR,21-IIR and 21-IIR.

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	16-VII	16-VIII	17-I	17-II	17-III	17-IV	18-I	18-II	18-III	18-IV	19-I	19-II	19-III	19-IV	20-IR	20-IIR	21-IR	21-IIR	21-IIIR
Geologic Unit	Bedrock	Lower Bedrock	Bedrock	Lower Till	Upper Till	Outwash	Upper Till	Outwash	Outwash	Fill/ Outwash	Bedrock	Lower Till	Upper Till	Upper Till	Bedrock	Upper Till	Upper Till	Upper Till	Upper Till
Date																			
25-Apr-2017	340.66	317.81	341.24	343.16	343.48	344.06	342.27	342.24	342.09	342.16	341.18	341.94	345.55	348.11	342.87	346.42	346.77	347.96	347.92
10-Aug-2017	340.66	317.87	341.01	342.69	343.01	343.21	341.91	342.07	342.00	341.93	341.09	341.63	345.05	347.66	342.65	343.77	345.46	346.25	346.51
28-Sep-2017	340.28	317.16	340.81	342.42	342.71	342.87	341.81	341.92	342.12	341.91	341.41	341.58	344.82	347.35	342.53	343.61	344.76	345.93	346.38
14-Nov-2017	339.87	317.56	340.90	342.46	342.93	342.27	341.79	341.86	342.26	342.01	341.61	341.76	344.90	347.11	342.75	343.57	344.49	345.69	346.16

Note: All Water Level in mASL

Location 20 was decommissioned in 2009. 20-I was replaced by 20-IR and 20-IV was replaced by 20-IIR. Location 21 was decommissioned in 2009 and replaced by 21-IR,21-IIR and 21-IIR.

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	26-I	26-II	27-I	27-II	28-I	28-II	30-I	31-I	32-I	33-I	34-I	35-I	35-II	36-I	37-I	37-IR	37-IIR	50-I	53-I	53-II/IIR
Geologic Unit	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Lower Till
Date																				
28-Apr-1992	342.63	343.06	343.09	343.40	342.04	343.51	344.94	343.63	343.53	343.59	342.06	342.19	342.99	342.41	338.80			340.77		
14-Aug-1992	342.64	343.12	343.27	343.52	342.22	343.02	345.05	343.61	343.71	343.62	342.22	342.15	343.02	342.44	341.69			340.27		
10-Nov-1992	342.62	343.15	343.24	343.54	342.07	342.99	345.09	343.69	343.58	343.70	342.71	342.20	342.85	342.62	341.99			341.39		
22-Mar-1993	342.38		342.91		341.81						342.00	341.85								
22-Apr-1993	342.69	343.02	343.27	343.54	341.85	343.09	345.20	343.67	343.61	343.57	342.11	342.29	343.15	342.70	342.30			341.74	342.26	
25-May-1993																			342.20	
08-Jun-1993	342.54	343.05	343.12	343.36	341.96	342.40	345.02	343.64	343.58	343.55	342.04	342.14	342.92	342.40	342.01			341.72	341.73	
23-Aug-1993	341.72	DRY	342.37	dry	341.65	342.39	344.61	343.22	343.23	343.17	341.70	341.87	342.56	341.72	340.88			340.45	341.22	
26-Oct-1993	342.08	DRY	342.85	dry	341.69	dry	344.82	343.45	343.38	343.34	341.80	342.10	342.68	342.02	341.11			340.66	341.46	329.60
16-Mar-1994																				
20-Apr-1994	342.73	343.27	343.33	343.62	342.26	343.14	345.15	343.68	343.78	343.71	342.41	342.22	343.03	342.60	341.68			341.36	341.97	340.37
18-Jun-1994	342.63	342.96	343.26	343.28	341.98	342.62	344.91	343.53	343.56	343.39	342.35	342.29	342.93	342.26	341.47			341.09	341.66	341.46
24-Aug-1994	341.85	342.37	341.53	343.71	341.84	342.45	344.66	343.17	343.17	343.22	341.74	341.86	342.50	341.77	340.92			340.52	341.19	341.26
26-Oct-1994	342.04	342.34	342.41	342.56	341.79	342.46	344.45	342.98	342.94	343.02	341.59	341.36	342.25	341.46	340.53			340.10	340.84	340.81
18-Apr-1995	342.67	343.07	343.13	343.41	342.09	342.95	344.91	343.67	343.61	343.60	342.10	342.33	342.97	342.42	341.38			340.99	341.69	341.80
16-Jun-1995	342.47	342.92	342.96	343.24	342.06	342.88	344.89	343.52	343.53	343.40	342.04	342.11	342.78	342.25	341.25			340.85	341.70	341.37
21-Aug-1995	342.49	342.91	342.97	343.48	342.12	342.84	344.80	343.38	343.41	343.48	342.06	342.17	342.79	342.20	341.15			340.87	341.47	341.39
13-Nov-1995	342.78	343.15	343.37	343.59	342.42	343.09	344.92		343.62	343.66	342.13	342.26	343.55	342.47	341.36			341.64	341.73	341.50
15-Apr-1996	342.60	343.15	343.62	343.35	342.15	343.22	344.93	343.70	343.91	343.65	342.02	342.17	342.92	342.54	341.59			341.27	341.79	341.76
13-Jun-1996	342.78	342.85	343.18	343.40	342.14	343.11	345.22	343.73	343.34	343.35	342.13	342.39	343.07	342.60	342.04			341.65	342.13	340.99
15-Aug-1996	342.18	343.16	342.83	343.17	341.73		344.86	343.35	343.30	343.16	341.97	342.15	342.77	342.09	341.59			341.27	341.72	340.84
12-Nov-1996	342.76		343.25	343.56	341.95	343.02	345.12	343.45	343.66	343.64	341.97	342.32	342.88	342.46	341.79			341.46	341.90	341.43
21-Apr-1997	342.69	343.35	343.26	343.56	341.83	343.06	345.16	343.52	343.58	343.71	342.19	342.67	342.82	342.66	342.29			341.97	342.06	342.06
09-Jun-1997	342.63	342.85	343.09	343.36	341.78	342.94	345.07	343.52	343.25	343.14	342.01	342.25	342.92	342.37	341.86			341.51	341.84	340.11
18-Aug-1997	DRY	342.75	342.33	342.92	341.61	342.47	344.64	343.01	342.51	342.49	342.44	341.56	342.38	341.66	341.51			340.71	341.20	340.67
10-Nov-1997	342.35	342.75	342.88	343.16	342.18	342.52	344.86	343.43	343.21	343.34	341.81	341.82	342.54	341.95	341.24			340.91	341.50	341.04
14-Apr-1998	342.68	343.13	343.12	343.45	341.78	343.01	344.99	343.65	343.55	343.66	341.84	342.28	342.88	342.38	342.29			341.61	342.03	341.91
10-Jun-1998	342.11	342.59	342.40	343.12	341.67	342.57	344.36	343.34	343.05	342.79	341.67	341.60	342.52	341.86	341.59			340.89	341.45	340.83
10-Aug-1998	342.09	342.94	342.66	342.85	341.85	342.49	344.70	343.12	343.28	342.63	342.77	341.49	342.33	341.66	341.20			340.54	341.05	340.62
09-Nov-1998	341.83	342.17	342.15	Dry	342.10	Dry	342.64	342.71	342.80	342.31	342.52	341.58	341.69	341.13	340.60			339.91	340.43	340.85
16-Apr-1999	343.08	343.15	343.34	343.36	342.38	343.06	343.71	343.68	343.35	343.69	341.79	342.91	342.81	342.24	341.19			340.64	341.25	341.59
23-Jun-1999	Damaged	342.66	342.97	343.46	342.25	342.68	343.45	342.95	342.74	342.46	342.49	342.36	342.47	341.98	340.91			340.34	341.01	341.01
16-Aug-1999	Damage	343.16	342.50	Dry	341.99	342.58	342.86	Dry	342.62	342.79	341.60	342.16	342.05	341.86	340.70			340.16	340.76	340.46
16-Nov-1999	Dry	342.68	343.01	Dry	342.15	342.78	343.32	343.41	343.07	343.11	341.85	342.53	342.42	342.30	342.11			340.56	341.33	341.17
12-Apr-2000	343.16	Dry	343.61	Dry	343.00	343.04	343.86	343.64	343.67	343.79	341.93	342.89	342.83	342.33	341.11			340.56	340.75	341.63
19-Jun-2000	343.20	N/A	343.63	343.63	342.99	343.19	343.96	343.73	343.80	343.68	341.92	N/A	342.75	342.57	341.71			341.12	341.60	341.18
14-Aug-2000	Damaged		343.42	343.67	342.85	343.03	343.87	343.63Dry	343.67	343.65	342.04	342.83	342.81	342.46	341.91			341.31	341.76	340.94
06-Nov-2000	Dry	Dry	342.41	Dry	342.23	Dry	343.39	343.24	343.13	343.24	341.58	342.25	342.26	341.91	341.11			340.56	341.00	341.20
02-Apr-2001	N/A	Dry	343.60	343.23	343.10	343.15	343.96	343.68	343.74	343.63	N/A	342.84	342.89	342.52	341.71			341.18	341.52	341.75
25-Jun-2001	N/A	N/A	343.06	343.54	342.08	342.64	343.63	343.19	343.48	343.52	341.80	342.36	342.47	342.11	341.27			340.67	341.26	341.41
13-Aug-2001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	342.14	341.53	N/A			339.96	340.47	340.20
05-Nov-2001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	342.78	342.77	341.91	N/A			340.58	341.22	341.19
22-Apr-2002	343.06	N/A	343.48	343.66	342.97	343.00	343.85	343.64	N/A	N/A	N/A	342.86	342.91	342.78	341.96			341.41	341.68	341.78
17-Jun-2002	343.15	N/A	343.57	343.69	343.03	343.04	343.91	343.54	343.72	343.67	341.90	342.86	342.86	342.17	341.99			341.39	341.75	341.05
12-Aug-2002	Dry	Dry	Dry	343.65	Dry	Dry	Dry	Dry	Dry	343.07	Dry	341.98	342.12	341.68	341.11			340.48	340.92	340.68
04-Nov-2002	Dry	N/R	Dry	343.66	Dry	342.57	N/R	343.51	N/R	343.27	N/R	341.65	342.68	341.58	340.57			340.06	340.57	340.93

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	26-I	26-II	27-I	27-II	28-I	28-II	30-I	31-I	32-I	33-I	34-I	35-I	35-II	36-I	37-I	37-IR	37-IIR	50-I	53-I	53-II/IIR
Geologic Unit	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Lower Till
Date																				
22-Apr-2003	N/A	N/A	343.34	343.68	343.01	343.01	343.72	343.58	343.63	343.57	N/A	342.84	342.84	342.43	341.24			340.64	341.35	341.48
23-Jun-2003	Dry	Dry	342.75	343.13	341.90	342.70	343.19	342.83	343.07	342.95	342.46	342.73	342.67	342.28	341.12			340.56	341.21	341.05
02-Sep-2003	Dry	Dry	Dry	Dry	Dry	Dry	Dry	342.69	342.42	342.45	341.50	N/A	342.13	341.63	340.52			339.98	340.60	340.88
03-Nov-2003	342.98	N/R	343.03	Dry	Dry	342.57	343.55	343.51	342.77	343.27	342.23	342.76	342.68	342.13	340.81			340.31	340.88	341.14
19-Apr-2004	343.14	N/A	343.60	N/A	342.99	343.08	343.86	343.60	343.76	343.64	342.70	342.88	342.88	342.53	341.92			341.38	341.69	342.16
07-Jun-2004	341.21	Dry	342.65	343.04	342.23	342.76	343.26	343.14	343.08	342.94	342.19	342.45	342.33	342.23	341.78			341.21	341.55	342.50
23-Aug-2004	Dry	Dry	342.79	342.95	343.10	N/A	343.47	343.12	342.94	342.88	341.95	342.34	342.55	342.01	341.44			340.84	341.38	342.11
01-Nov-2004	343.01	N/R	342.71	Dry	342.39	342.61	343.18	343.20	342.85	342.77	342.28	342.39	342.32	342.03	341.17			340.57	341.09	342.44
11-Apr-2005	N/A	N/A	N/A	N/A	343.01	343.18	343.83	N/A	N/A	N/A	N/A	342.94	342.96	342.62	342.09			341.52	341.82	342.12
21-Jun-2005	Dry	Dry	342.81	342.96	342.43	342.63	343.59	343.17	342.86	342.80	341.91	342.38	342.68	342.18	341.55			341.00	341.47	341.32
31-Aug-2005	Dry	Dry	342.52	Dry	342.05	342.64	342.89	342.72	342.50	342.27	341.82	342.06	342.14	341.82	340.91			340.33	340.92	341.51
15-Nov-2005	Dry	N/R	343.18	Dry	342.47	342.57	343.15	343.55	343.04	343.10	342.44	342.38	342.46	341.87	340.84			340.35	341.04	342.29
24-Apr-2006	343.17	N/A	343.54	N/A	343.03	343.14	343.87	343.32	343.54	343.57	342.98	342.80	342.86	342.44	341.91			341.48	341.74	342.43
07-Jun-2006	342.95	N/A	343.34	N/A	342.82	343.02	343.78	343.70	343.61	343.57	342.49	342.87	342.86	342.42	341.89			341.33	341.76	342.13
30-Aug-2006	Dry	N/A	342.60	342.89	342.32	342.65	343.46	343.23	342.80	342.61	342.06	342.38	342.25	342.13	341.40			340.81	341.25	342.09
24-Nov-2006	343.17	N/R	343.56	343.46	343.03	343.09	343.91	343.77	343.77	343.70	343.02	342.88	343.02	342.67	342.02			341.50	341.91	342.84
10-Apr-2007	343.13	N/A	343.19	343.47	342.59	343.14	343.89	343.56	343.21	343.11	343.03	Frozen	Frozen	342.59	342.18			341.69	341.97	342.65
18-Jun-2007	343.01	N/A	342.90	343.09N/A	342.33	342.71	342.54	343.21	343.26	343.39	342.49	342.98	342.52	342.19	341.57			341.11	341.50	339.49
13-Aug-2007	Dry	N/A	342.22	342.85	342.17	Dry	342.69	342.56	342.24	342.15	341.48	Dry	342.07	341.57	340.96			340.41	340.88	341.23
15-Nov-2007	Dry	N/R	342.09	342.81	342.05	342.57	342.48	342.22	343.00	342.81	342.89	341.78	341.90	341.60	340.61			340.14	340.70	341.27
29-Apr-2008	343.09	N/A	343.43	343.37	343.13	343.20	343.78	343.64	343.73	343.66	342.94	342.84	342.88	342.54	342.09			341.48	341.85	341.94
18-Jun-2008	N/A	N/A	342.77	343.05	342.33	342.71	343.18	342.25	342.51	342.60	342.32	343.02	342.58	342.32	341.85			341.31	341.63	341.64
11-Sep-2008	Dry	N/A	343.00	343.03	342.75	342.78	343.51	343.33	343.39	343.29	Dry	342.84Dry	342.75	342.27	341.50			341.02	341.45	341.81
20-Nov-2008															341.66			341.32	341.75	341.79
24-Nov-2008	342.93	N/R	342.95	342.47	342.45	342.96	343.30	342.02			343.14	342.73	341.35	342.45						
27-Apr-2009	343.02	N/A	343.43	343.35	342.88	343.24	343.82	343.59	344.48	343.59	343.02	343.31	342.69	342.76				341.91	342.07	339.57
22-Jun-2009	343.10	N/A	342.95	342.58	342.36	342.87	343.21	343.22	343.70	343.63	342.87	342.83	342.88	342.30	341.82			341.41	341.52	341.72
20-Aug-2009	342.93	N/A	342.84	342.91	342.28	342.59	343.02	343.17	343.33	343.20	341.38	342.67	342.68	342.05						
24-Aug-2009															341.18			339.02	341.19	341.61
10-Nov-2009	342.93	342.58	342.56	342.90	342.28	342.57	343.10	343.32	342.76	342.98	342.40	342.58	342.45	342.07	340.85			340.49	340.92	341.57
20-May-2010	343.16	342.79	343.05	342.78	342.38	342.91	343.23	343.16	343.61	343.54	342.81	342.71	342.81	342.32	341.34			338.97	341.54	341.36
20-Oct-2010	342.93	342.58	341.96	342.61	343.48	343.27	344.59	342.76	343.26	343.45	342.59	342.93	342.42	342.33	340.95			339.31	341.37	341.48
18-Apr-2011	343.05	342.73	342.97	342.73	342.64	342.75	342.93	342.97	343.66	343.60	343.01	342.82	342.95	342.72	341.95			341.39	342.07	341.78
01-Nov-2011	dry	342.64			342.19	342.61	342.24	N/A	343.11	343.06	N/A	342.02	342.23		341.34			340.98	341.52	341.64
07-May-2012	dry	N/A	343.06	342.80	342.43	N/A	343.31	N/A	343.69	343.58		343.20	342.84	342.64		342.21	339.08	341.24	341.81	341.76
21-Nov-2012	dry	342.68	342.80	343.00	342.23	342.66	343.45	343.17	342.84	343.15		NA	NA	NA		341.32	341.25	340.96	341.64	341.89
21-May-2013			343.24	342.88	342.78		343.26		343.77	343.54	343.39			342.93		341.70	341.61	341.33	341.80	341.80
13-Nov-2013	342.95				341.88		342.51									341.93	341.70	341.62	342.06	341.86
10-May-2014	343.10		343.74	343.31	343.21		343.73		343.76	343.61	343.49	343.33	343.07	344.98		342.21	342.19	342.25	342.41	341.94
20-Nov-2014	frozen				frozen		frozen							342.82		341.50	341.58	341.42	341.78	341.45
11-May-2015	344.07		343.11	342.69	343.04		343.56		343.53	343.48	343.43	343.23	343.19	342.71		341.81	341.19	341.27	341.70	341.72
19-Nov-2015	343.50		342.84		342.79		343.42		343.46	343.32	343.34	343.07	342.99	342.62		341.23	341.30		341.54	341.91
01-May-2016	343.09		342.87	342.83	342.38	342.90	343.58	342.95	343.91	343.52	343.19	343.31	342.84	342.83		341.59	341.46	341.59	341.24	341.94
10-Aug-2016	dry		342.65	dry	342.46		342.85				342.11	342.54	342.36	342.32		340.57	340.47	340.43	340.25	341.41
01-Sep-2016	dry		342.71	dry	342.59		342.81				342.28	342.70	342.51	342.24		340.82	340.64	340.65	340.49	341.35
03-Nov-2016	343.00		342.75	342.53	342.49		343.03		343.69	343.33	342.39	342.88	342.71	342.42		340.42	340.36	340.26	340.15	341.40

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	26-I	26-II	27-I	27-II	28-I	28-II	30-I	31-I	32-I	33-I	34-I	35-I	35-II	36-I	37-I	37-IR	37-IIR	50-I	53-I	53-II/IIR
Geologic Unit	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Lower Till
Date																				
25-Apr-2017	343.14		343.35	342.90	342.99		343.69		343.64	343.65	343.54	343.34	343.04	342.87		341.97	341.81	341.26	341.67	342.01
10-Aug-2017	343.02		342.88	342.56	342.77		343.50		343.23	343.31	343.31	342.89	342.55	342.50		341.26	341.17	341.13	341.02	341.60
28-Sep-2017	343.24		342.79	Dry	342.60		343.38		343.05	343.23	343.11	342.94	342.71	342.44		340.98	340.91	340.74	340.77	341.51
14-Nov-2017	343.36		342.65	Dry	342.64		343.32		343.11	343.05	343.21	343.00	342.89	342.41		341.06	340.99	340.82	340.96	341.69

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	54-I	60-I	60-II	60-III	90-I	90-II	91-I	92-I	93-I	94-I	95-I	96-I	96-II	86-2
Geologic Unit	Bedrock	Upper Till	Upper Till	Lower Till	Lower Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Upper Till
Date														
28-Apr-1992														341.18
14-Aug-1992														343.15
10-Nov-1992														343.68
22-Mar-1993														340.60
22-Apr-1993	343.66													340.69
25-May-1993	345.33													
08-Jun-1993	345.69													342.44
23-Aug-1993	344.33	341.93	339.78	341.75										341.41
26-Oct-1993		342.42	343.56	343.74										343.72
16-Mar-1994														
20-Apr-1994	345.31	342.90	344.36	344.97										343.85
18-Jun-1994	344.68	342.30	343.53	344.52										343.09
24-Aug-1994	343.91	341.74	342.73	343.71										341.65
26-Oct-1994	343.16	341.16	341.63	342.29										340.85
18-Apr-1995	344.68	342.48	344.07	344.84										343.46
16-Jun-1995	344.78	342.50	344.14	345.02										342.94
21-Aug-1995	344.26	342.36	343.89	344.88										
13-Nov-1995	344.26	342.35	344.03	345.49										344.17
15-Apr-1996	345.27	342.73	344.47	345.43										344.11
13-Jun-1996	345.31	342.90	344.42	345.89										344.13
15-Aug-1996	344.75	342.49	344.05	345.03										342.62
12-Nov-1996	345.01	342.64	344.58	345.78										344.12
21-Apr-1997	345.48	342.98	344.85	345.91										343.96
09-Jun-1997	344.98	342.51	344.35	345.53										343.23
18-Aug-1997	343.80	341.36	342.43	343.93										341.01
10-Nov-1997	343.54	341.77	344.05	344.92										343.81
14-Apr-1998	345.32	342.74	344.58	345.74										
10-Jun-1998	344.21	341.86	343.48	344.86										342.36
10-Aug-1998	343.51	341.28	342.76	344.16										340.85
09-Nov-1998	342.22	340.35	340.89	341.77										340.85
16-Apr-1999	344.26	342.02	344.04	345.10										343.87
23-Jun-1999	344.06	341.77	343.56	344.69										343.14
16-Aug-1999	343.52	341.35	343.04	344.23										342.65
16-Nov-1999	343.90	342.06	344.30	345.31										
12-Apr-2000	344.86	341.18	344.14	345.45										344.77
19-Jun-2000	345.48	342.73	344.64	345.93										344.73
14-Aug-2000	345.19	342.68	344.60	345.53										344.36
06-Nov-2000	343.91	341.61	343.22	344.30										342.76
02-Apr-2001	345.42	342.78	344.65	346.11										344.74
25-Jun-2001	344.59	342.19	344.21	345.35										343.80
13-Aug-2001	343.66	341.23	342.84	344.43										341.72
05-Nov-2001	344.10	341.94	344.02	345.67										344.73
22-Apr-2002	345.52	342.87	344.74	345.77										344.63
17-Jun-2002	345.19	342.67	344.64	345.84										344.66
12-Aug-2002	343.92	341.70	343.70	344.79										342.66
04-Nov-2002	343.05	341.28	343.80	344.84										N/A

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	54-I	60-I	60-II	60-III	90-I	90-II	91-I	92-I	93-I	94-I	95-I	96-I	96-II	86-2
Geologic Unit	Bedrock	Upper Till	Upper Till	Lower Till	Lower Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Upper Till
Date														
22-Apr-2003	344.99	342.37	344.26	345.55										344.60
23-Jun-2003	344.72	342.46	344.25	345.26		342.03	342.70	340.54						N/A
02-Sep-2003	343.75	341.58	343.72	344.64		341.30	341.83	339.94						342.65
03-Nov-2003	343.93	341.84	344.17	346.23	316.76	341.82	342.23	340.27						344.65
19-Apr-2004	345.41	342.75	344.63	346.12	317.89	342.48	343.22	341.55						344.57
07-Jun-2004	344.85	342.32	344.21	345.16	317.94	342.12	342.67	341.32						N/A
23-Aug-2004	344.36	341.94	343.75	344.74	318.00	341.79	342.23	340.92						342.76
01-Nov-2004	343.25	341.73	343.92	345.80	316.63	341.63	341.95	340.64						344.31
11-Apr-2005	345.47	342.75	344.47	345.57	317.27	342.57	343.19	341.69						344.36
21-Jun-2005	344.73	342.28	344.19	345.08	317.55	342.14	342.62	341.00						343.49
31-Aug-2005	343.68	341.47	343.09	344.31	315.32	342.72	341.77	340.44						341.68
15-Nov-2005	343.63	341.64	343.88	345.74	314.99	341.75	342.08	340.21						344.42
24-Apr-2006	345.42	342.79	344.61	345.97	317.68	342.71	343.22	341.81						344.35
07-Jun-2006	345.41	342.76	344.75	345.68	317.29	342.62	339.60	341.45						344.28
30-Aug-2006	344.43	342.05	343.78	344.86	316.66	341.97	342.34	340.98						342.99
24-Nov-2006	345.39	342.89	344.76	345.94	317.50	342.73	343.29	341.60						344.50
10-Apr-2007	345.56	343.02	344.88	346.02	317.91	342.84	343.42	341.85						
18-Jun-2007	344.86	342.28	344.15	345.63	317.19	342.18	342.63	341.25						342.99
13-Aug-2007	343.85	341.21	342.52	344.11	316.14	341.34	341.52	340.49						Dry
15-Nov-2007	343.08	341.08	343.25	345.80	316.96	341.08	341.13	340.23	340.10	340.45	340.18			342.44
29-Apr-2008	345.25	342.85	344.68	345.75	317.91	342.82	343.23	341.73	340.94	341.80	341.68			344.39
18-Jun-2008	344.95	342.46	344.34	345.65	317.62	342.36	342.83	341.44	340.55	341.54	341.44			343.24
11-Sep-2008	344.59	342.26	344.10	345.09	316.54	342.19	342.55	341.10	340.52	341.30	341.10			344.57
20-Nov-2008	348.11	342.74			317.43	342.69	343.18	341.35	340.73	341.55	341.49			
24-Nov-2008			344.72	345.79										342.64
27-Apr-2009	345.53	343.03	345.91	346.26	318.13	342.56	343.59	342.08	340.61	342.00	342.28			344.38
22-Jun-2009	345.06	342.64	344.69	345.60	318.11	341.87	342.26	341.52	340.86	341.63	341.51			343.81
20-Aug-2009			344.11	344.93										343.18
24-Aug-2009	344.28	342.25			314.50	341.96	342.47	340.87	340.44	340.85	340.63			
10-Nov-2009	343.90	341.97	344.30	345.11	313.40	341.90	342.24	340.56	340.29	340.79	340.61			343.18
20-May-2010	344.89	342.66	344.81	345.87	312.17	342.56	343.05	341.06	340.70	341.77	341.17			343.92
20-Oct-2010	344.24	342.44	344.46	345.95	316.77	341.57	342.71		340.50	340.72	340.79			
18-Apr-2011	345.39	343.06	346.25	346.24	317.61	342.94	343.33	Decom	340.91	341.78	341.56			343.92
01-Nov-2011	343.34	342.26	344.46	345.68	315.65	342.21	342.58	Decom	340.73	341.22	341.02			
07-May-2012	344.98	342.84	344.95	345.28	316.55	342.70	343.32		340.90	341.52	341.60	335.76	339.32	
21-Nov-2012	344.85	342.46	344.46	345.69	316.61	342.65	342.75		340.78	341.29	341.20	334.85	338.33	
21-May-2013	345.11	342.90	345.33	346.98	317.46	342.62	343.15		340.94	341.54	341.57	336.17	339.52	343.08
13-Nov-2013	345.14	343.12	345.56	346.89	317.78	342.98	343.43		341.00	341.82	341.86	336.90	339.46	
10-May-2014		343.17	346.51	347.33		343.16	343.52		341.35	342.10	342.15	337.43	340.15	342.86
20-Nov-2014	344.91	342.81	346.58	346.66		343.06	343.35		341.03	341.55	341.50	336.60	339.54	343.04
11-May-2015	345.10	342.97	345.16	346.78	318.08	342.52	343.13		340.87	341.39	341.74	336.46	339.25	343.00
19-Nov-2015		342.52	345.07	346.29	317.09	342.32	342.97		340.66	341.24	341.15	336.00	338.90	342.84
01-May-2016	345.31	342.28	346.06	347.16	318.63	340.69	342.58		341.00	341.32	341.62	336.90	339.64	343.24
10-Aug-2016	344.48	341.61	344.15	345.55	318.51	341.37	341.22		340.22	340.28	340.60	336.00	338.65	342.63
01-Sep-2016	344.10	341.09	343.99	345.38	318.83	341.25	341.79		340.46	340.47	340.72	336.30	338.80	342.69
03-Nov-2016	343.70	341.00	343.92	345.17	317.48	341.18	341.08		340.24	340.12	340.38	335.83	338.36	342.64

Note: All Water Level in mASL

A2: Groundwater Elevations - - Closed Eastview Road Landfill Site

Monitor	54-I	60-I	60-II	60-III	90-I	90-II	91-I	92-I	93-I	94-I	95-I	96-I	96-II	86-2
Geologic Unit	**Bedrock**	**Upper Till**	**Upper Till**	**Lower Till**	**Lower Bedrock**	**Bedrock**	**Bedrock**	**Bedrock**	**Bedrock**	**Bedrock**	**Bedrock**	**Bedrock**	**Bedrock**	**Upper Till**
Date														
25-Apr-2017	345.51	342.82	345.82	347.37	318.70	341.76	342.03		341.27	341.61	340.94	337.35	340.07	343.14
10-Aug-2017	345.68	342.87	345.05	346.15	318.50	341.79N/A	342.45		340.72	341.06	341.42	336.69	339.25	343.16
28-Sep-2017	345.33	342.61	344.87	346.10	317.79	341.55	341.93		340.46	340.76	340.94	336.28	338.85	343.00
14-Nov-2017	344.34	341.79	344.42	345.61	318.24	340.84	342.07		340.62	340.89	341.05	336.18	338.98	342.96

Note: All Water Level in mASL

A3 : Performance Monitors Groundwater Elevations - Eastview Road Landfill

Date Monitor	04-Apr-17	16-Aug-17	13-Sept-17	20-Nov-17
C1-I	342.02	341.97	341.90	341.85
C1-II	342.39	342.27	342.22	342.15
C2-I	341.93	341.74	341.69	341.65
C2-II	342.32	342.12	342.03	341.92
C3-I	342.58	342.56	342.52	342.47
C5-I	342.90	342.60	342.48	342.27
C6-I	342.33	342.06	342.03	342.09
C6-II	342.50	341.26	342.21	342.18
C7-I	342.14	342.05	342.02	341.98
C8-I	342.47	342.32	342.27	342.25
C9-I	342.84	342.74	342.68	342.75
C9-II	342.91	342.84	342.78	342.80
C10-I	342.70	342.58	342.64	342.61
C10-II	342.52	342.45	342.46	342.48
C11-I	342.90	342.99	343.07	343.12
C11-II	342.98	343.06	343.09	343.02
C12-I	343.37	342.80	342.72	342.67
C13-I	343.16	342.99	342.95	342.88
C14-I	344.36	344.17	344.21	344.12
D1-I	342.28	341.70	341.55	341.63
D2-I	341.21	341.16	341.10	341.08
D3-I	341.07	340.75	340.55	340.40
D4-I	341.37	341.25	341.21	341.15
D5-I	342.36	342.14	342.08	342.04

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	5-III	13-I	14-IV	15-I	16-VII	16-VIII	19-I	20-I /IR	37-I	37-IR	50-I	53-I	54-I	90-I	90-II	91-I	92-I	93-I	94-I	95-I	94-I	95-I
1/13/1994							341.79					341.49	344.30									
1/20/1994	341.13	341.91		338.17			341.70	342.16	341.02		340.65	341.41	344.24									
2/17/1994	341.19	341.92		337.91			341.76	342.23	341.02		340.66	341.48	344.22									
3/16/1994	341.32	342.12		338.05			341.88	342.25	341.02		340.85	341.54	344.48									
4/12/1994	341.78	342.43		338.59			342.30	342.77	341.61		341.28	341.95	345.21									
4/20/1994	341.83	342.42		338.69			342.46	342.84	341.68		341.36	341.97	345.31									
5/16/1994	342.05	342.52		338.90			342.57	342.86	341.87		341.52	342.08	345.44									
6/18/1994	341.38	342.12		338.21			341.88	342.17	341.47		341.09	341.66	344.68									
6/21/1994	341.37	342.13		338.24			341.96	342.25	341.47		341.08	341.69	344.77									
7/18/1994	341.24	342.42		338.06			341.78	342.80	341.34		340.92	341.58	345.08									
8/15/1994	340.88	341.64		337.70			341.45	341.81	341.06		340.67	341.30	344.08									
8/24/1994	340.63	341.51		337.60			341.31	341.69	340.92		340.52	341.19	343.91									
9/23/1994	340.36	341.54		337.63			340.75	341.78	340.93		341.10	339.97	344.33									
10/19/1994	340.31	341.42		337.53			340.74	341.74	340.87		340.93	340.80	343.16									
10/26/1994	340.57	341.16		337.56			340.75	340.91	340.53		340.10	340.84	343.16									
11/16/1994	340.47	341.30		337.66			340.94	341.45	340.57		340.16	340.16	343.16									
12/19/1994	340.69	341.38		337.60			341.26	341.68	340.73		340.33	341.12	343.25									
1/18/1995	341.42	341.62		338.22			342.00	342.29	341.29		340.95	341.55	344.29									
2/15/1995	341.37	341.44		338.13			341.91	342.19	340.78		340.68	341.56	344.65									
3/13/1995	341.46	341.49		338.21			341.92	342.15	340.95		340.88	341.66	344.58									
4/11/1995	341.56	342.24		338.04			342.08	342.35	341.40		341.03	341.70	344.67									
4/18/1995	341.58	342.21		338.31			342.12	342.36	341.38		340.99	341.69	344.68									
5/11/1995	341.67	342.04		338.55			342.33	342.68	341.58		341.23	341.80	345.22									
6/16/1995	341.46	342.06		338.03			341.99	342.46	341.25		340.85	341.70	344.78									
6/21/1995	341.46	342.06		338.03			341.99	342.46	341.25		340.85	341.70	344.78									
7/17/1995	341.27	341.90		338.08			341.74	342.12	341.18		340.82	340.54	344.41									
8/15/1995	341.38	342.02		338.25			341.84	342.16	341.30		340.95	341.36	344.22									
8/21/1995	341.17	341.97		337.73			341.86	342.27	341.15		340.87	341.47	344.26									
9/23/1995	340.75	341.60		337.81			341.21	341.83	340.87		341.05	340.44	343.72									
9/28/1995																						
10/18/1995																						
10/19/1995	340.77	341.63		337.84			341.24	341.86	340.89		340.99	340.52	343.78									
11/11/1995																						
11/13/1995	341.59	342.15		338.34			342.07	342.32	341.36		341.64	341.73	344.26									
11/22/1995	341.96	342.32		338.67			342.25	342.58	341.64		341.34	341.99	344.82									
12/18/1995	341.68	342.25		338.26			342.21	342.46	341.50		341.17	341.87	344.84									
1/16/1996	341.12	341.91		337.83			341.72	342.08	341.13		340.78	341.43	344.39									

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
2/14/1996	341.33	342.15		337.93			342.06	342.43	341.39		341.03	341.63	344.87									
3/13/1996	341.28	342.14		337.94			342.03	342.39	341.37		341.02	341.62	344.86									
4/9/1996	341.62	342.28		338.34			342.30	342.63	341.59		341.27	341.79	345.27									
4/15/1996	341.62	342.28		338.34			342.30	342.63	341.59		341.27	341.79	345.27									
5/6/1996	342.00	342.57		339.00			342.58	343.01	341.97		341.59	342.08	345.57									
6/10/1996	342.05	342.44		339.00			342.47	342.82	342.04		341.65	342.13	345.31									
6/13/1996	342.05	342.44		339.00			342.47	342.82	342.04		341.65	342.13	345.31									
7/16/1996	341.77	342.35		338.87			342.22	342.64	341.94		341.52	341.96	345.07									
8/12/1996	341.40	342.09		338.51			341.96	342.41	341.59		341.27	341.72	344.75									
8/15/1996	341.40	342.09		338.51			341.96	342.41	341.59		341.27	341.72	344.75									
9/17/1996	341.80	342.32		338.67			342.12	342.49	341.75		341.34	341.92	344.79									
10/16/1996	341.80	342.39		338.66			342.24	342.63	341.78		341.39	341.91	344.91									
11/12/1996	341.82	342.45		338.75			340.40	342.42	341.79		341.46	341.90	345.01									
11/13/1996	341.82	342.45		338.75			340.40	342.42	341.79		341.46	341.90	345.01									
12/12/1996	341.75	342.41		338.49			340.26	342.41	341.71		341.45	341.85	344.92									
1/20/1997	341.78	342.45		338.56			340.26	342.55	341.88		341.61	341.92	345.01									
2/18/1997	341.67	342.32		338.32			340.17	342.42	341.76		341.48	341.83	344.80									
3/21/1997	342.09	342.64		338.94			340.62	342.83	342.20		341.92	342.12	345.44									
4/21/1997	342.07	342.66		339.04			340.90	342.86	342.29		341.97	342.06	345.48									
5/14/1997	342.03	342.64		339.04			340.97	342.80	342.28		341.88	342.16	345.41									
6/9/1997	341.66	342.43		338.74			340.53	342.37	341.86		341.51	341.84	344.98									
7/15/1997	341.33	342.06		338.52			340.17	341.90	341.61		341.26	341.63	344.47									
8/18/1997	340.87	341.47		337.72			339.69	341.21	341.51		340.71	341.20	343.80									
9/29/1997	341.00	341.71		338.25			340.08	341.57	341.21		340.88	341.33	343.64									
10/20/1997	340.75	341.44		337.91			339.91	341.35	340.99		340.66	341.15	343.21									
11/10/1997	341.20	341.89		338.25			340.26	341.65	341.24		340.91	341.50	343.54									
12/15/1997	341.36	341.96		338.08			340.57	342.01	341.26		340.99	341.59	343.88									
1/20/1998	341.78	342.33		338.37			340.94	342.49	342.03		341.40	341.91	344.87									
2/23/1998	341.77	342.37		338.45			340.98	342.54	342.04		341.42	341.67	344.98									
3/19/1998	341.81	342.47		338.50			341.10	342.68	342.18		341.52	341.89	345.34									
4/14/1998	341.89	342.50		338.72			341.01	342.60	342.29		341.61	342.03	345.32									
5/14/1998	341.69	342.33		338.51			340.73	342.31	342.05		341.37	341.82	344.91									
6/10/1998	341.04	341.91		337.81			339.98	341.74	341.59		340.89	341.45	344.21									
7/15/1998	341.06	342.03		338.22			340.03	341.82	341.52		340.83	341.47	344.14									
8/10/1998	340.58	341.42		337.36			339.30	341.16	341.20		340.54	341.05	343.51									
9/23/1998	340.07	340.80		337.10			338.77	340.48	340.74		340.03	340.63	342.62									
10/16/1998	340.08	340.80		337.35			338.73	340.32	340.70		340.02	340.61	342.47									

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
11/9/1998	340.00	340.69		337.31			338.72	340.21	340.60		339.91	340.43	342.22									
12/15/1998	340.04	341.20		337.32			339.07	340.45	340.62		339.97	340.62	342.34									
1/26/1999	339.98	341.01		336.99			339.03	340.42	340.45		339.82	340.58	342.33									
2/15/1999	340.44	341.61		337.29			339.59	341.32	343.04		340.28	340.90	343.22									
3/16/1999	340.71	341.79		337.73			340.17	341.70	341.10		340.48	341.13	343.88									
4/16/1999	340.82	341.98		337.83			340.33	341.89	341.19		340.64	341.25	344.26									
5/20/1999	340.57	341.83		337.68			339.75	341.69	341.02		340.48	341.06	344.20									
6/23/1999	340.52	341.71		337.98			339.83	341.70	340.91		340.34	341.01	344.06									
7/16/1999	340.40	341.78		337.99			339.76	341.68	340.89		340.33	341.00	344.03									
9/16/1999	340.03	341.37		337.52			339.75	341.10	340.56		339.98	340.66	343.23									
10/18/1999	340.42	341.65		337.95			340.13	341.50	340.77		340.23	340.92	343.34									
12/16/1999	341.00	341.93		337.95			339.81	342.19	341.18		340.67	341.33	344.20									
1/27/2000	340.59	341.78		337.68			340.47	341.97	341.01		340.49	341.13	344.23									
2/15/2000	340.25	341.54		337.28			340.26	341.73	340.92		340.27	340.81	343.99									
3/21/2000	340.70	341.95		337.84			340.80	342.27	341.11		340.57	341.08	344.81									
5/25/2000	341.07	342.30		338.35			341.21	342.65	341.55		340.98	341.52	345.40									
7/27/2000	341.31	342.26		338.74			340.98	342.52	341.76		341.18	341.69	345.08									
9/21/2000	340.81	341.86		338.03			340.46	341.77	341.37		340.78	341.18	344.31									
10/17/2000	340.80	341.81		338.02			340.44	341.75	341.35		340.75	341.18	344.12									
12/18/2000	340.64	341.85		337.77			340.56	341.95	341.22		340.57	341.13	344.22									
1/16/2001	340.58	341.84		337.56			340.50	342.09	341.14		340.50	341.08	344.27									
2/14/2001	340.96	342.12		337.99			341.06	342.53	341.44		340.91	341.51	345.13									
3/12/2001	340.93	342.10		337.93			341.00	342.58	341.47		340.94	341.41	345.04									
4/2/2001	341.10	342.15		338.16			341.28	342.72	341.71		341.18	341.52	345.42									
5/14/2001	340.87	342.05		338.05			340.96	342.36	341.53		340.92	341.36	345.01									
6/25/2001	340.54	341.95		337.69			340.67	342.11	341.27		340.67	341.26	344.59									
7/26/2001	340.14	341.40		337.36			340.06	341.54	340.90		340.31	340.78	344.07									
8/13/2001	339.79	341.11		337.07			339.54	341.15	N/A		339.96	340.47	343.66									
9/19/2001	339.96	341.24		337.54			339.69	340.83	N/A		340.03	340.59	343.19									
10/29/2001	340.71	341.81		337.98			340.58	341.67	N/A		340.52	341.13	343.85									
11/5/2001	340.83	341.83		338.02			340.71	341.82	N/A		340.58	341.22	344.10									
12/21/2001	341.24	342.24		338.39			341.28	342.46	N/A		341.03	341.54	345.07									
1/29/2002	341.13	342.16		338.17			341.19	342.44	N/A		340.94	341.46	345.02									
2/22/2002	341.26	342.28		338.32			341.42	342.67	N/A		341.11	341.60	345.38									
3/26/2002	341.13	342.22		338.31			341.25	342.63	341.64		341.08	341.52	345.36									
4/22/2002	341.37	342.38		338.60			341.46	342.79	341.96		341.41	341.68	345.52									
5/9/2002	341.62	342.46		338.88			341.58	342.78	342.09		341.48	341.82	345.51									

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
6/17/2002	341.47	342.34		338.67			341.38	342.62	341.99		341.39	341.75	345.19									
7/23/2002	340.62	341.65		337.78			340.51	341.79	341.30		340.69	341.07	344.36									
8/12/2002	340.43	341.49		337.68			340.29	341.59	341.11		340.48	340.92	343.92									
9/13/2002	339.93	340.93		337.27			339.70	340.96	340.69		340.06	340.53	343.33									
10/22/2002	339.88	341.00		337.20			339.92	340.97	340.59		340.01	340.50	343.07									
11/4/2002	339.99	341.10		337.36			339.98	341.07	340.57		340.06	340.57	343.05									
12/18/2002	340.11	341.31		337.41			340.06	341.23	340.77		340.08	340.61	343.12									
1/28/2003	340.19	341.39		337.45			340.26	341.32	340.72		340.05	340.64	343.37									
2/27/2003	340.08	341.31		337.33			340.23	341.27	340.68		339.93	340.55	343.36									
3/24/2003	340.61	341.75		337.64			340.74	341.70	340.87		340.35	341.07	344.08									
4/22/2003	341.06	342.09		338.34			341.20	342.30	341.24		340.64	341.35	344.99									
5/29/2003	341.22	342.36	339.28	338.52	338.81		341.33	342.50	341.41		340.90	341.49	345.11			343.04	340.92					
6/23/2003	340.87	342.16	339.32	338.16	338.63		340.74	342.20	341.12		340.56	341.21	344.72		342.03	342.70	340.54					
7/23/2003	340.56	341.66	336.71	337.67	338.64	314.51	340.73	341.91	340.85		340.33	340.94	344.32		341.71	342.31	340.31					
8/26/2003	340.13	341.29	336.09	337.15	337.51	313.52	340.36	341.47	340.53		339.99	340.64	343.75		341.34	341.87	339.96					
9/2/2003	340.11	341.24	336.07	337.11	337.42	313.51	340.31	341.46	340.52		339.98	340.60	343.75		341.30	341.83	339.94					
10/15/2003	340.15	341.44	336.17	337.36	339.01	313.74	340.49	341.49	340.52		339.99	340.66	343.58	314.01	341.37	341.83	339.93					
11/3/2003	340.60	341.65	336.59	337.79	339.45	316.43	340.92	341.85	340.81		340.31	340.88	343.93	316.76	341.82	342.23	340.27					
12/23/2003	341.44	343.23	337.79	338.53	340.10	318.60	341.55	342.52	341.53		341.03	341.61	345.11	318.98	342.38	342.97	341.00					
1/30/2004	341.08	341.94	337.10	338.08	339.62	316.07	341.12	342.19	341.37		340.84	341.49	344.65	316.40	342.19	342.53	340.75					
2/24/2004	340.90	341.70	336.38	337.57	339.20	313.58	341.21	342.21	341.29		340.63	341.22	344.53	313.83	342.12	342.65	340.66					
3/31/2004	341.53	342.29	337.53	338.56	339.84	317.15	341.83	342.79	341.92		341.38	341.78	345.61	317.50	342.59	343.28	341.51					
4/19/2004	341.44	342.27	337.56	338.47	339.66	317.47	341.68	342.74	341.92		341.38	341.69	345.41	317.89	342.48	343.22	341.55					
5/17/2004	341.60	342.40	338.19	338.91	340.27	318.77	341.64	342.75	342.07		341.50	341.79	345.43	319.28	342.53	343.22	341.64					
6/7/2004	341.17	342.12	337.66	338.45	339.60	317.81	341.21	342.23	341.78		341.21	341.55	344.85	317.94	342.12	342.67	341.32					
6/18/2004	341.30	342.27	337.77	338.63	339.72	318.10	341.33	342.31	341.90		341.30	341.68	345.03	318.14	342.25	342.87	341.40					
7/6/2004	341.17	342.12	337.66	338.45	339.60	317.81	341.21	342.23	341.78		341.21	341.55	344.85	317.94	342.12	342.67	341.32					
8/23/2004	340.87	341.84	337.91	338.23	339.65	317.95	340.80	341.88	341.44		340.84	341.38	344.36	318.00	341.79	342.23	340.92					
9/27/2004	340.53	341.78	337.97	338.12	339.61	317.45	340.35	341.66	341.19		340.68	341.17	344.15	317.96	341.30	342.06	340.78					
10/15/2004	340.43	341.78	337.91	337.99	339.37	316.99	340.48	341.64	341.19		340.63	341.13	343.52	317.11	341.47	341.99	340.69					
11/1/2004	340.41	341.73	337.74	337.84	339.23	316.18	340.66	341.58	341.17		340.57	341.09	343.25	316.63	341.63	341.95	340.64					
12/21/2004	341.41	342.21	338.36	338.45	339.80	318.35	341.36	342.38	341.67		341.15	341.63	344.82	318.94	342.35	342.80	341.20					
1/13/2005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A					
2/24/2005	341.63	342.36	338.49	338.59	339.39	318.76	341.59	342.52	341.58		341.48	341.82	345.17	319.31	342.51	343.01	341.56					
3/21/2005	341.61	341.79	338.42	338.58	339.23	317.27	341.64	342.73	341.80		341.52	341.82	345.35	317.93	342.54	343.12	341.65					
4/11/2005	341.55	341.27	338.36	338.56	339.17	317.05	341.67	342.69	342.09		341.52	341.82	345.47	317.27	342.57	343.19	341.69					
5/18/2005	341.44	342.22	338.39	338.36	339.99	316.83	341.64	342.61	341.92		341.37	341.73	345.27	317.18	342.48	343.08	341.46					

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
6/21/2005	341.15	342.04	338.16	337.73	339.58	317.05	341.25	342.21	341.55		341.00	341.47	344.73	317.55	342.14	342.62	341.00					
7/28/2005	340.64	341.56	337.72	337.66	339.25	315.47	340.67	341.64	341.15		340.60	341.13	344.09	315.78	341.71	342.06	340.63					
8/31/2005	340.63	341.49	337.65	337.51	338.99	314.96	340.51	341.38	340.91		340.33	340.92	343.68	315.32	342.72	341.77	340.44					
9/21/2005	340.15	341.33	337.57	337.62	339.34	314.96	340.42	341.26	340.74		340.19	340.75	343.42	315.34	341.29	341.60	340.16					
10/28/2005	340.30	341.54	337.55	337.49	339.38	314.63	340.63	341.55	340.78		340.25	340.85	343.42	315.03	341.54	341.86	340.22					
11/15/2005	340.51	341.65	337.50	337.48	339.37	314.57	340.86	341.48	340.84		340.35	341.04	343.63	314.99	341.75	342.08	340.21					
12/20/2005	340.99	341.87	338.16	337.87	339.42	314.51	341.21	342.18	341.16		340.61	341.35	344.63	314.88	342.20	342.60	340.62					
1/23/2006	341.06	342.17	338.40	338.14	339.77	315.34	341.33	342.41	341.40		340.95	341.34	345.21	315.66	342.10	342.86	341.02					
2/20/2006	t Comple	t Comple	t Comple	t Comple	t Comple	t Comple	t Comple	t Comple	t Comple		t Comple	t Comple	t Comple	t Comple	t Comple	t Comple	t Comple					
3/21/2006	341.51	342.35	338.60	338.53	339.98	317.11	341.79	342.77	341.98		341.40	341.81	345.54	317.42	342.62	343.27	341.52					
4/24/2006	341.48	342.31	338.49	338.53	339.95	316.81	341.84	342.75	341.91		341.48	341.74	345.42	317.68	342.71	343.22	341.81					
5/26/2006	341.44	342.27	338.72	338.61	340.13	317.14	341.74	342.70	341.90		341.34	341.76	345.28	317.50	342.53	343.14	341.44					
6/7/2006	341.43	342.24	338.95	338.58	340.07	316.98	341.56	342.71	341.89		341.33	341.76	345.41	317.29	342.62	339.60	341.45					
7/28/2006	341.18	342.13	338.54	338.35	339.92	317.11	341.25	342.34	341.61		341.05	341.53	344.89	317.49	342.26	342.75	341.14					
8/30/2006	340.81	341.88	338.46	338.16	339.70	316.39	340.96	N/A	341.40		340.81	341.25	344.43	316.66	341.97	342.34	340.98					
9/26/2006	340.96	341.97	338.30	338.24	339.93	316.06	341.11	341.99	341.36		340.82	341.34	344.35	316.45	342.04	342.37	340.90					
10/31/2006	341.62	342.36	338.59	338.40	340.16	316.91	341.86	342.76	341.95		341.45	341.86	345.34	317.27	342.71	343.21	341.58					
11/24/2006	341.63	342.37	338.61	338.41	340.13	317.13	341.93	342.84	342.02		341.50	341.91	345.39	317.50	342.73	343.29	341.60					
12/18/2006	341.71	342.38	338.87	338.63	340.46	317.67	341.97	342.94	342.16		341.63	341.95	345.47	318.08	342.81	343.40	341.77					
1/22/2007	341.54	342.34	338.76	338.52	340.32	317.44	341.58	342.81	342.10		341.62	341.79	345.32	317.82	342.44	343.28	341.74					
2/27/2007	341.35	342.06	338.36	338.28	340.02	317.06	341.36	342.44	341.88		341.25	341.74	344.74	317.49	342.38	343.13	341.37					
3/26/2007	341.74	342.39	338.44	338.47	340.21	317.06	341.93	342.84	342.16		341.62	342.00	345.46	317.45	342.82	343.34	341.77					
4/10/2007	341.72	342.42	338.60	338.51	340.28	317.49	341.96	342.95	342.18		341.69	341.97	345.56	317.91	342.84	343.42	341.85					
5/22/2007	341.62	342.34	338.63	338.62	340.41	317.38	341.72	342.74	342.07		341.52	341.87	345.33	317.76	342.66	343.20	341.63					
6/18/2007	341.14	342.16	338.24	338.20	340.10	316.81	341.11	342.25	341.57		341.11	341.50	344.86	317.19	342.18	342.63	341.25					
7/26/2007	340.59	341.52	337.82	337.75	339.86	316.12	340.50	341.49	341.16		340.60	341.05	344.15	316.49	341.67	341.87	340.72					
8/13/2007	340.33	341.35	337.63	337.59	339.67	315.81	340.01	341.18	340.96		340.41	340.88	343.85	316.14	341.34	341.52	340.49					
9/27/2007	339.93	340.99	337.30	337.23	339.35	315.04	339.78	340.62	340.55		340.05	340.52	343.09	315.43	340.98	340.92	340.09	339.91	340.33	340.08	340.33	340.08
10/22/2007	340.02	341.25	337.59	337.52	339.55	316.38	339.84	340.66	340.56		340.10	340.60	343.06	316.83	341.00	340.96	340.07	340.02	340.38	340.11	340.38	340.11
11/15/2007	340.12	341.29	337.63	337.62	339.69	316.47	340.06	340.91	340.61		340.14	340.70	343.08	316.96	341.08	341.13	340.23	340.10	340.45	340.18	340.45	340.18
12/14/2007	340.64	341.71	337.45	337.78	339.87	314.82	340.69	341.51	340.88		340.45	341.03	343.55	315.14	341.76	341.79	340.44	340.33	340.74	340.45	340.74	340.45
1/29/2008	341.21	342.08	337.73	338.18	340.09	315.03	341.48	342.39	341.50		341.06	341.50	344.81	315.32	342.40	342.82	341.13	340.75	341.30	341.09	341.30	341.09
2/25/2008	341.42	342.13	337.55	338.20	340.16	314.75	341.87	342.69	341.72		341.23	341.72	345.03	312.24	339.94	343.14	341.31	340.84	341.50	341.29	341.50	341.29
3/31/2008	341.43	342.12	337.30	338.15	340.12	315.20	341.92	342.81	341.84		341.35	341.76	345.16	315.47	342.74	343.26	341.48	340.84	341.58	341.41	341.58	341.41
4/29/2008	341.47	342.25	338.39	338.63	340.26	317.58	341.90	342.77	342.09		341.48	341.85	345.25	317.91	342.82	343.23	341.73	340.94	341.80	341.68	341.80	341.68
5/22/2008	341.54	342.32	338.45	338.84	340.43	317.70	341.91	342.84	342.08		341.58	341.85	345.27	318.07	342.67	343.27	341.67	340.75	341.80	341.62	341.80	341.62
6/18/2008	341.27	342.14	338.13	338.49	340.24	317.21	341.54	342.39	341.85		341.31	341.63	344.95	317.62	342.36	342.83	341.44	340.55	341.54	341.44	341.54	341.44

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
7/24/2008	341.42	342.10	337.99	338.23	340.18	314.90	341.61	342.45	341.88		341.41	341.82	344.86	315.22	342.62	342.83	341.41	340.72	341.57	341.42	341.57	341.42
8/20/2008	341.34	342.14	338.18	338.40	340.04	316.47	341.69	342.60	341.78		341.30	341.67	345.00	316.87	342.53	343.04	341.42	340.70	341.52	341.40	341.52	341.40
9/11/2008	341.13	341.94	338.16	338.21	339.80	316.08	341.38	342.16	341.50		341.02	341.45	344.59	316.54	342.19	342.55	341.10	340.52	341.30	341.10	341.30	341.10
10/30/2008	341.21	341.96	337.96	338.14	339.92	315.96	341.49	342.36	341.49		341.02	341.50	344.53	316.42	342.34	342.77	341.10	340.53	341.29	341.12	341.29	341.12
11/20/2008	341.57	342.05	338.23	338.32	340.02	316.84	341.86	342.23	341.66		341.32	341.75	348.11	317.43	342.69	343.18	341.35	340.73	341.55	341.49	341.55	341.49
12/27/2008	341.74	342.43	338.48	338.51	340.30	317.30	342.25	342.70	341.85		341.69	341.84	345.55	317.31	342.80	343.53	342.02	341.02	341.94	341.81	341.94	341.81
1/26/2009	341.56	342.15	338.11	338.46	340.19	316.90	341.83	342.75	341.96		341.45	341.81	344.94	317.39	342.69	342.20	341.59	340.47	341.69	341.59	341.69	341.59
2/25/2009	341.71	342.26	338.14	338.60	340.20	317.14	341.98	342.87	342.17		341.66	341.94	345.13	317.60	342.84	343.33	341.86	340.58	341.87	341.82	341.87	341.82
3/31/2009	341.76	342.33	338.18	338.73	340.02	317.57	342.03	342.91	342.34		341.77	341.95	345.31	317.52	342.89	343.34	341.99	340.62	341.95	341.92	341.95	341.92
4/27/2009	341.85	342.40	338.16	338.67	340.37	316.90	342.01	342.99			341.91	342.07	345.53	318.13	342.56	343.59	342.08	340.61	342.00	342.28	342.00	342.28
5/31/2009	341.72	342.38	338.69	338.86	340.34	318.04	341.86	Decom	342.59		341.79	341.93	345.19	318.53	342.74	343.32	341.89	341.05	341.97	341.93	341.97	341.93
6/22/2009	341.24	342.24	338.10	338.35	339.99	314.58	341.53	Decom	341.82		341.41	341.52	345.06	318.11	341.87	342.26	341.52	340.86	341.63	341.51	341.63	341.51
7/31/2009	341.08	341.95	338.12	338.02	339.83	314.40	341.18	Decom	341.48		341.11	341.43	344.43	316.52	342.18	342.46	341.23	340.72	341.35	341.26	341.35	341.26
8/24/2009	340.67	341.85	337.66	337.90	337.98	314.26	340.70	Decom	341.18		339.02	341.19	344.28	314.50	341.96	342.47	340.87	340.44	340.85	340.63	340.85	340.63
9/29/2009	340.34	341.55	336.77	337.73	339.42	313.56	340.78	Decom	341.02		340.54	340.90	343.93	313.87	341.64	341.96	340.61	340.25	340.76	340.64	340.76	340.64
10/27/2009	340.57	341.69	336.85	337.78	339.38	313.87	341.02	Decom	341.06		340.58	341.09	343.94	314.22	341.91	342.24	340.62	340.35	340.86	340.70	340.86	340.70
11/10/2009	340.51	341.55	336.66	337.64	339.64	313.67	341.06	N/A	340.85		340.49	340.92	343.90	313.40	341.90	342.24	340.56	340.29	340.79	340.61	340.79	340.61
12/8/2009	340.72	341.62	336.70	337.61	339.68	313.79	341.20		341.03		340.55	341.12	344.07	313.81	342.14	342.42	340.85	340.35	340.89	340.64	340.89	340.64
1/25/2010	340.75	341.62	336.67	337.62	339.67	313.81	341.18	345.78	341.03		340.58	341.13	344.08	313.82	342.14	342.41	340.84	340.35	340.90	340.65	340.90	340.65
2/26/2010	340.63	341.51	336.55	337.63	339.39	313.96	341.19	345.14	340.99		340.42	341.01	343.94	314.37	342.06	342.45	340.47	340.26	340.79	340.55	340.79	340.55
3/24/2010	340.80	341.66	336.66	337.78	339.54	314.18	341.34	345.76	340.99		340.23	341.11	344.06	314.59	342.20	342.55	340.59	340.32	340.88	340.63	340.88	340.63
4/18/2010	341.11	341.99	338.09	338.40	339.89	316.62	341.66	345.59	340.94		340.99	341.50	344.89	317.03	342.43	343.08	341.07	340.71	341.29	341.12	341.29	341.12
5/3/2010	341.23	341.97	336.88	338.25	340.04	314.25	341.71	345.53	341.34		340.97	341.54	344.89	312.17	342.56	343.05	341.06	340.70	341.77	341.17	341.77	341.17
6/1/2010	341.21	342.08	338.07	338.09	340.04	314.25	341.30	345.65	340.39		340.97	341.49	344.55	316.03	342.27	342.60	341.28	340.74	341.29	341.60	341.29	341.60
7/1/2010	341.19	342.01	338.05	338.06	340.01	314.31	341.31	345.62	341.34		341.00	341.51	344.52	316.04	342.25	342.56	341.30	340.75	341.26	341.56	341.26	341.56
8/1/2010	341.10	342.09	337.95	337.72	339.92	314.27	341.38	345.57	341.29		340.84	341.49	344.56	316.19	342.19	342.58	341.25	340.73	341.18	341.30	341.18	341.30
9/1/2010	341.04	342.07	337.99	338.08	339.91	314.24	341.39	345.42	341.13		340.10	341.46	344.44	316.39	342.05	342.66	341.19	340.68	341.09	341.14	341.09	341.14
10/1/2010	340.88	341.78	338.08	338.17	339.86	314.15	341.45	345.13	340.95		340.31	341.37	344.24	316.73	341.57	342.71	removed	340.50	340.72	340.79	340.72	340.79
11/10/2010	340.74	341.70	337.70	337.88	339.75	313.92	341.24	344.99	340.92		339.37	341.26	344.09	316.48	341.53	342.39	removed	340.37	340.76	340.72	340.76	340.72
12/16/2010	340.84	341.76	337.33	337.71	339.79	314.01	341.30	345.08	340.99		339.82	341.19	344.20	315.15	341.83	342.51	removed	340.40	340.82	340.74	340.82	340.74
1/24/2011	341.04	341.97	337.55	337.92	340.03	314.41	341.36	345.21	341.42		340.10	341.27	344.43	315.21	342.00	342.58	Decom	340.48	340.98	340.88	340.98	340.88
2/22/2011	341.23	342.10	337.61	338.10	340.14	314.60	341.59	345.44	341.68		340.24	341.49	344.64	315.69	342.21	342.81	Decom	340.56	341.19	341.04	341.19	341.04
3/14/2011	341.62	342.29	337.92	338.49	339.97	316.74	341.97	345.17	341.79		340.37	341.87	345.23	315.85	342.62	343.20	Decom	340.83	341.61	341.33	341.61	341.33
4/18/2011	341.81	342.36	338.30	338.82	339.73	317.93	342.20	345.63	341.95		341.39	342.07	345.39	317.61	342.94	343.33	Decom	340.91	341.78	341.56	341.78	341.56
5/23/2011	341.81	342.34	338.31	338.68	339.83	318.00	342.28	345.86	342.09		341.85	342.00	345.18	317.85	342.60	343.37	Decom	342.73	341.79	N/A	341.79	N/A
6/21/2011	341.59	342.28	338.22	338.37	339.96	317.97	342.02	345.77	342.14		341.97	341.78	344.99	317.64	342.14	343.53	Decom	341.13	341.81	341.76	341.81	341.76
7/18/2011	341.29	342.01	338.04	338.18	339.88	317.95	341.67	345.70	342.24		341.23	341.53	344.52	316.15	341.60	349.13	Decom	340.78	341.38	341.25	341.38	341.25

Note: All Water Level in mASL

(9d-1 Subrpt Detailed Bedrock WL new/EastvwEAC1/60565850/Apr-18)

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	5-III	13-I	14-IV	15-I	16-VII	16-VIII	19-I	20-I /IR	37-I	37-IR	50-I	53-I	54-I	90-I	90-II	91-I	92-I	93-I	94-I	95-I	94-I	95-I
8/17/2011	340.87	341.76	337.77	338.02	339.03	317.92	341.10	345.53	341.34		340.86	341.42	344.15	315.91	341.13	343.18	Decom	340.43	341.08	340.96	341.08	340.96
9/13/2011	340.65	341.64	337.72	337.81	338.85	316.87	341.27	345.39	341.03		340.83	341.36	343.61	315.70	341.41	343.03	Decom	340.39	341.07	340.79	341.07	340.79
10/10/2011	340.89	341.67	337.94	337.90	339.01	316.45	341.39	345.06	341.13		340.89	341.40	343.55	315.57	341.57	342.89	Decom	340.46	341.11	340.85	341.11	340.85
11/1/2011	341.20	341.72	338.07	337.76		316.29	341.46	344.96	341.34		340.98	341.52	343.34	315.65	342.21	342.58	Decom	340.73	341.22	341.02	341.22	341.02
12/2/2011	341.32	341.83	338.24	337.69	339.51	316.39	341.49	344.99	341.48		341.24	341.74	343.52	315.81	342.14	342.77	Decom	340.86	341.33	341.27	341.33	341.27
1/16/2012	341.64	341.95	338.07	338.21	339.86	316.63	341.70	345.09			341.32	341.76	345.13	315.91	342.76	342.92		340.90	341.42	341.42	341.42	341.42
2/9/2012	341.66	342.01	337.93	338.09	339.67	316.70	341.84	345.25		342.38	341.17	341.73	344.77	315.83	342.58	343.01		340.74	341.38	341.54	341.38	341.54
3/19/2012	341.71	342.10	338.02	338.19	339.61	316.85	341.89	345.39		342.43	341.26	341.79	344.94	316.55	342.67	342.97		340.92	341.45	341.62	341.45	341.62
4/17/2012	341.64	342.17	338.42	338.40	340.13	317.19	341.91	345.52		342.37	341.54	341.91	345.15	317.01	342.77	343.30		340.84	341.63	341.77	341.63	341.77
5/7/2012	341.56	342.23	338.10	338.90	339.71	316.80	341.94	345.76		342.21	341.24	341.81	344.98	316.55	342.70	343.32		340.90	341.52	341.60	341.52	341.60
6/8/2012	341.24	342.11	337.97	338.14	338.25	316.23	341.79	345.80		341.97	341.08	341.54	344.57	316.94	342.32	342.95		340.52	341.40	341.38	341.40	341.38
7/12/2012	341.04	341.98	337.90	338.12	339.80	315.80	341.42	343.30		341.86	341.01	341.32	344.49	316.45	342.16	342.79		340.30	341.28	341.14	341.28	341.14
8/14/2012	340.90	341.89	337.71	338.50	339.53	315.56	341.52	343.32		341.73	340.63	341.30	344.56	315.99	342.44	342.91		340.21	341.18	340.88	341.18	340.88
9/17/2012	340.82	341.97	338.02	338.36	339.57	315.80	341.31	343.11		341.50	341.12	341.33	344.51	315.95	342.35	342.97		340.17	341.06	340.86	341.06	340.86
10/3/2012	340.71	342.00	337.75	338.19	339.62	316.41	341.34	342.98		340.89	341.37	341.17	344.69	316.19	342.75	342.86		340.47	340.78	340.82	340.78	340.82
11/21/2012	341.38	342.03	337.81	338.04	339.65	316.52	341.46	342.79		341.32	340.96	341.64	344.85	316.61	342.65	342.75		340.78	341.29	341.20	341.29	341.20
12/19/2012	341.51	342.09	337.94	337.87	339.67	316.61	341.38	342.70		341.39	340.84	341.69	344.70	316.39	342.50	342.55		340.69	341.20	341.11	341.20	341.11
1/15/2013	341.39	342.04	337.84	337.94	339.60	316.33	341.46	342.65		341.47	341.03	341.64	344.75	316.23	342.44	342.51		340.66	341.24	341.16	341.24	341.16
2/11/2013	341.36	342.08	337.70	337.88	339.34	316.04	341.53	342.70		341.53	341.21	341.59	344.72	316.41	342.33	342.56		340.58	341.36	341.12	341.36	341.12
3/11/2013	341.41	342.15	337.67	337.99	339.26	315.97	341.65	342.81		341.50	341.28	341.67	344.84	316.62	342.42	342.63		340.70	341.50	341.29	341.50	341.29
4/17/2013	341.45	342.18	337.88	338.22	339.29	316.30	341.77	342.88		340.62	341.31	341.75	344.93	316.95	342.50	342.87		340.76	341.52	341.43	341.52	341.43
5/25/2013	341.48	342.26	338.09	338.60	339.31	316.30	341.98	342.96		341.70	341.33	341.80	345.11	317.46	342.62	343.15		340.94	341.54	341.67	341.54	341.67
6/25/2013	341.61	342.31	338.27	339.13	339.39	316.84	341.94	342.99		341.72	341.28	341.78	345.15	317.38	342.66	343.18		340.91	341.61	341.65	341.61	341.65
7/9/2013	341.70	342.27	338.23	338.54	339.47	316.72	341.80	342.94		341.62	341.21	341.74	345.18	317.32	342.62	343.15		340.88	341.59	341.70	341.59	341.70
7/30/2013	341.50									341.73	341.47	341.81						341.08	341.60	341.78	341.60	341.78
8/20/2013	341.63	342.12	338.16	338.45	339.80	316.61	341.84	342.89		341.51	341.22	341.71	345.21	317.25	342.59	343.09		340.84	341.65	341.75	341.65	341.75
9/11/2013	341.72	342.08	338.10	338.52	339.76	316.63	341.73	342.81		340.66	341.31	341.75	345.17	317.41	342.69	343.03		340.88	341.71	341.72	341.71	341.72
9/26/2013	341.67									341.74	341.35							341.01	341.59	341.68	341.59	341.68
10/16/2013	341.77	341.99	338.21	338.34	339.92	316.56	341.70	342.68		340.75	341.43	341.84	345.07	317.46	342.77	343.15		340.94	341.76	341.78	341.76	341.78
11/18/2013	341.83	341.82	338.34	338.43	340.07	316.42	341.55	342.64		341.93	341.62	342.06	345.14	317.78	342.98	343.43		341.00	341.82	341.86	341.82	341.86
12/23/2013	341.62	341.87	338.05	338.16	339.96	316.31	341.49	342.48		341.78	341.47	341.99	344.99	317.31	342.82	343.17		340.86	341.72	341.69	341.72	341.69
1/9/2014	341.55	341.92	337.97	338.09	339.81	316.27	341.31	342.43		341.67	341.35	341.68	344.89	317.15	342.36	342.65		340.76	341.21	341.39	341.21	341.39
2/10/2014	341.52	342.17	338.20	338.04	339.59	316.23	341.46	342.50		341.84	341.40	341.81	344.82	317.12	342.48	342.84		340.84	341.35	341.61	341.35	341.61
3/14/2014	341.69	342.36	338.39	338.22	339.66	316.39	341.77	342.74		342.09	341.22	342.09	344.93	317.27	337.64	343.07		340.99	341.71	341.78	341.71	341.78
4/8/2014	341.85	342.39	338.46	338.49	339.45	316.42	341.90	343.03		342.30	341.31	342.24	345.25	317.41	343.00	343.35		341.05	341.83	341.90	341.83	341.90
5/2/2014	342.11	342.57	338.68	339.21	339.28	316.51	342.34	343.16		342.71	341.25	342.41	345.60	317.70	343.16	343.52		341.35	342.10	342.15	342.10	342.15
6/13/2014	341.98	342.48	338.57	339.12	339.52	316.67	342.17	343.20		342.52	341.30	342.31	345.70	317.73	343.31	343.56		341.32	342.03	342.24	342.03	342.24

Note: All Water Level in mASL

(9d-1 Subrpt Detailed Bedrock WL new/EastvwEAC1/60565850/Apr-18)

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	5-III	13-I	14-IV	15-I	16-VII	16-VIII	19-I	20-I /IR	37-I	37-IR	50-I	53-I	54-I	90-I	90-II	91-I	92-I	93-I	94-I	95-I	94-I	95-I
7/15/2014	341.80	342.36	338.55	339.04	339.59	316.71	342.09	343.12		342.27	341.38	342.20	345.65	317.60	343.13	343.49		341.23	341.73	342.00	341.73	342.00
8/8/2014	341.49	342.19	338.32	338.90	339.47	316.59	342.04	343.01		341.71	341.46	342.00	345.38	317.36	343.20	343.36		341.01	341.65	341.64	341.65	341.64
9/3/2014	341.53	342.21	338.30	338.85	339.45	316.50	341.85	342.98		341.79	341.42	341.76	345.25	317.42	343.25	343.34		340.97	341.57	341.59	341.57	341.59
10/6/2014	341.49	342.13	338.22	338.88	339.54	316.42	341.72	342.82		341.76	341.46	341.85	345.17	317.31	343.17	343.15		341.05	341.69	341.42	341.69	341.42
11/12/2014	341.54	342.08	338.05	338.79	339.67	316.48	341.64	342.67		341.50	341.42	341.78	344.91	317.20	343.06	343.35		341.03	341.55	341.50	341.55	341.50
12/4/2014	341.47	342.05	337.94	338.57	339.60	316.40	341.52	342.69		341.57	341.37	341.66	345.03	317.09	342.85	343.20		340.94	341.41	341.59	341.41	341.59
1/5/2015	341.59	341.67	337.83	338.42	339.51	316.60	341.44	342.55		341.52	341.28	341.56	344.97	317.36	342.62	343.07		340.83	341.28	341.52	341.28	341.52
2/11/2015	341.69	341.84	337.90	338.31	339.45	316.85	341.57	342.49		341.65	341.20	341.46	345.05	317.51	342.44	342.99		340.69	341.33	341.57	341.33	341.57
3/22/2015	341.64	341.97	338.08	338.39	339.59	317.07	341.65	342.60		341.76	341.24	341.54	344.95	317.63	342.50	342.97		340.75	341.23	341.54	341.23	341.54
4/13/2015	341.52	342.10	338.17	338.52	339.76	317.30	341.71	342.72		341.70	341.26	341.59	345.01	317.78	342.39	343.05		340.81	341.31	341.62	341.31	341.62
5/2/2015	341.40	342.24	338.32	338.77	339.86	317.68	341.89	342.95		341.81	341.27	341.70	345.10	318.08	342.52	343.13		340.87	341.39	341.74	341.39	341.74
6/9/2015	341.44	342.50	338.49	338.94	340.17	317.60	342.17	343.04		341.67	341.33	341.74	345.25	318.03	342.57	343.07		340.64	341.60	341.60	341.60	341.60
7/21/2015	341.07	342.47	338.39	338.92	340.08	317.52	342.10	343.19		341.25	340.96	341.47	345.39	317.86	342.76	342.90		342.12	341.75	341.24	341.75	341.24
8/18/2015	340.94	342.43	338.15	338.87	340.00	317.22	341.96	343.03		341.27	340.80	341.37	345.14	317.64	342.64	342.82		340.34	341.61	341.13	341.61	341.13
9/13/2015	340.77	342.38	337.89	338.79	339.81	316.90	341.70	342.77		341.11	340.71	341.33	344.85	317.25	342.48	343.11		340.59	341.10	341.01	341.10	341.01
10/11/2015	341.02	342.35	337.87	338.70	339.91	316.82	341.64	342.69		341.17	340.84	341.46	344.80	317.19	342.55	342.65		340.54	341.12	341.04	341.12	341.04
11/17/2015	341.12	342.29	337.77	338.60	339.75	316.59	341.56	342.65		341.23	341.42	341.54	344.70	317.09	342.32	342.97		340.66	341.24	341.15	341.24	341.15
12/8/2015	341.32	341.97	337.70	338.54	339.59	316.67	341.45	342.45		341.27	341.20	341.42	344.63	317.04	342.40	342.87		340.57	341.13	341.20	341.13	341.20
1/18/2016	341.45	342.05	337.76	338.71	339.46	317.02	340.79	342.35		341.21	341.28	341.34	344.73	317.31	342.34	342.98		340.64	341.08	341.14	341.08	341.14
2/9/2016	341.29	342.36	337.92	338.91	339.60	317.22	340.92	342.50		341.33	341.45	341.38	344.79	317.56	342.38	343.09		340.68	341.19	341.30	341.19	341.30
3/7/2016	341.18	342.44	338.05	339.07	339.81	317.80	340.99	342.64		341.47	341.51	341.31	344.97	317.93	342.17	342.94		340.79	341.23	341.49	341.23	341.49
4/20/2016	340.97	342.50	338.43	339.03	339.92	318.12	341.04	342.30		341.59	341.59	341.24	345.31	318.63	341.69	342.58		341.00	341.82	341.62	341.82	341.62
5/11/2016	341.04	342.39	338.28	339.12	340.01	317.92	341.33	342.39		341.67	341.55	341.19	345.38	318.96	341.64	342.50		340.96	341.20	341.67	341.20	341.67
6/13/2016	340.55	342.00	337.93	338.80	339.73	317.74	340.90	342.21		341.29	341.13	341.04	345.15	319.33	341.75	342.37		340.67	341.05	341.23	341.05	341.23
7/18/2016	340.14	341.71	337.57	338.59	339.38	317.27	340.54	342.10		340.91	340.82	340.57	344.77	319.01	341.48	341.82		340.42	340.76	340.89	340.76	340.89
8/15/2016	339.81	341.57	337.24	338.26	339.25	317.02	340.22	341.96		340.57	340.43	340.25	344.48	318.51	341.37	341.22		340.22	340.28	340.60	340.28	340.60
9/7/2016	340.11	341.40	337.15	338.44	339.32	317.19	340.39	342.09		340.82	340.65	340.49	344.10	318.83	341.25	341.79		340.46	340.47	340.72	340.47	340.72
10/25/2016	339.97	341.47	337.30	338.71	339.44	317.04	340.62	342.34		340.71	340.53	340.40	344.15	318.30	341.30	341.43		340.41	340.38	340.64	340.38	340.64
11/14/2016	339.59	341.72	337.49	338.69	339.56	316.95	340.87	342.49		340.42	340.26	340.15	343.70	317.48	341.18	341.08		340.23	340.12	340.38	340.12	340.38
12/19/2016	339.85	341.69	337.27	338.50	339.49	316.73	340.94	342.22		340.49	340.22	340.21	343.89	317.23	341.45	341.25		340.29	340.43	339.91	340.43	339.91
1/16/2017	340.30	341.94	337.64	338.87	339.83	317.02	340.85	342.42		340.86	340.70	340.74	344.33	317.50	341.58	341.55		340.22	340.69	340.30	340.69	340.30
2/22/2017	340.85	342.37	337.95	339.06	340.10	317.37	341.26	342.57		341.20	341.08	341.06	344.67	317.93	341.79	341.89		340.59	341.00	340.56	341.00	340.56
3/13/2017	341.19	342.57	338.14	339.22	340.38	317.59	341.32	342.70		341.67	341.30	341.41	345.15	318.20	341.85	342.07		341.06	341.21	340.82	341.21	340.82
4/20/2017	341.39	342.59	338.22	339.26	340.57	317.74	341.37	342.77		341.86	341.35	341.62	345.35	318.54	341.80	342.15		341.20	341.44	340.89	341.44	340.89
5/11/2017	341.47	342.54	338.18	339.18	340.66	317.81	341.18	342.87		341.97	341.26	341.67	345.51	318.70	341.76	342.03		341.27	341.61	340.94	341.61	340.94
6/26/2017	341.15	342.59	338.37	339.31	340.81	317.90	341.30	343.05		341.79	341.50	341.57	345.85	318.79	342.00	342.19		341.12	341.73	341.10	341.73	341.10
7/19/2017	340.82	342.44	338.58	339.02	340.95	317.95	341.37	342.80		341.57	341.38	341.38	346.00	318.66	342.15	342.50		340.97	341.43	341.28	341.43	341.28

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
8/8/2017	340.64	342.25	338.65	338.81	340.66	317.87	341.09	342.65		341.26	341.13	341.02	345.67	318.50	341.79	342.45		340.70	341.06	341.42	341.06	341.42
9/26/2017	340.33	342.05	338.48	338.57	340.45	317.16	341.41	342.53		340.98	340.74	340.77	345.33	317.79	341.55	341.93		340.46	340.76	340.94	340.76	340.94
10/19/2017	340.28	342.17	338.37	338.39	340.24	317.32	341.56	342.67		340.86	340.62	340.72	344.95	318.01	341.24	341.78		340.38	340.83	341.00	340.83	341.00
11/14/2017	340.57	342.19	338.18	338.65	339.87	317.56	341.61	342.75		341.06	340.82	340.96	344.34	318.24	340.84	342.07		340.62	340.89	341.05	340.89	341.05
12/5/2017	340.83	342.24	337.95	338.57	339.76	317.43	341.49	342.89		340.77	340.73	341.06	344.20	318.18	340.95	341.75		340.54	340.84	340.90	340.84	340.90

Note: All Water Level in mASL

(9d-1 Subrpt Detailed Bedrock WL new/EastvwEAC1/60565850/Apr-18)

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Lower Till Locations			
Monitor Date	**11-III**	**16-VI**	**53-II /IIR**	**60-I**
1/13/1994	343.28	341.93	340.53	342.50
1/20/1994				
2/17/1994				
3/16/1994	343.40	342.03	337.28	342.36
4/12/1994	343.77	342.26	340.02	342.77
4/20/1994	343.85	342.37	340.37	342.90
5/16/1994	343.96	342.13	339.46	343.02
6/18/1994	343.52	341.73	341.46	342.30
6/21/1994	343.60	341.77	341.35	342.42
7/18/1994	343.48	341.61	340.37	342.24
8/15/1994	343.28	341.43	341.15	341.86
8/24/1994	343.20	341.33	341.26	341.74
9/23/1994	343.39	341.39	340.76	341.25
10/19/1994	342.82	341.20	340.72	341.15
10/26/1994	343.49	341.25	340.81	341.16
11/16/1994	342.92	341.39	340.85	341.45
12/19/1994	343.05	341.54	341.06	341.78
1/18/1995	343.42	342.32	341.50	342.35
2/15/1995	343.47	341.81	341.68	342.30
3/13/1995	343.54	342.11	341.74	342.22
4/11/1995	343.54	341.87	341.74	342.45
4/18/1995	343.49	341.86	341.80	342.48
5/11/1995	343.76	341.93	341.73	342.75
6/16/1995	343.37	341.73	341.37	342.50
6/21/1995	343.37	341.73	341.37	342.50
7/17/1995	343.45	341.74	341.36	342.17
8/15/1995	343.48	342.05	341.51	342.26
8/21/1995	343.66	341.75	341.39	342.36
9/23/1995				
9/28/1995	343.41	341.55	341.01	341.51
10/18/1995	343.42	341.56	341.03	341.53
10/19/1995				
11/11/1995	343.61	342.15	341.16	342.34
11/13/1995	343.56	342.21	341.50	342.35
11/22/1995				
12/18/1995	343.66	341.87	338.56	342.76
1/16/1996	343.36	341.70	340.83	342.31
2/14/1996	343.75	342.06	341.56	342.54
3/13/1996	343.64	341.96	341.76	342.47
4/9/1996	343.81	342.13	341.76	342.73
4/15/1996	343.81	342.13	341.76	342.73
5/6/1996	344.18	342.23	337.11	343.08
6/10/1996	344.02	342.21	340.99	342.90
6/13/1996	344.02	342.21	340.99	342.90
7/16/1996	343.89	342.01	338.83	342.70
8/12/1996	343.96	341.78	340.84	342.49
8/15/1996	343.96	341.78	340.84	342.49
9/17/1996	343.80	342.06	338.35	342.57
10/16/1996	343.74	342.02	340.87	342.65
11/12/1996	343.84	342.06	341.43	342.64
11/13/1996	343.84	342.06	341.43	342.64

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Lower Till Locations			
Monitor Date	**11-III**	**16-VI**	**53-II /IIR**	**60-I**
12/12/1996	343.70	342.05	339.31	342.58
1/20/1997	343.90	342.04	341.52	342.83
2/18/1997	343.79	341.98	341.80	342.59
3/21/1997	344.12	342.19	341.98	342.95
4/21/1997	344.29	342.16	342.06	342.98
5/14/1997	344.25	342.19	335.48	342.92
6/9/1997	343.98	341.91	340.11	342.51
7/15/1997	343.63	341.58	338.50	342.01
8/18/1997	343.22	341.50	340.67	341.36
9/29/1997	343.24	341.49	339.43	341.74
10/20/1997	343.08	341.42	340.62	341.53
11/10/1997	343.38	341.78	341.04	341.77
12/15/1997	343.38	341.79	339.57	342.17
1/20/1998	343.81	342.02	341.43	342.53
2/23/1998	343.69	342.18	341.77	342.61
3/19/1998	343.85	342.13	341.85	342.77
4/14/1998	343.89	341.98	341.91	342.74
5/14/1998	343.67	341.86	339.18	342.40
6/10/1998	343.41	341.88	340.83	341.86
7/15/1998	343.50	341.59	339.20	341.97
8/10/1998	343.15	341.31	340.62	341.28
9/23/1998	342.78	340.91	339.67	340.58
10/16/1998	342.71	340.90	340.51	340.41
11/9/1998	342.64	340.89	340.85	340.35
12/15/1998	342.78	341.44	339.04	340.56
1/26/1999	342.75	341.35	340.90	342.78
2/15/1999	343.09	341.82	341.22	343.10
3/16/1999	343.33	341.79	341.48	341.81
4/16/1999	343.42	341.87	341.59	342.02
5/20/1999	342.80	341.69	339.71	341.77
6/23/1999	342.67	341.50	341.01	341.77
7/16/1999	342.75	341.52	338.10	341.79
9/16/1999	342.42	341.42	338.60	341.21
10/18/1999	342.63	341.59	340.65	341.64
12/16/1999	342.88	341.87	339.23	342.27
1/27/2000	342.79	341.70	341.27	342.05
2/15/2000	342.59	341.60	341.41	341.82
3/21/2000	343.03	341.92	341.61	342.35
5/25/2000	343.36	342.05	340.35	342.71
7/27/2000	343.34	341.83	339.97	342.58
9/21/2000	342.93	341.52	339.90	341.84
10/17/2000	342.81	341.50	340.99	341.82
12/18/2000	342.76	341.72	340.15	342.06
1/16/2001	342.72	341.70	341.21	342.20
2/14/2001	343.22	342.02	341.73	342.03
3/12/2001	343.09	342.02	341.75	342.65
4/2/2001	343.51	342.15	341.75	342.78
5/14/2001	343.26	341.85	340.39	342.42
6/25/2001	343.22	341.69	341.41	342.19
7/26/2001	342.79	341.41	339.24	341.63
8/13/2001	342.61	341.28	340.20	341.23

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Lower Till Locations			
Monitor Date	**11-III**	**16-VI**	**53-II /IIR**	**60-I**
9/19/2001	342.54	341.46	339.99	340.91
10/29/2001	343.08	341.74	341.16	341.77
11/5/2001	343.07	341.79	341.19	341.94
12/21/2001	343.32	342.01	340.61	342.53
1/29/2002	343.13	341.94	341.54	342.50
2/22/2002	343.40	342.08	341.71	342.72
3/26/2002	343.45	341.97	341.76	342.68
4/22/2002	343.58	342.12	341.78	342.87
5/9/2002	343.69	342.02	337.69	342.84
6/17/2002	343.54	341.99	341.05	342.67
7/23/2002	342.99	341.46	340.08	341.88
8/12/2002	342.87	341.31	340.68	341.70
9/13/2002	342.50	340.92	339.00	341.06
10/22/2002	342.45	341.20	340.84	341.16
11/4/2002	342.48	341.20	340.93	341.28
12/18/2002	342.50	341.38	340.03	341.44
1/28/2003	342.46	341.46	341.06	341.52
2/27/2003	342.42	341.43	341.19	341.43
3/24/2003	342.87	341.97	341.28	341.81
4/22/2003	343.18	342.02	341.48	342.37
5/29/2003	343.28	341.97	339.97	342.57
6/23/2003	343.14	341.77	341.05	342.46
7/23/2003	342.74	341.51	339.09	342.01
8/26/2003	342.55	341.31	340.81	341.61
9/2/2003	342.52	341.30	340.88	341.58
10/15/2003	342.47	341.55	340.43	341.64
11/3/2003	342.54	341.77	341.14	341.84
12/23/2003	343.21	341.95	342.34	342.58
1/30/2004	343.09	341.76	342.04	342.31
2/24/2004	342.93	341.71	341.83	342.30
3/31/2004	343.62	342.27	342.54	342.82
4/19/2004	343.64	342.03	342.16	342.75
5/17/2004	343.71	342.00	342.21	342.80
6/7/2004	343.35	341.77	342.50	342.32
6/18/2004	343.47	341.83	342.33	342.40
7/6/2004	343.35	341.77	342.50	342.32
8/23/2004	343.16	341.64	342.11	341.94
9/27/2004	343.00	341.56	342.10	341.79
10/15/2004	342.94	341.59	342.24	341.77
11/1/2004	342.85	341.62	342.44	341.73
12/21/2004	343.26	341.92	342.45	342.34
1/13/2005	N/A	N/A	N/A	N/A
2/24/2005	343.51	342.11	342.16	342.70
3/21/2005	343.51	342.11	342.16	342.70
4/11/2005	343.89	342.19	342.12	342.75
5/18/2005	343.56	341.96	339.99	342.67
6/21/2005	343.26	341.70	341.32	342.28
7/28/2005	342.85	341.43	339.76	341.77
8/31/2005	342.76	341.47	341.51	341.47
9/21/2005	342.58	341.23	337.29	341.39
10/28/2005	342.66	341.55	341.59	341.70

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Lower Till Locations			
Monitor Date	**11-III**	**16-VI**	**53-II /IIR**	**60-I**
11/15/2005	342.77	341.64	342.29	341.64
12/20/2005	343.03	341.82	342.42	342.27
1/23/2006	343.41	342.09	342.54	342.45
2/20/2006	Not Completed	Not Completed	Not Completed	Not Completed
3/21/2006	343.82	342.07	342.50	342.83
4/24/2006	343.61	341.97	342.43	342.79
5/26/2006	343.64	341.99	342.22	342.75
6/7/2006	343.56	341.98	342.13	342.76
7/28/2006	343.37	341.87	342.20	342.43
8/30/2006	343.13	342.10	342.09	342.05
9/26/2006	343.03	341.73	342.46	342.09
10/31/2006	343.70	342.12	342.63	342.80
11/24/2006	343.61	342.12	342.84	342.89
12/18/2006	343.80	342.06	342.55	342.99
1/22/2007	343.75	341.99	342.28	342.91
2/27/2007	343.37	341.80	342.02	342.51
3/26/2007	343.85	342.14	342.63	342.91
4/10/2007	343.94	342.07	342.65	343.02
5/22/2007	343.74	341.96	342.40	342.81
6/18/2007	343.31	341.61	339.49	342.28
7/26/2007	342.79	341.22	341.42	341.57
8/13/2007	342.63	341.08	341.23	341.21
9/27/2007	342.27	340.82	341.24	340.70
10/22/2007	342.29	340.98	341.32	340.75
11/15/2007	342.29	341.12	341.27	341.08
12/14/2007	342.69	341.64	341.53	341.67
1/29/2008	343.33	341.92	341.87	342.46
2/25/2008	343.65	341.99	341.87	342.77
3/31/2008	343.70	342.02	341.88	342.87
4/29/2008	343.98	341.97	341.94	342.85
5/22/2008	343.76	341.93	341.71	342.92
6/18/2008	343.54	341.83	341.64	342.46
7/24/2008	343.46	342.14	341.73	342.57
8/20/2008	343.48	341.87	341.87	342.68
9/11/2008	343.15	341.77	341.81	342.26
10/30/2008	343.06	341.77	341.74	342.45
11/20/2008	343.45	341.87	341.79	342.74
12/27/2008	343.81	342.08	341.91	343.11
1/26/2009	343.50	341.84	341.86	342.82
2/25/2009	343.78	341.93	341.89	342.93
3/31/2009	343.78	341.98	341.88	342.98
4/27/2009	343.85	342.06	339.57	343.03
5/31/2009	343.72	341.93	341.83	342.87
6/22/2009	343.91	341.80	341.72	342.64
7/31/2009	343.15	341.62	341.67	342.21
8/24/2009	343.03	341.53	341.61	342.25
9/29/2009	342.75	341.30	341.34	341.72
10/27/2009	342.82	341.66	341.55	342.02
11/10/2009	342.81	341.67	341.57	341.97
12/8/2009	342.95	341.68	341.45	342.24
1/25/2010	342.86	341.60	341.66	342.28

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Lower Till Locations			
Monitor Date	**11-III**	**16-VI**	**53-II /IIR**	**60-I**
2/26/2010	342.85	341.70	341.62	342.27
3/24/2010	342.92	341.86	341.64	342.30
4/18/2010	343.94	341.85	341.79	342.64
5/3/2010	343.38	341.63	341.36	342.66
6/1/2010	343.10	341.79	341.79	342.23
7/1/2010	343.11	341.76	341.77	342.22
8/1/2010	343.08	341.78	341.73	342.25
9/1/2010	343.05	341.80	341.65	342.34
10/1/2010	342.99	341.82	341.48	342.44
11/10/2010	342.91	341.72	341.49	342.35
12/16/2010	342.97	341.74	341.54	342.37
1/24/2011	343.06	341.79	341.65	342.42
2/22/2011	343.30	341.86	341.63	342.51
3/14/2011	343.61	341.91	341.59	342.75
4/18/2011	343.75	342.00	341.78	343.06
5/23/2011	343.64	341.97	341.76	343.08
6/21/2011	343.58	341.84	341.75	343.01
7/18/2011	343.52	341.64	341.73	342.93
8/17/2011	342.87	341.38	341.61	342.50
9/13/2011	342.81	341.31	341.57	342.05
10/10/2011	342.91	341.51	341.59	342.23
11/1/2011	343.14	341.63	341.64	342.26
12/2/2011	343.33	341.71	341.73	342.49
1/16/2012	343.39	341.97	341.89	342.63
2/9/2012	343.46	342.05	341.89	342.71
3/19/2012	343.64	342.03	341.94	342.79
4/17/2012	343.88	342.00	341.85	342.87
5/7/2012	342.98	341.91	341.76	342.84
6/8/2012	343.34	341.75	341.61	342.01
7/12/2012	343.26	341.69	341.65	341.90
8/14/2012	343.15	341.81	341.54	342.05
9/17/2012	343.24	341.75	341.70	342.00
10/3/2012	343.18	341.77	341.77	342.07
11/21/2012	343.35	341.82	341.89	342.46
12/19/2012	343.31	341.91	341.78	342.38
1/15/2013	343.35	341.85	341.74	342.42
2/11/2013	343.27	341.85	341.74	342.42
3/11/2013	343.32	341.87	341.69	342.65
4/17/2013	343.35	341.75	341.71	342.79
5/25/2013	343.43	341.94	341.80	342.90
6/25/2013	343.45	341.90	341.74	342.96
7/9/2013	343.48	341.93	341.76	342.95
7/30/2013				
8/20/2013	343.55	341.96	341.81	342.92
9/11/2013	343.51	342.01	341.79	342.89
9/26/2013				
10/16/2013	343.62	341.98	341.89	342.97
11/18/2013	343.72	342.05	341.86	343.12
12/23/2013	343.60	341.93	341.67	342.99
1/9/2014	343.39	341.71	341.64	342.57
2/10/2014	343.36	341.76	341.69	342.75

Note: All Water Level in mASL

A4 : Selected Bedrock and Lower Till Groundwater Elevations - Eastview Road Landfill Site

	Lower Till Locations			
Monitor Date	**11-III**	**16-VI**	**53-II /IIR**	**60-I**
3/14/2014	343.56	341.81	341.73	342.82
4/8/2014	343.67	341.89	341.78	343.00
5/2/2014	343.99	342.04	341.94	343.17
6/13/2014	343.95	342.11	342.02	343.20
7/15/2014	343.83	342.25	341.98	343.23
8/8/2014	343.78	342.08	342.05	343.19
9/3/2014	343.84	341.93	341.94	343.03
10/6/2014	343.68	341.91	341.70	342.96
11/12/2014	343.52	341.72	341.45	342.81
12/4/2014	343.56	341.70	341.57	342.84
1/5/2015	343.48	341.68	341.51	342.78
2/11/2015	343.40	341.77	341.47	342.86
3/22/2015	343.29	341.75	341.56	342.91
4/13/2015	343.34	341.81	341.65	342.95
5/2/2015	343.36	341.92	341.72	342.97
6/9/2015	343.30	342.05	341.83	342.91
7/21/2015	343.45	342.18	341.63	343.01
8/18/2015	343.41	342.13	341.89	342.77
9/13/2015	343.26	342.01	341.77	342.58
10/11/2015	343.28	341.79	341.75	342.61
11/17/2015	343.32	341.66	341.91	342.52
12/8/2015	343.29	341.63	341.79	342.54
1/18/2016	343.26	341.71	341.71	342.46
2/9/2016	343.44	341.78	341.75	342.53
3/7/2016	343.51	341.99	341.87	342.32
4/20/2016	343.66	342.05	341.94	342.28
5/11/2016	343.74	341.98	342.00	342.14
6/13/2016	343.52	341.83	341.79	342.03
7/18/2016	343.36	341.69	341.63	341.84
8/15/2016	343.04	341.53	341.41	341.61
9/7/2016	342.99	341.28	341.35	341.09
10/25/2016	343.08	341.35	341.43	341.11
11/14/2016	342.87	341.16	341.40	341.00
12/19/2016	343.03	341.47	341.53	341.48
1/16/2017	342.96	341.40	341.45	341.88
2/22/2017	343.28	341.58	341.71	342.23
3/13/2017	343.59	341.84	341.95	342.55
4/20/2017	343.82	342.07	342.03	342.90
5/11/2017	343.96	342.22	342.01	342.82
6/26/2017	343.81	342.00	342.12	342.95
7/19/2017	343.64	341.85	341.84	343.11
8/8/2017	343.48	341.58	341.60	342.87
9/26/2017	343.20	341.66	341.51	342.61
10/19/2017	343.14	341.79	341.64	342.28
11/14/2017	343.08	341.71	341.69	341.79
12/5/2017	343.16	341.83	341.60	341.90

Note: All Water Level in mASL

A5 : Routine Leachate Groundwater Elevations - Eastview Road Landfill Site

Monitor	1-I/1-IR	51-I/51-IR	59-I	67-I	65-I	51-II	52-I	55-I/55-IR	56-I/56-IR	57-I	58-I	61-I/IR	63-I	66-I/IR	68-I	69-I
Geologic Unit	Waste				Fill/ Waste	Outwash										
Date																
21-Jun-1993	342.73	346.81					341.89									
22-Jun-1993	342.80	346.83					341.97									
23-Jun-1993	342.77	346.83					341.95									
24-Jun-1993	342.65	346.78					341.73									
25-Jun-1993	342.78	346.80					341.82									
28-Jun-1993	342.72	346.81					341.80									
29-Jun-1993	342.73	346.81					341.78									
30-Jun-1993	342.44	346.78					342.09									
02-Jul-1993	342.45	346.79					341.72									
08-Jul-1993	342.36	345.76					341.72									
16-Jul-1993	342.35	345.74					341.71									
22-Jul-1993	342.37	345.89					341.72									
08-Aug-1993	342.44	346.44					341.75									
18-Aug-1993	342.30	346.62					341.82									
24-Aug-1993			345.38					342.34	340.71	341.90	341.87					
25-Aug-1993	342.22	346.28	343.70				341.85	342.28	341.73	341.92	341.85					
27-Aug-1993			343.68					342.31	341.81	342.04	341.99					
30-Aug-1993	342.33	346.39	343.69				341.87	342.40	341.91	342.19	342.20					
31-Aug-1993	342.37	346.67	343.73				341.87	342.42	341.93	342.23	342.26					
01-Sep-1993	342.33	345.94	343.69				341.87	342.38	341.91	342.22	342.26					
02-Sep-1993	342.34	346.27	343.70				341.93	342.41	341.96	342.26	342.30					
03-Sep-1993	342.38	346.37	343.76				341.97	342.45	341.99	342.32	342.36					
07-Sep-1993	342.50	346.49	343.71				342.08	342.60	342.05	342.44	342.44					
08-Sep-1993	342.56	346.52	343.75				342.12	342.64	342.10	342.45	342.50					
09-Sep-1993	342.59	347.14	343.75				342.14	342.67	342.06	342.43	342.41					
10-Sep-1993	342.55	347.13	343.77				342.08	342.60	341.93	342.30	342.24					
13-Sep-1993	342.48	347.09	343.75				341.93	342.54	341.85	342.03	341.92					
14-Sep-1993	342.40	347.14	343.80			341.49	341.87	342.54	341.85	342.00	341.90	341.70				
15-Sep-1993	342.42	346.97	343.80			342.06	341.87	342.44	341.78	342.04	341.99	341.90				
16-Sep-1993	342.47	347.18	343.81			342.23	341.86	342.46	341.80	342.12	342.07	342.01				
17-Sep-1993	342.46	347.18	343.87			342.16	341.86	342.46	341.80	341.97	341.89	342.09				
20-Sep-1993	342.39	347.27	343.89			342.19	341.85	342.40	341.78	341.89	341.82	342.18				
21-Sep-1993	342.35	347.33	343.95			342.09	341.85	342.38	341.76	341.88	341.82	342.18				
22-Sep-1993	342.33	347.34	343.92			342.09	341.87	342.34	341.75	341.86	341.79	342.20				
23-Sep-1993	342.31	347.32	344.00			342.05	341.86	342.35	341.75	341.87	341.82	340.20				
24-Sep-1993	342.27	347.38	343.92			341.88	341.86	342.34	341.72	341.73	341.78	340.49				
27-Sep-1993	342.26	347.43	343.95			341.96	341.92	342.28	341.74	341.85	341.78	341.30				
28-Sep-1993	342.20	347.47	344.02			342.05	341.85	342.23	341.70	341.80	341.77	341.49				
29-Sep-1993	342.26	347.43	344.01			342.11	341.86	342.19	341.68	341.78	341.76	341.67				
30-Sep-1993	342.23	347.39	343.96			342.08	341.83	342.20	341.69	341.78	341.75	341.78				
01-Oct-1993	342.32	347.42	344.02			342.02	341.78	342.18	341.73	341.83	341.77	341.83				
04-Oct-1993	342.23	347.49	344.35			342.02	341.75	342.25	341.68	341.82	341.76	341.98				
05-Oct-1993	342.12	347.49	344.52			342.13	341.83	342.17	341.63	341.74	341.75	342.03				
06-Oct-1993	342.17	347.45	344.17			342.13	341.79	342.19	341.67	341.77	341.75	342.03				
07-Oct-1993	342.18	347.46	344.11			341.99	341.73	342.22	341.70	341.81	341.76	342.02				
08-Oct-1993	342.16	347.51	344.13			342.03	341.76	342.22	341.70	341.82	341.78	342.05				

Note: All Water Level in mASL

Monitor 55-I was replaced by Monitor 55-IR in September 2001. 55-IR was replace in April 2007

Monitor 61-I and 66-I were replaced by Monitors 61-IR and 66-IR in April 2007.

A5 : Routine Leachate Groundwater Elevations - Eastview Road Landfill Site

Monitor	1-I/1-IR	51-I/51-IR	59-I	67-I	65-I	51-II	52-I	55-I/55-IR	56-I/56-IR	57-I	58-I	61-I/IR	63-I	66-I/IR	68-I	69-I
Geologic Unit	Waste				Fill/ Waste	Outwash										
Date																
12-Oct-1993	342.24	347.55	344.22			342.10	341.73	342.24	341.68	341.82	341.77	342.07				
13-Oct-1993	342.14	347.58	344.29			342.14	341.80	342.15	341.63	341.73	341.78	342.08				
14-Oct-1993	342.13	347.52	344.77			342.05	341.80	342.17	341.65	341.75	341.76	342.07				
15-Oct-1993	342.18	347.59	344.57			342.02	341.76	342.20	341.65	341.77	341.77	342.07				
18-Oct-1993	342.27	347.57	344.26			341.90	341.76	342.42	341.63	341.77	341.82	342.05				
19-Oct-1993	342.31	347.52	344.16			342.03	341.81	342.54	341.66	341.82	341.84	342.08				
20-Oct-1993	342.39	347.52	344.23			342.04	341.75	342.59	341.69	341.85	341.85	342.09				
21-Oct-1993	342.51	347.69	344.47			341.33	341.72	342.65	341.68	341.88	341.87	340.55				
25-Oct-1993	342.42	347.69	344.37			341.70	341.78	342.57	341.65	341.82	341.87	341.27				
26-Oct-1993	342.50	347.71	344.39			341.88	341.75	342.62		341.84	341.86	341.45				
27-Oct-1993	342.39	347.77	344.98			342.02	341.79	342.59		341.88	341.87	341.64				
28-Oct-1993	342.46	347.81	344.49			341.99	341.80	342.59		341.89	341.89	341.81				
29-Oct-1993	342.48	347.88	344.68			341.72	341.79	342.55		341.87	341.91	341.95				
01-Nov-1993	342.16	347.83	344.02			341.73	341.81	342.45	341.64	342.01	341.88	342.08				
03-Nov-1993	342.38	347.90	344.45			341.84	341.71	342.48	341.70	341.87	341.91	342.01				
04-Nov-1993	342.30	347.92	344.48			342.00	341.70	342.44	341.68	341.85	341.91	341.99				
05-Nov-1993	342.26	348.00	345.07			341.95	341.73	342.48	341.72	341.89	341.92	340.92				
08-Nov-1993	342.30	347.65	344.39			341.96	341.74	342.37	341.65	341.80	341.89	341.19				
09-Nov-1993	342.29	347.74	344.76			341.98	341.73	342.36	341.67	341.83	341.90	341.37				
10-Nov-1993	342.27	347.75	344.84			342.05	341.73	342.34	341.66	341.82	341.90	341.51				
15-Nov-1993	342.27	347.75	344.92			341.82	341.75	342.35	341.68	341.83	341.91	341.43				
16-Nov-1993	342.27	347.76	344.93			341.71	341.76	342.34	341.69	341.84	341.93	341.34				
17-Nov-1993	342.27	347.77	344.95			341.47	341.78	342.35	341.70	341.86	341.94	341.32				
18-Nov-1993	342.18	347.70	345.09			341.97	341.79	342.26	341.64	341.80	341.89	341.51				
19-Nov-1993	342.26	347.81	345.16			341.97	341.80	342.37	341.73	341.91	341.94	342.26				
23-Nov-1993	342.18	347.62	345.13			341.95	341.75	342.32	341.66	341.81	341.91	341.81				
24-Nov-1993	342.16	347.66	345.17			341.99	341.78	342.33	341.65	341.84	341.94	341.86				
25-Nov-1993	342.14	347.58	345.13			342.10	341.79	342.31	341.66	341.80	341.93	341.91				
26-Nov-1993	342.22	347.67	345.14			342.04	341.82	342.32	341.68	341.81	341.94	341.94				
29-Nov-1993	342.26	347.74	345.22			341.88	341.79	342.52	341.66	341.86	342.00	341.91				
30-Nov-1993	342.19	347.63	345.17			342.17	341.80	342.50	341.62	342.35	341.97	341.98				
01-Dec-1993	342.30	347.58	345.21			342.13	341.79	342.63	341.65	342.30	341.99	341.98				
02-Dec-1993	342.41	347.75	345.25			342.09	341.76	342.57	341.74	342.07	342.02	342.00				
03-Dec-1993	342.34	347.65	345.24			342.20	341.82	342.65	341.69	341.89	342.03	342.03				
06-Dec-1993	342.45	347.76	345.29			342.35	341.73	342.76	341.76	341.96	342.14	342.00				
07-Dec-1993	342.37	347.74	345.25			342.25	341.74	342.67	341.68	341.88	341.96	342.03				
10-Dec-1993	342.53	347.78	345.37			341.95	341.78	342.75	341.79	341.96	342.02	342.04				
13-Dec-1993	342.39	347.65	345.31			342.18	341.78	342.70	341.70	341.90	342.02	342.09				
14-Dec-1993	342.41	347.84	345.30			342.20	341.80	342.74	341.73	341.93	342.03	342.09				
15-Dec-1993	342.39	347.84	345.29			342.28	341.76	342.73	341.70	341.91	342.03	342.10				
16-Dec-1993	342.32	347.77	345.24			342.21	341.77	342.64	341.67	341.86	342.02	342.12				
17-Dec-1993	342.34	347.76	345.30			342.15	341.78	342.69	341.71	341.90	342.00	342.12				
20-Dec-1993	342.34	347.80	345.29			342.18	341.78	342.71	341.70	341.88	342.01	342.11				
21-Dec-1993	342.39	347.90	345.29			341.79	341.78	342.68	341.74	341.95	342.04	342.02				
22-Dec-1993	342.35	347.84	345.36			342.11	341.80	342.59	341.70	341.93	342.02	342.03				
23-Dec-1993	342.36	347.79	345.28			342.20	341.79	342.55	341.66	341.90	341.98	342.06				

Note: All Water Level in mASL

Monitor 55-I was replaced by Monitor 55-IR in September 2001. 55-IR was replace in April 2007

Monitor 61-I and 66-I were replaced by Monitors 61-IR and 66-IR in April 2007.

A5 : Routine Leachate Groundwater Elevations - Eastview Road Landfill Site

Monitor	1-I/1-IR	51-I/51-IR	59-I	67-I	65-I	51-II	52-I	55-I/55-IR	56-I/56-IR	57-I	58-I	61-I/IR	63-I	66-I/IR	68-I	69-I
Geologic Unit	Waste				Fill/ Waste	Outwash										
Date																
20-Jan-1994	342.49	347.88	345.27			342.08	341.73	342.19	341.63	341.75	341.87	341.39				
17-Feb-1994	342.57	347.93	345.61			342.81	341.82	342.27	341.73	341.97	341.99	341.65				
22-Feb-1994								342.48	341.75							
01-Mar-1994	341.59							342.05	341.70							
08-Mar-1994	341.52							341.53	341.64							
16-Mar-1994	341.02	348.05	345.61			341.84	341.93	341.48	341.61	341.79	341.92	341.08				
23-Mar-1994	340.90							341.38	341.55							
05-Apr-1994	341.28							341.80	341.58							
11-Apr-1994	341.84	347.93	345.67			341.62	341.45	341.84	341.54	341.86	342.09	341.53				
19-Apr-1994	342.11							342.37	341.97							
27-Apr-1994	343.11							342.38	342.14							
05-May-1994	342.11							341.85	341.68							
10-May-1994	341.89							341.65	341.26							
16-May-1994	341.75	347.63	345.64			342.18	341.56	341.56	341.05	341.83	342.10	341.92				
25-May-1994	341.68							341.45	340.90							
02-Jun-1994	341.75							341.70	341.51							
07-Jun-1994	341.72							341.60	341.20							
16-Jun-1994	341.60							341.40	340.97							
21-Jun-1994	341.52	347.87	345.64			341.69	341.60	341.30	340.84	342.06	342.14	341.50				
28-Jun-1994	341.47							341.23	340.88							
07-Jul-1994	341.42							341.24	340.76							
13-Jul-1994	341.37							341.16	340.70							
18-Jul-1994	341.93	347.87	345.66			342.21	341.44	341.11	340.69	341.96	342.18	341.66				
27-Jul-1994	341.40							341.03	340.70							
03-Aug-1994	341.42							341.02	340.64							
11-Aug-1994	341.31							340.96	340.61							
15-Aug-1994	341.23	347.82	345.64			341.97	341.27	340.93	340.61	341.92	341.82	341.53				
26-Aug-1994	341.22							340.93	340.61							
08-Sep-1994	341.08							340.82	340.53							
15-Sep-1994	341.09							340.79	340.54							
23-Sep-1994	341.10	347.81	345.62			341.87	341.39	340.78	340.59	341.94	341.80	341.50				
30-Sep-1994	340.99							340.67	340.59							
06-Oct-1994	341.01							340.74	340.62							
13-Oct-1994	341.05							340.75	340.63							
19-Oct-1994	341.09	347.94	345.64			341.64	341.32	340.75	340.64	341.89	341.65	341.52				
26-Oct-1994	341.28							340.76	340.64							
03-Nov-1994	341.62							340.77	340.65							
11-Nov-1994	341.23							340.97	340.94							
16-Nov-1994	341.16	347.62	345.62			341.59	341.17	341.00	340.67	341.62	341.70	341.30				
25-Nov-1994	341.09							340.94	340.56							
30-Nov-1994	341.09							340.91	340.55							
07-Dec-1994	341.13							340.92	340.50							
16-Dec-1994	341.13							340.79	340.51							
20-Dec-1994	341.22	347.56	345.68			341.89	341.22	340.80	340.43	341.52	341.82	341.39				
28-Dec-1994	341.13							340.77	340.44							
05-Jan-1995	341.09							340.76	340.45							

Note: All Water Level in mASL

Monitor 55-I was replaced by Monitor 55-IR in September 2001. 55-IR was replace in April 2007

Monitor 61-I and 66-I were replaced by Monitors 61-IR and 66-IR in April 2007.

A5 : Routine Leachate Groundwater Elevations - Eastview Road Landfill Site

Monitor	1-I/1-IR	51-I/51-IR	59-I	67-I	65-I	51-II	52-I	55-I/55-IR	56-I/56-IR	57-I	58-I	61-I/IR	63-I	66-I/IR	68-I	69-I
Geologic Unit	Waste				Fill/ Waste	Outwash										
Date																
12-Jan-1995	341.11							340.74	340.52							
18-Jan-1995	341.62	347.39	345.70			342.09	341.21	341.62	341.51	341.62	342.04	340.80				
25-Jan-1995	341.55							341.37	341.27							
02-Feb-1995	341.07							341.14	340.71							
09-Feb-1995	340.71							341.04	340.65							
15-Feb-1995	340.72	347.56	345.85			342.22	341.26	340.99	340.56	341.65	341.90	341.55				
23-Feb-1995	340.89							340.88	340.57							
28-Feb-1995	341.15		345.76					340.81	340.53				342.90			
08-Mar-1995	341.06		345.77					340.89	340.50				342.89			
13-Mar-1995	341.00	347.36	345.78			342.07	341.18	340.75	340.38	341.58	342.00	341.50	342.88			
21-Mar-1995	341.02		345.79					340.78	340.40				342.88			
29-Mar-1995	341.23		345.84					340.99	340.58				342.90			
06-Apr-1995	341.17		345.84					340.90	340.56				342.89			
11-Apr-1995	341.05	347.39	345.83			342.07	341.19	340.87	340.56	341.64	342.02	341.08	342.88			
18-Apr-1995	341.15		345.85					340.79	340.52				342.87			
05-May-1995	341.31		345.77					340.99	340.53				342.87			
11-May-1995	341.33	347.59	345.81			342.13	341.18	340.98	340.51	341.66	342.02	341.52	342.89			
15-May-1995	341.32		345.79					341.06	340.71				342.89			
26-May-1995	341.27		345.79					340.87	340.52				342.87			
01-Jun-1995	341.27		345.83					340.97	340.70				342.87			
07-Jun-1995	341.14		345.84					340.86	340.53				342.86			
14-Jun-1995	341.10		345.84					340.85	340.50				342.86			
21-Jun-1995	341.21	347.43	345.82			342.05	341.17	340.84	340.56	341.59	342.04	341.41	342.86			
29-Jun-1995	341.04		345.90					340.75	340.50				342.85			
05-Jul-1995	341.02		345.92					340.72	340.47				342.85			
11-Jul-1995	341.08		345.87					340.70	340.50				342.83			
17-Jul-1995	341.18	347.49	345.91	344.23	342.60	342.05	341.07	340.87	340.67	341.53	341.92	341.13	342.81	342.87		
26-Jul-1995	341.15		345.88	342.73	342.92			340.85	340.57				342.82	342.88		
02-Aug-1995	341.07		345.85	342.69	343.13			340.75	340.47				342.80	342.85		
10-Aug-1995	341.06		345.77	342.53	343.32			340.78	340.52				342.80	342.70		
15-Aug-1995	341.19	347.30	345.93	342.67	343.39	342.03	341.09	341.05	341.07	341.70	342.13	341.35	342.78	342.85		
17-Aug-1995	341.28		345.79	342.53	343.26			341.09	341.09				342.79	342.69		
30-Aug-1995	341.14		345.96	342.66	343.30			340.87	340.57				342.78	342.83		
06-Sep-1995	340.93		345.90	342.51	343.39			340.80	340.40				342.77	342.68		
13-Sep-1995	340.94		345.88	342.50	343.44			340.76	340.40				342.77	342.82		
28-Sep-1995	340.95	347.23	345.89	342.46	343.47	341.58	341.12	340.75	340.43	341.68	341.90	341.37	342.73	342.63		
04-Oct-1995	340.95		345.87	342.46	343.44			340.77	340.42				342.75	342.65		
11-Oct-1995	340.96		345.89	342.48	343.47			340.78	340.43				342.74	342.68		
18-Oct-1995	341.07	347.24	345.89	342.50	343.47	341.57	341.10	340.80	340.44	341.68	341.92	341.36	342.77	342.70		
25-Oct-1995	340.80		345.95	342.54	343.29			340.53	340.33				342.96	342.61		
01-Nov-1995	340.80		345.96	342.58	343.45			340.53	340.53				342.71	342.76		
08-Nov-1995	341.15		345.96	342.62	343.45			340.95	340.84				342.73	342.77		
15-Nov-1995	341.33		345.99	342.62	343.45			341.26	341.30				342.72	342.77		
22-Nov-1995	341.43	347.57	345.68	342.66	343.43	342.29	341.29	341.27	341.24	341.93	342.36	341.71	342.74	342.83		
29-Nov-1995	341.50		345.75	342.65	343.04			341.33	341.27				342.75	342.83		
06-Dec-1995	341.88		345.79	342.68	343.17			341.45	341.40				342.81	342.84		

Note: All Water Level in mASL

Monitor 55-I was replaced by Monitor 55-IR in September 2001. 55-IR was replace in April 2007

Monitor 61-I and 66-I were replaced by Monitors 61-IR and 66-IR in April 2007.

A5 : Routine Leachate Groundwater Elevations - Eastview Road Landfill Site

Monitor	1-I/1-IR	51-I/51-IR	59-I	67-I	65-I	51-II	52-I	55-I/55-IR	56-I/56-IR	57-I	58-I	61-I/IR	63-I	66-I/IR	68-I	69-I
Geologic Unit	Waste				Fill/ Waste	Outwash										
Date																
18-Dec-1995	341.09		345.83	342.72	343.28			341.30	341.17				342.83	342.89		
20-Dec-1995	341.33	347.50	345.75	342.73	343.31	342.53	341.63	341.18	341.06	342.13	342.57	341.85	342.79	342.89		
27-Dec-1995	340.93		345.71	342.74	343.36			341.08	340.94				342.79	342.89		
16-Jan-1996	340.75	347.40	345.51	342.64	343.36	341.98	341.29	340.90	340.62	341.65	341.89	341.52	342.71	342.81		
14-Feb-1996	340.96	347.26	345.87	342.71	343.35	342.07	341.44	341.24	341.14	341.73	341.98	341.69	342.99	342.85		
13-Mar-1996	340.88	347.40	345.76	342.75	343.33	342.07	341.43	341.25	341.11	341.75	341.94	341.68	342.79	342.81		
11-Apr-1996	340.86	347.29	347.76	342.64	343.28	342.09	341.42	341.19	341.09	341.73	342.02	341.65	342.78	342.78		
06-May-1996	341.19	347.41	345.76	342.75	343.16	342.23	341.60	341.55	341.55	341.96	342.20	341.85	342.86	342.85		
10-Jun-1996	341.76	347.26	345.67	342.90	343.26	342.29	341.64	341.58	341.67	342.05	342.21	341.94	342.92	342.89		
16-Jul-1996	340.98	347.34	345.70	342.85	343.24	342.06	341.59	341.52	341.49	341.77	341.98	341.82	342.88	342.88		
12-Aug-1996	341.59	347.52	345.68	342.80	343.29	341.99	341.51	341.45	341.35	341.67	341.89	341.77	342.86	342.82		
17-Sep-1996	341.40	347.54	345.68	342.71	343.25	342.07	341.41	341.28	341.28	341.76	342.03	341.66	342.76	342.76		
16-Oct-1996	341.43	347.63	345.74	342.65	343.27	342.05	341.44	341.24	341.03	341.72	341.98	341.67	342.78	342.76		
13-Nov-1996	341.36	347.49	345.89	342.63	343.27	342.21	341.41	341.19	341.11	341.69	342.06	341.75	342.78	342.75		
12-Dec-1996	341.26	347.39	345.84	342.55	343.17	342.14	341.40	341.06	340.88	341.81	342.07	341.66	342.73	342.75		
20-Jan-1997	341.03	347.29	345.74	342.69	343.45	342.08	341.58	341.41	341.28	341.76	341.91	341.77	342.79	342.78		
18-Feb-1997	341.34	347.32	346.01	342.64	343.51	342.13	341.47	341.29	341.12	341.80	342.01	341.69	342.78	342.75		
21-Mar-1997	341.27	347.44	345.90	342.76	343.55	342.25	341.69	341.74	341.69	341.88	342.12	341.93	342.89	342.81		
21-Apr-1997	341.80	347.48	345.80	342.79	343.57	342.14	341.80	341.71	341.63	341.89	342.06	341.98	342.92	342.84		
14-May-1997	341.63	347.63	346.02	342.74	343.77	342.17	341.59	341.58	341.53	341.85	342.07	341.82	342.90	342.79		
09-Jun-1997	341.54	347.34	346.04	342.80	344.05	342.02	341.42	341.39	341.21	341.75	341.94	341.83	342.85	342.36		
15-Jul-1997	341.22	347.42	345.90	342.62	344.27	341.94	341.28	341.05	340.79	341.59	341.85	341.58	342.73	342.71		
18-Aug-1997	341.12	348.09	346.00	342.56	344.29	341.92	341.08	340.94	340.78	341.58	342.01	341.49	342.67	342.67		
29-Sep-1997	341.16	347.88	345.96	342.56	343.54	341.93	341.15	340.94	340.69	341.62	341.69	341.52	342.63	342.68		
20-Oct-1997	341.06	347.71	346.07	342.46	343.41	341.74	341.13	340.79	340.55	341.43	341.61	341.41	342.57	342.59		
10-Nov-1997		348.09	346.09	342.37	343.03	341.90	Dry	341.00	340.77	341.57	341.84	341.32	Dry	342.55		
15-Dec-1997		347.24	346.04	342.41	343.05	341.96	341.24	341.01	340.87	341.36	341.90	341.48	342.57	342.55		
20-Jan-1998		347.29	346.06	342.47	343.18	342.17	341.47	341.16	341.02	341.87	342.16	341.65	342.56	342.60		
23-Feb-1998		347.20	346.17	342.48	343.18	342.06	341.37	341.26	341.45	341.69	342.01	341.55	342.56	342.62		
19-Mar-1998		347.23	346.25	342.49	343.66	342.07	341.35	341.24	340.87	341.67	342.00	341.54	342.57	342.62		
14-Apr-1998		347.30	346.23	342.45	344.82	342.03	341.10	340.99	340.68	341.66	341.96	341.54	342.56	342.61		
14-May-1998		345.67	346.17	342.40	344.36	341.96	340.52	340.86	340.59	341.57	342.13	341.41	342.56	342.57		
10-Jun-1998		346.42	346.20	342.38	343.64	341.86	340.52	340.77	340.52	341.51	341.80	341.37	342.44	342.55		
15-Jul-1998		345.16	345.32	342.35	343.27	341.87	341.11	340.74	340.53	341.48	341.84	341.34	342.56	342.51		
10-Aug-1998		346.19	345.27	342.04	343.17	341.76	340.52	340.67	340.46	341.39	341.68	341.28	342.44	342.47		
23-Sep-1998		345.41	345.51	342.23	343.06	341.73	341.11	340.57	340.41	341.23	341.53	341.17	342.56	342.42		
16-Oct-1998		345.50	345.56	342.19	343.02	341.63	341.11	340.53	340.38	341.23	341.56	341.14	342.56	342.37		
27-Oct-1998															340.60	
09-Nov-1998		346.08	345.64	342.16	343.01	341.61	341.11	340.49	340.40	341.35	341.53	341.15	342.56	342.34		
23-Nov-1998															340.55	340.90
15-Dec-1998		345.78	346.23	342.12	342.97	341.90	341.11	340.53	340.42	341.30	341.62	341.14	342.56	342.29		
26-Jan-1999		346.10	346.37	342.09	342.94	341.80	341.11	340.65	340.84	341.35	341.76	341.10	342.56	342.25	340.72	341.52
15-Feb-1999		346.41	346.68	342.09	344.65	341.78	341.11	340.74	340.58	341.43	341.84	341.17	342.56	342.25	340.78	341.52
16-Mar-1999		346.49	346.59	342.13	344.60	341.82	341.11	340.76	340.48	341.46	341.91	341.27	342.56	342.28	340.91	341.52
16-Apr-1999		346.35	346.47	342.15	343.63	341.92	341.11	340.76	340.49	341.47	341.95	341.26	342.56	342.30	340.82	340.98
20-May-1999		345.06	346.39	341.98	344.05	341.89	340.87	340.64	340.30	341.20	341.65	341.21	342.43	343.16		

Note: All Water Level in mASL

Monitor 55-I was replaced by Monitor 55-IR in September 2001. 55-IR was replace in April 2007

Monitor 61-I and 66-I were replaced by Monitors 61-IR and 66-IR in April 2007.

A5 : Routine Leachate Groundwater Elevations - Eastview Road Landfill Site

Monitor	1-I/1-IR	51-I/51-IR	59-I	67-I	65-I	51-II	52-I	55-I/55-IR	56-I/56-IR	57-I	58-I	61-I/IR	63-I	66-I/IR	68-I	69-I
Geologic Unit	Waste				Fill/ Waste	Outwash										
Date																
23-Jun-1999		345.33	346.47	341.96	343.59	341.74	340.87	340.62	340.40	341.20	341.57	341.22	342.43	343.13	341.66	341.24
16-Jul-1999		345.31	346.22	341.95	343.15	341.68	340.87	340.63	340.16	341.16	341.62	341.22	342.43	343.12	341.69	341.43
16-Aug-1999		345.73	345.79	341.92	342.90	341.60	340.87	340.55	340.14	341.09	341.44	341.17	342.43	343.09		341.41
16-Sep-1999		345.27	345.37	341.89	342.72	341.60	340.87	340.54	340.14	341.09	341.44	341.16	342.43	343.10		
18-Oct-1999		345.61	345.56	341.88	342.68	341.64	340.87	340.60	340.15	341.10	341.52	341.14	342.43	343.04		
16-Nov-1999		344.85	345.97	341.91	342.67	341.68	340.87	340.69	340.23	341.21	341.71	341.27	342.43	343.06		
16-Dec-1999		345.80	346.32	341.95	342.65	341.71	340.87	340.84	340.43	341.25	341.72	341.33	342.43	343.08	341.87	341.64
27-Jan-2000		345.83	Frozen	341.94	343.00	341.81	340.87	340.79	340.42	341.13	341.59	341.20	342.43	343.10	N/A	N/A
15-Feb-2000		349.23	Frozen	341.93	343.05	341.65	340.87	340.73	340.41	341.11	341.53	341.22	342.43	343.09	341.90	341.49
21-Mar-2000		Broken	347.36	341.95	343.32	341.79	340.87	340.83	340.53	341.24	341.72	341.28	342.43	343.10	341.89	341.65
12-Apr-2000		Broken	346.78	341.96	344.97	341.78	340.87	340.79	340.49	341.21	341.71	341.31	342.43	343.11	341.90	341.64
25-May-2000		Broken	346.40	342.00	344.93	341.53	340.87	340.89	340.60	341.31	341.80	341.37	342.43	343.19	341.86	341.64
19-Jun-2000		Broken	346.69	341.90	344.48	342.00	340.87	341.01	340.68	341.47	342.13	341.41	342.43	343.15	341.88	341.64
27-Jul-2000		Broken	345.94	342.07	344.39	341.79	340.87	340.94	340.65	341.39	341.75	341.48	342.43	343.23	341.86	341.59
14-Aug-2000		Broken	346.04	342.08	344.00	341.86	340.87	340.92	340.64	341.35	341.77	341.43	342.43	343.23	341.87	341.60
21-Sep-2000		Broken	345.73	342.03	343.40	341.60	340.87	340.84	340.59	341.16	341.55	341.23	342.43	343.18	341.86	341.40
17-Oct-2000		Broken	346.00	341.99	343.02	341.66	340.87	Broken	340.61	341.19	341.56	341.28	342.43	343.15	341.86	341.35
06-Nov-2000		Broken	345.53	341.97	342.92	341.65	340.87	Broken	340.62	341.17	341.54	341.26	342.43	343.13	341.87	341.35
18-Dec-2000		Broken	345.42	341.94	342.93	341.75	340.87	Broken	340.61	341.21	341.70	341.24	342.43	343.10	341.88	341.34
16-Jan-2001		Broken	346.26	341.94	342.92	341.80	340.87	Broken	340.79	341.26	341.76	341.32	342.43	343.11	341.89	341.34
14-Feb-2001		Broken	346.11	341.97	342.76	341.93	340.87	Broken	340.92	341.38	341.86	341.34	342.43	343.14	341.92	341.65
12-Mar-2001		Broken	345.85	342.00	343.61	341.82	340.87	Broken	340.84	341.30	341.72	341.34	342.43	343.12	341.89	341.41
02-Apr-2001		Broken	346.69	342.01	344.45	341.85	340.87	Broken	341.08	341.34	341.77	341.41	342.43	343.17	341.89	341.42
14-May-2001		Broken	346.14	342.05	344.56	341.53	340.87	Broken	340.82	341.34	341.72	341.41	342.43	343.19	341.93	341.58
25-Jun-2001		Broken	346.53	342.03	344.39	341.79	340.87	Broken	340.88	341.29	341.72	341.41	342.43	343.18	341.95	341.57
26-Jul-2001		Broken	345.82	341.98	343.63	341.62	340.87	Decom	340.77	341.17	341.48	341.25	342.43	343.12	341.93	341.51
13-Aug-2001		Broken	346.13	341.97	343.47	341.55	340.87	Decom	340.85	341.16	341.45	341.30	342.43	343.09	341.91	341.45
19-Sep-2001		Broken	346.46	341.88	342.88	341.54	340.87	Decom	N/A	341.12	341.47	341.16	342.43	343.02	341.96	341.46
29-Oct-2001		Broken	346.59	341.89	342.83	341.71	340.87	340.97	Broken	341.22	341.64	341.21	342.43	343.05	341.93	341.58
05-Nov-2001		Broken	346.81	341.96	342.82	341.74	340.87	340.95	Broken	341.28	341.69	341.29	342.43	343.05	341.95	341.56
21-Dec-2001		Broken	346.34	341.94	342.70	341.50	340.87	340.98	Broken	341.21	341.73	341.24	342.43	343.08	341.94	341.63
29-Jan-2002			346.58	342.03	342.77	341.78	340.87	340.96	Broken	341.21	341.73	341.27	342.43	343.12	341.95	341.62
22-Feb-2002			346.95	342.10	343.59	341.92	340.87	340.96	Broken	341.33	341.83	341.36	342.43	343.13	341.94	341.60
26-Mar-2002			346.85	342.09	343.91	341.83	340.87	340.97	Broken	341.24	341.74	341.33	342.43	343.14	341.95	341.61
22-Apr-2002			346.21	342.14	343.68	341.83	340.87	341.03	Broken	341.30	341.82	341.35	342.43	343.15	341.95	341.62
09-May-2002			346.09	342.01	344.51	341.86	340.87	340.98	Broken	341.28	341.77	341.29	342.43	343.16	341.95	341.62
17-Jun-2002			346.50	342.05	344.23	341.84	340.87	341.00	Broken	341.28	341.81	341.45	342.43	343.19	341.96	341.62
23-Jul-2002			345.81	342.00	343.67	341.66	340.87	340.83	Broken	341.19	341.52	341.26	342.43	343.14	341.95	341.62
12-Aug-2002			346.14	341.98	343.48	341.61	340.87	340.86	Broken	341.17	341.44	341.25	342.43	343.11	341.94	341.62
13-Sep-2002			346.51	341.91	343.07	341.45	340.87	340.78	Broken	341.03	341.30	340.47	342.43	343.04	341.94	341.62
22-Oct-2002			346.23	341.86	342.81	341.46	340.87	340.71	Broken	341.02	341.36	341.06	342.43	343.00	341.91	341.13
04-Nov-2002			347.02	341.86	342.79	341.46	340.87	340.72	Broken	341.07	341.44	341.14	342.43	343.00	341.92	341.14
18-Dec-2002			346.52	341.84	342.46	341.37	340.87	340.75	Broken	340.98	341.33	341.02	342.43	342.97	341.93	341.14
28-Jan-2003			N/A	341.86	342.67	341.62	340.87	N/A	Broken	341.09	341.41	341.15	342.43	N/A	341.94	341.15
27-Feb-2003			N/A	341.83	342.66	341.60	340.87	340.75	Broken	341.06	341.39	341.15	342.43	N/A	341.96	341.16
24-Mar-2003			347.73	341.84	342.56	341.68	340.87	341.07	Broken	341.15	341.64	341.15	342.43	342.99	341.90	341.60

Note: All Water Level in mASL

Monitor 55-I was replaced by Monitor 55-IR in September 2001. 55-IR was replace in April 2007

Monitor 61-I and 66-I were replaced by Monitors 61-IR and 66-IR in April 2007.

A5 : Routine Leachate Groundwater Elevations - Eastview Road Landfill Site

Monitor	1-I/1-IR	51-I/51-IR	59-I	67-I	65-I	51-II	52-I	55-I/55-IR	56-I/56-IR	57-I	58-I	61-I/IR	63-I	66-I/IR	68-I	69-I
Geologic Unit	Waste				Fill/ Waste	Outwash										
Date																
22-Apr-2003			347.76	341.87	342.56	341.76	340.87	341.05		341.19	341.70	341.17	342.43	342.98	341.93	341.44
29-May-2003		344.42	346.86	341.92	344.89	341.87	340.87	341.56	340.62	341.29	341.77	341.33	342.43	broke	341.90	341.61
23-Jun-2003		344.38	347.86	341.93	344.64	341.76	340.87	341.60	340.64	341.25	341.71	341.24	342.43	broke	341.89	341.45
23-Jul-2003		344.27	346.00	341.91	344.41	341.53	340.87	340.87	340.61	341.16	341.56	341.18	342.43	broke	341.87	341.41
26-Aug-2003			346.68	341.97	343.90			340.91	340.64	341.10	341.47	341.18	342.43	broken	341.88	341.41
02-Sep-2003		344.18	346.73	341.96	343.86	341.52	340.87	340.90	340.64	341.08	341.47	341.18	342.43	broken	341.88	341.41
15-Oct-2003		344.17	347.64	341.94	343.20	341.56	340.87	340.85		341.12	341.49	341.14	342.43	broken	341.88	341.44
03-Nov-2003		344.27	348.45	342.02	343.46	341.20	340.87	341.00	340.64	341.24	341.58	341.25	342.43	broken	341.89	341.45
23-Dec-2003		344.26	346.79	342.10	344.51	341.95	340.87	341.00	340.61	341.50	342.02	341.35	342.43	broken	341.90	341.44
30-Jan-2004		344.19	frozen	342.06	frozen	341.82	340.87	340.88	340.59	341.29	341.74	341.20	342.43	broken	341.88	341.44
24-Feb-2004		344.23	Frozen	342.10	Frozen	341.88	340.87	340.85	340.58	341.30	341.80	341.29	342.43	Broken	341.88	341.44
31-Mar-2004		344.25	348.48	342.17	344.73	342.00	340.87	341.76	340.87	341.47	341.92	341.48	342.43	broken	341.88	341.44
19-Apr-2004		344.23	348.10	342.16	344.74	341.84	340.87	341.69	340.63	341.29	341.92	341.51	342.43	broken	341.88	341.45
17-May-2004		344.27	346.95	342.18	344.93	341.92	340.87	342.05	340.65	341.33	341.83	341.40	342.43	broken	341.87	341.43
07-Jun-2004		344.39	347.00	342.21	344.50	342.58	Dry	341.80	340.03	341.30	341.76	341.34		broken		
18-Jun-2004		344.30	346.97	342.19	344.67	341.91	340.87	341.89	340.26	341.32	341.79	341.37	342.43	broken	341.87	341.44
06-Jul-2004		344.31	347.00	342.21	344.50	342.58	340.87	341.80	340.03	341.30	341.76	341.34	342.43	broken	341.88	341.45
23-Aug-2004		344.32	346.52	342.20	343.64	341.85	340.87	339.39	340.87	341.33	341.72	341.45	342.43	broken	341.86	341.42
27-Sep-2004		344.31	347.18	342.17	343.69	341.80	340.87	339.62	340.83	341.25	341.55	341.42	342.43	broken	341.87	341.45
15-Oct-2004		344.29	347.22	342.16	343.66	341.81	340.87	339.62	340.83	341.25	341.61	341.45	342.43	broken	341.87	341.44
01-Nov-2004		344.26	347.32	342.13	343.56	341.82	340.87	339.64	340.82	341.24	341.67	341.49	342.43	broken	341.86	341.44
21-Dec-2004		344.34	347.00	342.15	343.41	341.95	340.87	341.81	340.85	341.36	341.80	341.58	342.43	broken	341.88	341.44
13-Jan-2005		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
24-Feb-2005	340.98	344.40	348.35	342.21	344.68	342.04	340.87	341.92	340.86	341.41	341.86	frozen	342.43	broken	341.87	341.45
21-Mar-2005	340.96	344.38	348.09	342.21	344.70	342.02	340.87	341.90	340.84	341.37	341.85	341.53	342.43	broken	341.87	341.45
11-Apr-2005	340.92	344.33	347.68	342.23	344.70	341.96	340.87	341.85	340.78	341.32	341.85	341.46	342.43	broken	341.88	341.44
18-May-2005	340.91	344.38	346.88	342.26	345.20	342.00	340.87	340.04	340.80	341.33	341.86	341.46	342.43	broken	341.88	341.44
21-Jun-2005	340.91	344.37	347.54	342.26	345.13	341.95	340.87	341.81	340.79	341.29	341.81	341.42	342.43	broken	341.87	341.44
28-Jul-2005	340.95	344.38	346.56	342.24	344.68	341.95	340.87	339.44	340.93	341.44	341.76	342.45	342.43	broken	341.86	341.44
31-Aug-2005	340.95	344.49	347.15	342.20	344.20	342.38	340.87	339.61	340.84	341.23	340.57	342.28	342.43	broken	341.86	341.44
21-Sep-2005	340.87	344.45	346.75	342.17	343.87	341.72	340.87	341.72	340.84	341.18	341.47	342.81	342.43	broken	341.86	341.44
28-Oct-2005	340.91	344.39	346.86	341.96	343.62	341.63	340.87	341.72	340.84	341.23	341.60	343.92	Dry	broken	341.87	341.44
15-Nov-2005	340.80	344.31	346.93	342.13	343.78	341.83	340.87	341.52	340.58	341.04	341.56	343.69	Dry	broken	341.86	341.44
20-Dec-2005	341.00	344.39	346.85	342.20	343.80	342.17	340.87	341.78	340.83	341.59	342.08	345.11	Dry	broken	341.87	341.45
23-Jan-2006	340.95	344.44	347.19	342.28	344.29	342.08	340.87	341.83	340.78	341.45	341.90	343.91	342.43	broken	341.86	341.44
20-Feb-2006	############	Not Completed	Not Complete	Not Complete	Not Completed	Not Complete	Not Complete	Not Completed	Not Completed	Not Complete	Not Complete	Not Complete	Not Complete	Not Complete	Not Complete	Not Complete
21-Mar-2006	340.90	344.47	347.20	342.36	345.87	342.09	340.87	341.78	340.86	341.40	341.88	342.75	342.43	broken	341.87	341.44
24-Apr-2006	340.84	344.43	347.41	342.30	346.16	341.97	340.87	341.62	340.68	341.22	341.95	342.90	342.38	broken	341.86	341.44
26-May-2006	340.75	343.87	346.80	341.82	345.59	341.51	340.87	341.18	340.75	341.27	341.78	342.26	342.43	broken	341.87	341.45
07-Jun-2006	340.90	344.60	346.96	342.54	346.11	342.23	340.87	341.87	340.92	341.46	341.80	342.25	342.65	broken	341.86	341.44
28-Jul-2006	340.83	344.69	350.34	342.55	345.52	342.17	340.87	341.75	340.92	341.41	341.86	Dry	342.65	broken	341.86	341.47
30-Aug-2006	340.85	344.66	350.61	342.55	345.40	342.04	340.87	341.76	340.96	341.35	341.81	Dry	342.65	broken	341.86	341.48
26-Sep-2006	340.70	344.64	347.58	342.54	345.13	342.09	340.87	341.40	340.87	341.33	341.81	Dry	342.65	broken	341.86	341.54
31-Oct-2006	340.77	344.72	347.07	342.59	345.57	342.33	340.87	341.57	340.84	341.48	342.07	347.09	342.65	broken	341.86	341.51
24-Nov-2006	340.76	344.62	348.53	342.61	345.64	342.24	340.87	341.69	340.92	341.65	342.16	347.08	342.64	broken	341.86	341.51
18-Dec-2006	340.75	344.70	347.38	342.65	345.53	342.22	340.87	341.44	340.76	341.40	341.94	347.16	342.64	broken	341.86	341.51

Note: All Water Level in mASL

Monitor 55-I was replaced by Monitor 55-IR in September 2001. 55-IR was replace in April 2007

Monitor 61-I and 66-I were replaced by Monitors 61-IR and 66-IR in April 2007.

A5 : Routine Leachate Groundwater Elevations - Eastview Road Landfill Site

Monitor	1-I/1-IR	51-I/51-IR	59-I	67-I	65-I	51-II	52-I	55-I/55-IR	56-I/56-IR	57-I	58-I	61-I/IR	63-I	66-I/IR	68-I	69-I
Geologic Unit	Waste				Fill/ Waste	Outwash										
Date																
22-Jan-2007	340.81	344.83	347.70	342.75	346.12	342.34	340.87	341.56	340.84	341.49	342.00	347.10	342.64	broken	341.87	341.49
27-Feb-2007	340.80	344.83	347.81	342.81	345.51	342.26	340.87	341.45	340.83	341.38	341.89	347.21	342.93	broken	341.86	341.47
26-Mar-2007	340.76	344.86	348.43	342.85	345.29	342.44	341.01	341.53	341.15	341.53	342.08	348.11	342.95	broken	341.88	341.58
10-Apr-2007	340.75	344.92	348.43	342.87	345.29	342.45	341.01	341.53	341.15	341.53	342.08	348.11	342.95	broken	341.86	341.61
22-May-2007	340.75	344.83	347.20	342.88	346.14	342.31	340.87	340.63	340.59	341.39	341.97	341.55	342.93	343.31	341.88	341.55
18-Jun-2007	340.90	344.89	347.56	342.74	346.14	342.31	340.87	340.62	340.60	341.40	341.92	341.57	342.98	343.38	341.86	341.54
26-Jul-2007	340.75	344.85	347.63	342.84	346.17	342.04	340.87	340.53	340.57	341.21	341.59	341.47	342.90	343.26	341.93	341.10
13-Aug-2007	340.75	344.83	348.12	342.82	345.65	341.98	340.87	340.51	340.55	341.19	341.61	341.47	342.88	343.23	341.92	341.10
27-Sep-2007	340.73	344.76	348.32	342.63	345.31	341.87	340.87	340.41	340.51	341.11	341.46	341.36	342.70	343.00	341.91	341.10
22-Oct-2007	340.69	344.73	347.14	342.57	344.95	341.85	340.87	340.39	340.51	341.10	341.49	341.30	342.63	342.92	341.84	341.12
15-Nov-2007	340.71	344.80	347.78	342.53	344.66	341.89	340.87	340.39	340.51	341.16	341.46	341.30	342.58	342.86	341.81	341.12
14-Dec-2007	340.76	344.71	347.76	342.50	345.02	342.02	340.87	340.44	340.45	341.23	341.73	341.34	342.52	342.79	341.81	341.47
29-Jan-2008	341.25	344.96	348.73	342.59	345.65	342.29	340.87	340.87	340.97	341.50	341.96	341.68	342.68	342.97	341.84	341.57
25-Feb-2008	341.03	344.87	347.58	342.70	346.14	342.31	340.87	340.72	340.71	341.45	341.98	341.58	342.78	343.01	341.83	341.53
31-Mar-2008	341.03	344.95	347.25	342.75	346.18	342.42	340.87	340.70	340.67	341.48	342.05	341.63	342.94	343.21	341.86	341.62
29-Apr-2008	341.05	345.02	347.67	342.87	346.22	342.45	340.87	340.88	340.87	341.49	342.00	341.68	343.09	343.33	341.84	341.56
22-May-2008	340.92	345.01	348.18	343.03	346.18	342.37	340.87	340.73	340.71	341.40	341.99	341.63	343.22	343.45	341.91	341.55
18-Jun-2008	340.89	344.89	348.28	343.07	346.18	342.35	340.87	340.68	340.70	341.38	341.95	341.61	343.20	343.47	341.90	341.47
24-Jul-2008	340.86	344.99	347.86	343.07	346.10	342.62	340.69	340.65	340.68	341.88	342.54	344.75	343.18	343.71	341.99	341.57
20-Aug-2008	340.80	344.96	348.24	343.10	345.56	342.38	341.10	340.63	340.62	341.38	341.93	341.61	343.10	343.52	341.88	341.52
11-Sep-2008	340.87	344.89	348.63	343.10	345.28	342.35	341.06	340.63	340.62	341.34	341.87	341.54	343.11	343.53	341.88	341.58
30-Oct-2008	340.71	344.85	349.14	342.98	345.03	342.17	341.11	340.51	340.48	341.21	341.78	341.42	342.94	343.33	341.90	341.46
20-Nov-2008	342.70	344.66	348.61	342.97	345.24	342.54	Dry	340.52	340.47	341.30	340.25	341.46	342.93	343.33	341.82	341.12
27-Dec-2008	340.91	345.01	348.61	342.93	346.19	342.61	n/r	340.70	340.53	341.57	341.92	341.59	343.01	343.50	342.03	341.61
26-Jan-2009	340.82	345.09	347.72	342.96	346.14	342.29	341.11	340.54	340.46	341.30	341.89	341.49	343.08	343.37	341.89	341.49
25-Feb-2009	340.90	345.27	347.37	343.01	346.12	342.35	341.11	340.59	340.52	341.37	341.93	341.58	343.12	343.44	341.90	341.52
31-Mar-2009	340.82	345.19	348.53	343.01	345.49	342.33	340.89	340.57	340.47	341.33	341.95	341.49	343.09	343.39	341.96	341.55
27-Apr-2009	340.73	345.08	348.56	343.11	346.06	342.36	dry	340.61	340.52	341.36	342.02	347.58	343.14	343.50	341.91	341.58
31-May-2009	340.87	345.05	352.20	343.08	346.13	342.37	Dry	340.58	340.53	341.34	342.03	341.56	343.22	343.52	341.91	341.53
22-Jun-2009	341.09	345.19	349.37	343.15	346.14	342.33	dry	340.52	340.52	341.30	341.94	341.59	343.26	343.56	341.79	341.50
31-Jul-2009	340.72	345.17	349.61	342.87	345.94	342.25	dry	340.39	340.50	341.23	341.78	341.53	343.22	343.49	341.78	341.50
24-Aug-2009	N/A	345.02	349.18	343.05	345.41	342.16	dry	340.50	340.46	341.64	341.74	341.55	343.11	343.51	341.90	N/A
29-Sep-2009	340.73	345.09	348.79	342.96	345.24	342.01	dry	340.39	340.43	341.14	341.55	341.46	342.98	343.26	341.88	341.26
27-Oct-2009	340.54	345.13	348.49	342.89	344.83	342.12	dry	340.45	340.49	341.22	341.72	341.45	342.90	343.30	341.84	341.43
10-Nov-2009	340.70	345.04	348.51	342.85	344.54	342.11	Dry	340.49	340.44	341.23	341.73	341.41	342.80	343.25	341.85	341.43
08-Dec-2009	340.75	345.07	349.30	342.85	344.60	342.14	N/A	340.44	340.41	341.23	341.78	341.40	342.84	343.18	341.86	341.52
25-Jan-2010	340.70	343.89	350.14	342.71	344.59	342.11		340.44	340.41	341.23	341.60	341.24	342.82	343.03	341.93	341.50
26-Feb-2010	Dry	344.86	349.17	342.70	346.10	342.05	Dry	340.38	340.37	341.28	341.73	341.30	342.63	343.05	341.89	341.43
24-Mar-2010	Dry	344.89	348.72	342.71	345.45	dry	dry	340.45	340.42	341.18	341.79	341.44	342.63	343.19	341.83	341.50
18-Apr-2010	340.71	345.10	349.15	342.76	346.10	342.32	dry	340.99	340.75	341.39	341.97	341.63	342.86	343.19	341.87	341.52
03-May-2010	340.94	345.04	349.65	342.75	346.09	342.40	dry	340.61	340.64	341.29	341.98	341.57	342.87	343.17	341.84	339.46
20-May-2010	340.94	345.04	349.65	342.75	346.09	342.40	dry	340.61	340.64	341.29	341.98	341.57	342.87	343.17	341.84	339.46
01-Jun-2010	340.80	345.13	349.72	341.98	345.83	342.75	dry	340.45	340.47	341.29	341.81	341.46	343.23	343.54	341.94	341.54
01-Jul-2010	340.77	345.12	349.64	342.94	345.79	342.23	dry	340.43	340.47	341.25	341.80	341.51	343.14	343.50	341.89	341.53
01-Aug-2010	340.71	345.08	349.75	342.91	345.70	342.26	dry	340.45	340.46	341.30	341.82	341.47	343.11	343.60	341.91	341.51
01-Sep-2010	340.51	344.90	349.82	342.94	345.71	342.22	dry	340.47	340.39	341.29	341.81	341.41	343.06	343.48	341.93	341.49

Note: All Water Level in mASL

Monitor 55-I was replaced by Monitor 55-IR in September 2001. 55-IR was replace in April 2007

Monitor 61-I and 66-I were replaced by Monitors 61-IR and 66-IR in April 2007.

A5 : Routine Leachate Groundwater Elevations - Eastview Road Landfill Site

Monitor	1-I/1-IR	51-I/51-IR	59-I	67-I	65-I	51-II	52-I	55-I/55-IR	56-I/56-IR	57-I	58-I	61-I/IR	63-I	66-I/IR	68-I	69-I
Geologic Unit	**Waste**				**Fill/ Waste**	**Outwash**										
Date																
01-Oct-2010	340.49	344.39	349.74	342.79	345.73	342.14	dry	340.50	340.48	341.18	341.75	341.30	342.81	343.25	341.88	341.46
20-Oct-2010	339.49	344.39	350.84	342.79	345.81	342.14		340.50	340.48	341.18	341.75		342.76	343.15	342.08	341.46
10-Nov-2010	339.73	344.33	349.65	342.74	345.50	342.01	dry	340.42	340.43	341.10	341.73	341.21	342.75	343.17	341.77	341.27
16-Dec-2010	340.29	344.70	349.19	342.76	345.42	342.09		340.59	340.50	341.15	341.75	341.44	342.83	343.26	341.81	341.32
24-Jan-2011	340.48	344.85	349.05	342.84	345.56	342.14	340.90	340.66	340.61	341.29	341.88	341.51	342.72	343.30	341.86	341.40
22-Feb-2011	340.55	344.90	349.26	342.82	345.64	342.28	340.95	340.65	340.58	341.36	341.90	341.44	342.68	343.26	341.83	341.42
14-Mar-2011	340.66	345.16	349.98	342.84	345.99	342.35	340.99	340.64	340.55	341.37	341.93	341.53	342.73	343.30	341.85	341.44
18-Apr-2011	340.76	345.30	351.13	342.87	346.14	342.46	341.00	340.62	340.49	341.40	341.94	341.59	342.96	343.32	341.86	341.45
23-May-2011	340.81	345.24	350.44	343.07	346.20	342.43	340.96	340.53	340.52	341.38	341.97	341.71	343.37	343.53	341.90	341.60
21-Jun-2011	340.74	345.18	350.07	343.14	346.18	342.36	Dry	340.48	340.40	341.35	341.94	341.69	343.36	343.59	341.73	341.56
18-Jul-2011	340.67	345.22	349.55	343.13	346.13	342.32	Dry	340.34	340.25	341.26	341.89	341.65	343.33	343.57	341.60	341.49
17-Aug-2011	340.71	345.28	349.39	343.09	345.66	342.05	Dry	340.38	340.22	341.29	341.52	341.59	343.16	343.54	341.66	341.46
13-Sep-2011	340.83	345.23	349.25	343.05	345.52	341.97	Dry	340.33	340.26	341.26	341.44	341.53	343.12	343.45	341.70	341.40
10-Oct-2011	340.77	345.20	349.70	343.01	345.78	342.09	Dry	340.39	340.31	341.23	341.55	341.51	343.10	343.43	341.67	341.47
01-Nov-2011	340.66	345.09	352.00	342.88	345.95	342.22	dry	340.50	340.47	341.22	341.67	341.47	342.99	343.38	341.76	341.56
02-Dec-2011	340.76	345.16	349.76	342.93	345.83	342.34	Dry	340.47	340.49	341.28	341.70	341.51	343.05	343.42	341.79	341.59
16-Jan-2012	341.19	345.22	347.95	342.85	345.90	342.41	dry	340.63	340.86	341.39	341.98	341.62	343.14	343.50	341.90	341.71
09-Feb-2012	341.22	345.10	347.43	342.88	345.99	342.50	340.80	340.53	340.63	341.49	342.05	341.53	343.02	343.41	341.77	341.55
19-Mar-2012	341.11	345.07	348.40	343.03	345.85	342.36	340.83	340.62	340.36	341.43	342.19	341.61	343.06	343.54	341.79	341.64
17-Apr-2012			348.68	343.14	346.09	342.29	340.92	340.57	340.61	341.47	342.16	341.87	343.25	343.61	341.87	341.65
07-May-2012	341.02	345.34	349.46	343.36	346.20	342.38	341.00	340.68	340.71	341.48	342.04	341.69	343.43	343.58	341.87	341.68
08-Jun-2012	340.83	345.13	349.30	343.12	346.02	342.23	340.99	340.60	340.46	341.33	341.99	341.61	343.24	343.46	341.82	341.52
12-Jul-2012	340.88	344.92	349.36	342.93	345.90	342.30	341.08	340.48	340.55	341.31	341.97	341.57	342.98	343.36	341.74	341.47
14-Aug-2012	340.83	344.88	349.24	342.99	345.69	342.47	341.00	340.69	340.61	341.44	342.13	341.67	343.13	343.30	341.85	341.68
17-Sep-2012	341.07	344.98	349.52	343.03	345.56	342.42	340.98	340.88	340.58	341.58	342.20	341.82	343.23	343.36	341.83	341.75
03-Oct-2012	341.19	345.27	349.48	342.95	345.96	342.38	dry	340.81	340.80	341.31	342.23	341.80	343.19	343.27	341.75	341.82
21-Nov-2012	340.99	345.09	352.39	343.17	346.03	342.27	dry	340.63	340.68	341.45	342.33	341.72	343.07	343.40	341.78	341.76
19-Dec-2012	340.92	345.12	349.34	343.11	346.09	342.24	dry	340.57	340.64	341.38	342.24	341.57	343.02	343.36	341.74	341.72
15-Jan-2013	341.02	345.16	349.21	342.85	345.72	342.21	340.86	340.52	340.60	341.56	342.17	341.59	342.73	343.09	341.70	341.42
11-Feb-2013	341.10	345.25	349.28	342.83	345.74	342.17	340.88	340.47	340.62	341.30	342.15	341.56	342.86	343.07	341.71	341.45
11-Mar-2013	341.09	345.29	349.44	342.97	345.81	342.25	340.82	340.51	340.68	341.38	342.04	341.62	342.99	343.28	341.76	341.48
17-Apr-2013	341.16	345.48	349.71	343.18	345.92	342.34	340.84	340.55	340.70	341.44	342.00	341.64	343.22	343.48	341.78	341.50
25-May-2013	341.28	345.75	352.35	343.53	346.28	342.44	340.88	340.58	340.71	341.39	342.05	341.69	343.54	343.74	341.79	341.53
25-Jun-2013	341.20	345.79	349.92	343.50	346.27	342.51	340.91	340.61	340.74	341.41	342.03	341.61	343.48	343.79	341.81	341.56
09-Jul-2013	341.23	345.75	349.96	343.44	346.30	342.50	340.93	340.63	340.72	341.43	342.01	341.64	343.43	343.82	341.76	341.58
20-Aug-2013	341.12	345.78	350.01	343.39	346.26	342.54	340.94	340.70	340.77	341.47	342.07	341.56	343.32	343.91		
11-Sep-2013	341.02	345.69	349.93	343.35	346.31	342.51		340.67	340.73	341.43	342.11	341.50	343.24	343.97	341.91	341.64
16-Oct-2013	341.04		349.86	343.32	346.32	342.48		340.71	340.67	341.44	342.07	341.41	343.20	343.99	341.96	341.66
13-Nov-2013			349.82		346.37								343.00	344.09		
18-Nov-2013	340.82	345.50		343.24		342.44		340.62	340.75	341.41	342.00	341.19			341.99	341.66
23-Dec-2013	340.79	345.30	349.64	343.05	346.20	342.32		340.56	340.62	341.48	342.07	341.22	342.92	343.91	341.83	341.57
09-Jan-2014	340.75	344.83	349.91	342.92	345.67	342.68	340.77	340.46	340.54	341.45	342.14	341.55	342.75	343.28	341.61	341.34
10-Feb-2014	340.79	344.99	350.37	343.03	345.76	342.34	340.70	340.49	340.51	341.38	342.09	341.58	342.93	343.46	341.53	341.47
14-Mar-2014	340.82	345.12	351.08	343.32	346.05	342.22	340.60	340.54	340.57	341.35	341.92	341.53	343.11	343.79	341.59	341.60
08-Apr-2014	340.97	345.26	351.31	343.43	346.28	343.00	340.47	340.59	340.64	341.37	341.94	341.61	343.26	343.82	341.85	341.75
02-May-2014	341.02	345.37	352.77	343.94	346.54	342.46	340.44	340.63	340.70	341.46	342.00	341.73	343.61	344.13	342.03	342.02

Note: All Water Level in mASL

Monitor 55-I was replaced by Monitor 55-IR in September 2001. 55-IR was replace in April 2007

Monitor 61-I and 66-I were replaced by Monitors 61-IR and 66-IR in April 2007.

A5 : Routine Leachate Groundwater Elevations - Eastview Road Landfill Site

Monitor	1-I/1-IR	51-I/51-IR	59-I	67-I	65-I	51-II	52-I	55-I/55-IR	56-I/56-IR	57-I	58-I	61-I/IR	63-I	66-I/IR	68-I	69-I
Geologic Unit	Waste				Fill/ Waste	Outwash										
Date																
13-Jun-2014	341.10	345.42	352.87	344.00	346.61	342.50	340.49	340.79	340.78	341.50	342.04	341.84	343.62	344.19	341.95	342.04
15-Jul-2014	341.05	345.28	353.02	343.95	346.50	342.51	340.53	340.85	340.78	341.54	342.13	341.91	343.11	344.26	341.99	342.09
08-Aug-2014	341.11	345.16	353.05	343.98	346.42	342.44	340.50	340.83	340.71	341.49	342.20	341.79	343.26	344.28	342.00	342.03
03-Sep-2014	341.10	345.08	352.96	343.85	346.46	342.36	340.36	340.74	340.61	341.52	342.22	341.71	343.11	344.20	341.92	341.97
06-Oct-2014	341.05	344.83	352.86	343.80	346.44	342.38	340.27	340.62	340.60	341.48	342.11	341.76	343.20	344.17	341.80	341.76
12-Nov-2014	340.82	344.67	352.93	343.84	346.35	342.46	340.29	340.59	340.68	341.34	341.96	341.69	343.57	344.02	341.86	341.69
04-Dec-2014	340.78	344.58	352.73	343.58	346.18	342.39	340.32	340.65	340.66	341.27	341.88	341.53	342.92	343.74	341.75	341.60
05-Jan-2015	340.83	344.47	352.65	343.47	346.15	342.31	340.42	340.62	340.59	341.33	341.86	341.51	342.85	343.58	341.54	341.55
11-Feb-2015	340.77	344.35	352.29	343.22	346.12	342.22	340.48	340.57	340.50	341.29	341.89	341.49	342.81	343.33	341.43	341.51
22-Mar-2015	340.79	344.38	352.33	342.99	346.16	342.15	340.40	340.55	340.56	341.41	341.87	341.53	342.89	343.13	341.46	341.46
13-Apr-2015	340.83	344.39	352.26	343.06	346.16	342.20	340.34	340.63	340.54	341.50	341.96	341.56	343.01	343.19	341.37	341.44
02-May-2015	340.87	344.42	352.45	343.20	346.19	342.23	dry	340.60	340.65	341.61	342.00	341.59	343.14	343.06	341.46	341.49
11-May-2015	340.77	344.42	349.45	343.20	346.19	342.23	dry	340.60	340.65	341.61	342.00	341.59	343.14	343.06	341.46	341.49
09-Jun-2015	340.89	344.76	352.69	343.23	346.40	342.20	340.31	340.65	340.76	341.54	342.14	341.62	343.16	343.17	341.67	341.72
21-Jul-2015	340.80	345.17	352.91	343.37	346.35	342.39	340.41	340.79	340.68	341.47	342.07	341.69	343.08	343.35	341.55	341.57
18-Aug-2015	340.83	344.88	352.87	343.34	346.27	342.32	340.37	340.81	340.63	341.35	341.99	341.72	343.00	343.11	341.51	341.50
13-Sep-2015	340.79	344.59	352.73	343.41	346.13	342.15	dry	340.71	340.66	341.27	341.81	341.61	342.94	342.87	341.38	341.29
11-Oct-2015	340.81	344.48	352.69	343.03	346.04	342.12	dry	340.63	340.65	341.23	341.82	341.45	342.89	342.93	341.36	341.34
17-Nov-2015	340.99	344.21	352.82	342.70	346.01	342.10	340.29	340.51	340.62	341.22	341.73	341.28	342.86	342.78	341.30	341.21
19-Nov-2015	340.99	344.21	352.82	342.70	346.01	342.10	340.29	340.51	340.62	341.22	341.73	341.28	342.84	342.78	341.30	341.21
08-Dec-2015	340.91	344.28	352.62	342.78	345.95	342.14	340.35	340.59	340.58	341.27	341.76	341.32	342.79	342.85	341.36	341.39
18-Jan-2016	340.86	344.23	352.55	342.73	345.85	342.12	340.39	340.56	340.56	341.19	341.69	341.22	342.67	342.65	341.18	341.46
09-Feb-2016	340.80	344.38	352.66	342.92	346.00	342.30	340.46	340.65	340.65	341.14	341.75	341.16	342.80	342.58	341.44	341.52
07-Mar-2016	340.86	344.50	352.78	343.03	346.22	342.33	340.33	340.79	340.80	341.31	341.92	341.23	342.92	342.71	341.49	341.57
20-Apr-2016	340.92	344.62	352.92	342.69	346.36	342.00	dry	340.71	340.93	341.26	341.73	341.40	343.14	342.68	341.20	341.34
11-May-2016	341.09	344.66	352.96	342.75	346.50	341.95	340.32	340.69	340.98	341.39	341.82	341.47	343.31	342.83	341.35	341.42
13-Jun-2016	341.03	344.53	352.64	342.87	346.38	341.85	dry	340.53	340.83	341.46	341.87	341.21	343.14	343.11	341.27	341.26
18-Jul-2016	340.88	344.30	352.23	342.80	346.14	341.77	dry	340.46	340.55	341.37	341.69	340.73	342.85	342.95	341.19	340.72
15-Aug-2016	340.71	344.22	351.83	342.61	345.77	341.42	dry	340.34	340.48	341.21	341.45	dry	342.71	342.73	341.08	340.44
07-Sep-2016	dry	344.08	351.23	342.25	345.48	341.37	dry	340.12	340.28	340.82	341.24	dry	342.34	342.33	340.67	340.27
25-Oct-2016	dry	344.16	351.19	342.16	345.52	341.50	340.39	340.19	340.39	340.94	341.20	340.74	342.32	342.39	340.75	340.49
14-Nov-2016	340.72	344.33	350.86	342.48	345.70	341.67	dry	340.31	340.76	341.20	341.42	341.40	342.69	342.82	340.64	340.38
19-Dec-2016	340.84	344.26	351.14	342.42	345.67	341.88	340.31	340.42	340.55	341.10	341.57	341.17	342.66	342.79	340.95	340.32
16-Jan-2017	340.79	344.48	351.41	342.39	345.95	341.80	340.48	340.61	340.76	341.02	341.94	341.05	342.75	342.64	341.24	340.59
22-Feb-2017	340.89	344.66	351.58	342.51	346.22	341.92	340.52	340.81	340.90	341.17	342.27	341.23	342.99	342.83	341.50	340.91
13-Mar-2017	340.99	344.71	351.75	342.62	346.37	342.02	340.49	340.95	341.06	341.37	342.62	341.49	343.04	342.92	341.65	341.24
20-Apr-2017	341.06	344.83	351.83	342.73	346.49	342.04	340.43	341.07	341.16	341.52	342.68	341.53	343.12	342.76	341.73	341.42
11-May-2017	340.92	344.70	351.70	342.65	346.55	342.08	Dry	341.02	341.10	341.63	342.74	341.59	343.08	342.63	341.62	341.67
26-Jun-2017	341.13	344.90	351.56	342.80	346.70	342.30	Dry	341.14	341.25	341.79	342.92	341.71	343.32	342.82	341.80	341.82
19-Jul-2017	341.04	344.66	351.79	343.02	346.75	341.97	Dry	340.91	341.05	341.92	343.04	341.89	343.15	342.97	341.97	341.91
08-Aug-2017	340.84	344.48	352.03	342.95	346.58	341.63	Dry	340.82	340.86	341.84	343.00	341.79	342.95	343.12	341.88	341.75
26-Sep-2017	340.76	344.93	352.26	342.82	346.39	341.78	Dry	340.69	340.58	341.75	342.87	341.64	342.86	343.03	341.61	341.66
19-Oct-2017	340.72	345.28	352.43	342.73	346.59	342.00	Dry	340.54	340.29	341.48	342.75	341.57	342.70	342.81	341.38	341.47
14-Nov-2017	340.87	345.48	352.71	342.57	345.73	341.91	340.33	340.50	340.06	341.24	342.54	341.35	342.75	342.58	341.22	341.06
05-Dec-2017	340.92	345.30	352.36	342.62	345.52	341.83	340.50	340.46	340.26	341.37	342.27	341.29	342.81	342.69	341.25	341.21

Note: All Water Level in mASL

Monitor 55-I was replaced by Monitor 55-IR in September 2001. 55-IR was replace in April 2007

Monitor 61-I and 66-I were replaced by Monitors 61-IR and 66-IR in April 2007.

(9 Rpt Leachate WL >=2006/EastvwEAC1/60565850/Apr-18)

Table A6. Water Temperatures Taken at Time of Sampling From Groundwater Monitors in 2017

Monitor	Date	Temperature (C^o)	Comments	Geological Unit
2-I	02-May-17	7.6	MAXXUM	Outwash
2-I	08-Nov-17	8.2	MAXXUM	Outwash
2-II	02-May-17	6.3	MAXXUM	Outwash
4-IR	25-Apr-17	9.3	MAXXUM	Bedrock
4-IR	10-Aug-17	10.4	MAXXUM	Bedrock
4-IR	28-Sep-17	10.1	MAXXUM	Bedrock
4-IR	08-Nov-17	9.3	MAXXUM	Bedrock
4-IIR	25-Apr-17	8.8	MAXXUM	Lower Till
4-IIR	07-Nov-17	9.7	MAXXUM	Lower Till
4-IIIR	25-Apr-17	7	MAXXUM	Upper Till
4-IIIR	08-Nov-17	10.1	MAXXUM	Upper Till
5-II	01-May-17	7.4	MAXXUM	Upper Till
5-II	09-Nov-17	11	MAXXUM	Upper Till
9A-I	02-May-17	8.1	MAXXUM	Bedrock
9-I	02-May-17	7.9	MAXXUM	Outwash
10-II	03-May-17	6.8	MAXXUM	Outwash
10-II	13-Nov-17		Decomm	Outwash
10-III	03-May-17	7.1	MAXXUM	Outwash/Peat
10-III	13-Nov-17		Decomm	Outwash/Peat
11-I	25-Apr-17	6.4	MAXXUM	Upper Till
11-I	07-Nov-17	9.4	MAXXUM	Upper Till
11-II	25-Apr-17	6.2	MAXXUM	Outwash
11-III	25-Apr-17	9	MAXXUM	Lower Till
13-I	03-May-17	9.2	MAXXUM	Bedrock
13-II	03-May-17	9.6	MAXXUM	Lower Till
13-III	03-May-17	9.2	MAXXUM	Upper Till
13-III	13-Nov-17	10.8	MAXXUM	Upper Till
13-IV	03-May-17	8.6	MAXXUM	Outwash
13-IV	13-Nov-17	11.1	MAXXUM	Outwash
13-V	03-May-17	9.2	MAXXUM	Outwash
13-V	13-Nov-17	9.7	MAXXUM	Outwash
14-II	08-May-17	7.7	MAXXUM	Outwash
14-II	13-Nov-17	10.7	MAXXUM	Outwash
14-III	08-May-17	8.4	MAXXUM	Outwash
14-III	13-Nov-17	10.2	MAXXUM	Outwash
14-IV	08-May-17	10.3	MAXXUM	Bedrock
14-IV	13-Nov-17	8.7	MAXXUM	Bedrock
15-I	27-Apr-17	10.4	MAXXUM	Bedrock
15-II	27-Apr-17	10.1	MAXXUM	Lower Till
15-III	27-Apr-17	10.8	MAXXUM	Upper Till
15-III	08-Nov-17	9.8	MAXXUM	Upper Till
15-IV	27-Apr-17	10.7	MAXXUM	Outwash
15-IV	08-Nov-17	10.6	MAXXUM	Outwash
15-V	27-Apr-17	11.1	MAXXUM	Fill
15-V	08-Nov-17	10.6	MAXXUM	Fill
16-I	24-Apr-17	9.8	MAXXUM	Lower Till

Table A6. Water Temperatures Taken at Time of Sampling From Groundwater Monitors in 2017

AECOM

Monitor	Date	Temperature (C^{o})	Comments	Geological Unit
16-III	24-Apr-17	9.1	MAXXUM	Outwash
16-IV	24-Apr-17	10.3	MAXXUM	Upper Till
16-IV	08-Nov-17	9.6	MAXXUM	Upper Till
16-V	24-Apr-17	8.4	MAXXUM	Fill
16-VI	24-Apr-17	8.9	MAXXUM	Lower Till
16-VII	24-Apr-17	8.9	MAXXUM	Bedrock
16-VII	08-Nov-17	7.9	MAXXUM	Bedrock
16-VIII	10-Aug-17	10.8	MAXXUM	Deep bedrock
16-VIII	28-Sep-17	9.8	MAXXUM	Deep bedrock
16-VIII	09-Nov-17	7.8	MAXXUM	Deep bedrock
17-I	02-May-17	8.3	MAXXUM	Bedrock
17-II	02-May-17	8.4	MAXXUM	Lower Till
17-III	02-May-17	7.5	MAXXUM	Upper Till
17-IV	02-May-17	7.9	MAXXUM	Outwash
17-IV	13-Nov-17		INSV	Outwash
18-III	02-May-17	7.2	MAXXUM	Outwash
18-III	13-Nov-17	10.1	MAXXUM	Outwash
19-I	26-Apr-17	10.1	MAXXUM	Bedrock
19-II	26-Apr-17	9.2	MAXXUM	Lower Till
19-IV	26-Apr-17	8.2	MAXXUM	Upper Till
20-IR	26-Apr-17	9.8	MAXXUM	Bedrock
21-IR	02-May-17	8.6	MAXXUM	Upper Till
21-IR	09-Nov-17	9.9	MAXXUM	Upper Till
26-I	08-May-17	7.9	MAXXUM	Outwash
28-I	09-May-17	7.4	MAXXUM	Outwash
30-I	09-May-17	6.4	MAXXUM	Outwash
35-I	08-May-17	9.7	MAXXUM	Outwash
37-IR	25-Apr-17	7.7	MAXXUM	Bedrock
37-IR	10-Aug-17	10.7	MAXXUM	Bedrock
37-IR	28-Sep-17	10.1	MAXXUM	Bedrock
37-IR	06-Nov-17	9.2	MAXXUM	Bedrock
37-IIR	25-Apr-17	7.4	MAXXUM	Bedrock
37-IIR	10-Aug-17	10.9	MAXXUM	Bedrock
37-IIR	28-Sep-17	10	MAXXUM	Bedrock
37-IIR	06-Nov-17	9.4	MAXXUM	Bedrock
50-I	24-Apr-17	9	MAXXUM	Bedrock
50-I	10-Aug-17	10.3	MAXXUM	Bedrock
50-I	28-Sep-17	10.4	MAXXUM	Bedrock
50-I	06-Nov-17	9.4	MAXXUM	Bedrock
53-I	26-Apr-17	8.6	MAXXUM	Bedrock
53-I	10-Aug-17	10.6	MAXXUM	Bedrock
53-I	28-Sep-17	10.1	MAXXUM	Bedrock
53-I	07-Nov-17	9.1	MAXXUM	Bedrock
53-IIR	26-Apr-17	8.4	MAXXUM	Lower Till
53-IIR	07-Nov-17	9.1	MAXXUM	Lower Till
54-I	01-May-17	8.9	MAXXUM	Bedrock
54-I	09-Nov-17	9.2	MAXXUM	Bedrock
60-I	26-Apr-17	10.1	MAXXUM	Lower Till
60-I	07-Nov-17	10.1	MAXXUM	Lower Till

Table A6. Water Temperatures Taken at Time of Sampling From Groundwater Monitors in 2017

Monitor	Date	Temperature (C^o)	Comments	Geological Unit
60-II	26-Apr-17	9.7	MAXXUM	Upper Till
60-II	07-Nov-17	9.9	MAXXUM	Upper Till
60-III	26-Apr-17	8.2	MAXXUM	Upper Till
60-III	07-Nov-17	11.1	MAXXUM	Upper Till
90-I	10-Aug-17	11.1	MAXXUM	Deep bedrock
90-I	28-Sep-17	9.9	MAXXUM	Deep bedrock
90-I	09-Nov-17	8.9	MAXXUM	Deep bedrock
90-II	25-Apr-17	8.9	MAXXUM	bedrock
90-II	09-Nov-17	8.9	MAXXUM	bedrock
91-I	01-May-17	8.6	MAXXUM	Bedrock
91-I	10-Aug-17	10.2	MAXXUM	Bedrock
91-I	28-Sep-17	10.1	MAXXUM	Bedrock
91-I	09-Nov-17	9.1	MAXXUM	Bedrock
93-I	24-Apr-17	9.1	MAXXUM	Bedrock
93-I	10-Aug-17	10.4	MAXXUM	Bedrock
93-I	28-Sep-17	9.9	MAXXUM	Bedrock
93-I	06-Nov-17	9.3	MAXXUM	Bedrock
94-I	25-Apr-17	8.4	MAXXUM	Bedrock
94-I	10-Aug-17	10.6	MAXXUM	Bedrock
94-I	28-Sep-17	9.5	MAXXUM	Bedrock
94-I	07-Nov-17	8.5	MAXXUM	Bedrock
95-I	24-Apr-17	10.3	MAXXUM	Bedrock
95-I	10-Aug-17	11.1	MAXXUM	Bedrock
95-I	28-Sep-17	10.1	MAXXUM	Bedrock
95-I	06-Nov-17	9.8	MAXXUM	Bedrock
96-I	08-May-17	9.9	MAXXUM	Bedrock
96-I	10-Aug-17	10.2	MAXXUM	Bedrock
96-I	28-Sep-17	10.2	MAXXUM	Bedrock
96-I	14-Nov-17	8.3	MAXXUM	Bedrock
96-II	08-May-17	9.6	MAXXUM	Bedrock
96-II	10-Aug-17	10.2	MAXXUM	Bedrock
96-II	28-Sep-17	10.1	MAXXUM	Bedrock
96-II	14-Nov-17	8.7	MAXXUM	Bedrock
C2-I	26-Apr-17	8.3	MAXXUM	Outwash
C2-I	07-Nov-17	9.2	MAXXUM	Outwash
C6-I	24-Apr-17	8.8	MAXXUM	Outwash
C6-I	06-Nov-17	9.2	MAXXUM	Outwash
C9-I	01-May-17	8.2	MAXXUM	Outwash
C9-I	07-Nov-17	8.7	MAXXUM	Outwash
C10-I	01-May-17	8.4	MAXXUM	Outwash
C10-I	07-Nov-17	8.3	MAXXUM	Outwash
C11-I	01-May-17	8.7	MAXXUM	Outwash
C11-I	08-Nov-17	9.5	MAXXUM	Outwash
51-IR	04-May-17	12.8	MAXXUM	Waste
51-IR	15-Nov-17	10.9	MAXXUM	Waste

Table A6. Water Temperatures Taken at Time of Sampling From Groundwater Monitors in 2017

Monitor	Date	Temperature (C^o)	Comments	Geological Unit
51-II	04-May-17	12.3	MAXXUM	Outwash
51-II	15-Nov-17	12.4	MAXXUM	Outwash
52-I	04-May-17		Dry	Outwash
52-I	15-Nov-17		Dry	Outwash
55-IR	09-May-17	10.9	MAXXUM	Outwash
55-IR	15-Nov-17	11.6	MAXXUM	Outwash
56-IR	09-May-17	15.7	MAXXUM	Outwash
56-IR	15-Nov-17	12.2	MAXXUM	Outwash
57-I	04-May-17	10.3	MAXXUM	Outwash
57-I	14-Nov-17	11.9	MAXXUM	Outwash
58-I	04-May-17	10.1	MAXXUM	Outwash
58-I	14-Nov-17	10.7	MAXXUM	Outwash
59-I	09-May-17	11.8	MAXXUM	Waste
59-I	15-Nov-17	14.1	MAXXUM	Waste
61-IR	09-May-17	15.5	MAXXUM	Outwash
61-IR	14-Nov-17		MAXXUM	Outwash
63-I	09-May-17	10.8	MAXXUM	Outwash
63-I	15-Nov-17	11.4	MAXXUM	Outwash
65-I	09-May-17	8.3	MAXXUM	Waste/Fill
65-I	15-Nov-17	9.9	MAXXUM	Waste/Fill
66-IR	09-May-17	13.2	MAXXUM	Outwash
66-IR	15-Nov-17	12.8	MAXXUM	Outwash
67-I	09-May-17	17.9	MAXXUM	Waste
67-I	15-Nov-17	19.6	MAXXUM	Waste

Appendix B

Leachate Collection and Containment System Operating Results

- B1. Flow Meter Readings and Summary of Leachate Discharge from the Main Pump Station During 2017
- B2. South and West Pump Stations, Hour Meter Readings and Monthly Leachate Flows During 2017
- B3. Monthly Leachate Quantities and Average Daily Flow Rates for All Pump Stations During 2017
- B4. Manhole Leachate Elevations, South Collection System – 2017
- B5. Manhole Leachate Elevations, West Collection System – 2017

TABLE B1 - SUMMARY OF LEACHATE DISCHARGED FROM MAIN PUMP STATION DURING 2017

Reading Date	Volume Pumped Off site This Period (m^3)	Main Pump No. 1 Total Pump Time (hours)	Main Pump No. 2 Total Pump Time (hours)	Main Pump Station Total Pump Time (hours)	Main Pumps Average Pumping Rate (m^3/hr)	Main Station Cumulative Volume This Year (m^3)	Remarks
Jan-17	18,248.2	164.08	145.49	309.57	58.95	18,248.2	
Feb-17	13,410.7	121.8	107.7	229.5	58.43	31,658.9	
Mar-17	16,809.4	152.9	161.7	314.6	53.43	48,468.3	
Apr-17	13,646.1	139.9	123.9	263.8	51.73	62,114.4	
May-17	14,057.6	137.5	123.8	261.3	53.80	76,172.0	
Jun-17	13,602.5	117.2	129.2	246.4	55.20	89,774.5	
Jul-17	8,361.1	70.3	65.6	135.9	61.52	98,135.7	
Aug-17	6,885.4	56.8	51.5	108.3	63.58	105,021.0	
Sept-17	6,935.6	55.7	54.5	110.2	62.94	111,956.6	
Oct-17	6,208.6	52.8	49.5	102.3	60.69	118,165.2	
Nov-17	7,781.9	66.3	62.1	128.4	60.61	125,947.1	
Dec-17	7,655.9	67.6	60.9	128.5	59.58	133,603.0	
YEAR 2017 TOTAL		**1,203**	**1,136**	**2,339**		**133,603**	

TABLE B2 - SOUTH AND WEST PUMP STATION PUMP OPERATING HOURS AND ESTIMATED MONTHLY LEACHATE FLOWS FOR 2017

Date	**South Sta** Pump #1 (hours)	**South Sta** Pump #2 (hours)	**South Sta** Total (hours)	**South Sta** (Monthly vol) (cu m)	**West Sta** Pump #1 (hours)	**West Sta.** Pump #2 (hours)	**West Sta** Total (hours)	**West Sta** (Monthly vol) (cu m)	**TOTAL** Hours Pumped (hours)	**Average** pump rate (all 4 pumps) (m3/hr)	**Total flow** this period (cu m)
Jan-17	105.4	135	240.4	7546.65	161.6	179.3	340.9	10701.56	581.3	31.39	18,248.2
Feb-17	93.5	124.9	218.4	6009.22	134.4	134.6	269	7401.47	487.4	27.51	13,410.7
Mar-17	162.1	168	330.1	8248.54	205.3	137.3	342.6	8560.89	672.7	24.99	16,809.4
Apr-17	202.9	100.6	303.5	6788.37	193.3	113.3	306.6	6857.71	610.1	22.37	13,646.1
May-17	147.8	99.8	247.6	6693.60	165.4	107	272.4	7364.04	520	27.03	14,057.6
Jun-17	68.2	105	173.2	5274.13	165.4	108.1	273.5	8328.37	446.7	30.45	13,602.5
Jul-17	47.9	64.4	112.3	3660.64	74.6	69.6	144.2	4700.48	256.5	32.60	8,361.1
Aug-17	47.8	57.7	105.5	3588.96	46.4	50.5	96.9	3296.40	202.4	34.02	6,885.4
Sept-17	59.5	57.8	117.3	3853.82	47.2	46.6	93.8	3081.74	211.1	32.85	6,935.6
Oct-17	47.9	48.6	96.5	3572.65	35.9	35.3	71.2	2635.99	167.7	37.02	6,208.6
Nov-17	56.2	63	119.2	4050.65	51.9	57.9	109.8	3731.22	229	33.98	7,781.9
Dec-17	46.1	68.3	114.4	3939.87	47.4	60.5	107.9	3716.02	222.3	34.44	7,655.9
Total	**1,085.3**	**1,093.1**	**2,178.4**	**63,227.1**	**1,328.8**	**1,100.0**	**2,428.8**	**70,375.9**	**4,607.2**	**30.7**	**133,603.0**

TABLE B3 - MONTHLY LEACHATE QUANTITIES AND AVERAGE DAILY FLOW RATES FROM ALL PUMP STATIONS DURING 2017

Date	**Main Sta** Volume This period (m^3)	**Main Sta** Avg Daily Flow Rate for the month (m^3/day)	**South Sta** Total (m^3)	**South Sta** Avg Daily Flow Rate for the month (m^3/day)	**West Sta** Total (m^3)	**West Sta** Avg Daily Flow Rate for the month (m^3/day)	**South+West** Total (m^3)	**Remarks**
Jan-17	18,248.2	588.7	7,546.7	243.4	10,701.6	345.2	18,248.2	
Feb-17	13,410.7	479.0	6,009.2	214.6	7,401.5	264.3	13,410.7	
Mar-17	16,809.4	542.2	8,248.5	266.1	8,560.9	276.2	16,809.4	
Apr-17	13,646.1	454.9	6,788.4	226.3	6,857.7	228.6	13,646.1	
May-17	14,057.6	453.5	6,693.6	215.9	7,364.0	237.5	14,057.6	
Jun-17	13,602.5	453.4	5,274.1	175.8	8,328.4	277.6	13,602.5	
Jul-17	8,361.1	269.7	3,660.6	118.1	4,700.5	151.6	8,361.1	
Aug-17	6,885.4	222.1	3,589.0	115.8	3,296.4	106.3	6,885.4	
Sep-17	6,935.6	231.2	3,853.8	128.5	3,081.7	102.7	6,935.6	
Oct-17	6,208.6	200.3	3,572.7	115.2	2,636.0	85.0	6,208.6	
Nov-17	7,781.9	259.4	4,050.6	135.0	3,731.2	120.4	7,781.9	
Dec-17	7,655.9	247.0	3,939.9	127.1	3,716.0	119.9	7,655.9	
Total 2017	**133,603.0**	**N/A**	**63,227.1**	**N/A**	**70,375.9**	**N/A**	**133,603.0**	
Monthly Avg	**11,133.6**	**366.8**	**5,268.9**	**173.5**	**5,864.7**	**193.0**	**11,133.6**	

TABLE : B4 MANHOLE LEACHATE ELEVATIONS, SOUTH COLLECTION SYSTEM - 2017

DATE	**MANHOLE LOCATIONS**											
Elevation	**AS (mASL)**	**BS (mASL)**	**1S (mASL)**	**2S (mASL)**	**3S (mASL)**	**4S (mASL)**	**5S (mASL)**	**5AS (mASL)**	**South Pump Station**	**6S (mASL)**	**7S (mASL)**	**8S (mASL)**
18-Jan-2017	342.27	342.27	342.23	342.10	341.29	341.17	341.17	340.42	340.49	340.45	340.46	340.49
06-Feb-2017	342.18	342.30	342.22	342.11	341.29	341.18	341.18	340.15	340.22	340.14	340.16	340.34
14-Mar-2017	342.26	342.33	342.28	342.11	341.32	341.21	341.19	340.05	340.09	340.06	340.09	340.11
04-Apr-2017	342.26	342.31	342.29	342.10	341.35	341.15	341.19	339.86	340.04	339.83	339.92	340.00
16-May-2017	342.21	342.27	342.23	342.07	341.29	341.15	341.14	340.23	340.56	340.14	340.36	340.26
26-Jun-2017	342.28	342.34	342.31	342.11	341.33	341.16	341.17	340.05	340.07	340.05	340.02	340.01
17-Jul-2017	342.29	342.34	342.27	342.14	341.32	341.16	341.18	339.77	339.81	339.76	339.78	339.80
16-Aug-2017	342.30	342.32	342.26	342.09	341.34	341.19	341.19	340.04	340.04	340.02	340.89	339.94
13-Sep-2017	342.19	342.28	342.23	342.05	341.32	341.13	341.12	340.24	340.26	340.15	340.41	340.29
05-Oct-2017	342.32	342.34	342.27	342.08	341.34	341.20	341.18	339.96	339.84	339.92	339.90	339.96
20-Nov-2017	342.27	342.34	342.25	342.09	341.29	341.14	341.15	339.81	340.35	340.07	340.04	340.13
28-Dec-2017	342.27	342.37	342.31	342.13	341.35	341.15	341.15	340.18	340.57	340.09	340.09	340.03
Elevations of: **Pipe Invert**	**342.30**	**342.30**	**342.30**	**342.30**	**341.40**	**341.20**	**341.00**	**341.00 E** **339.50 W**	**339.50**	**339.50**	**339.60**	**339.70**
Top of Sheet Pile Wall	-----------	**344.00**	**343.90**	**344.00**	**343.40**	**343.20**	**343.50**	**343.50**	**343.30**	**343.20**	**344.00**	**344.70**

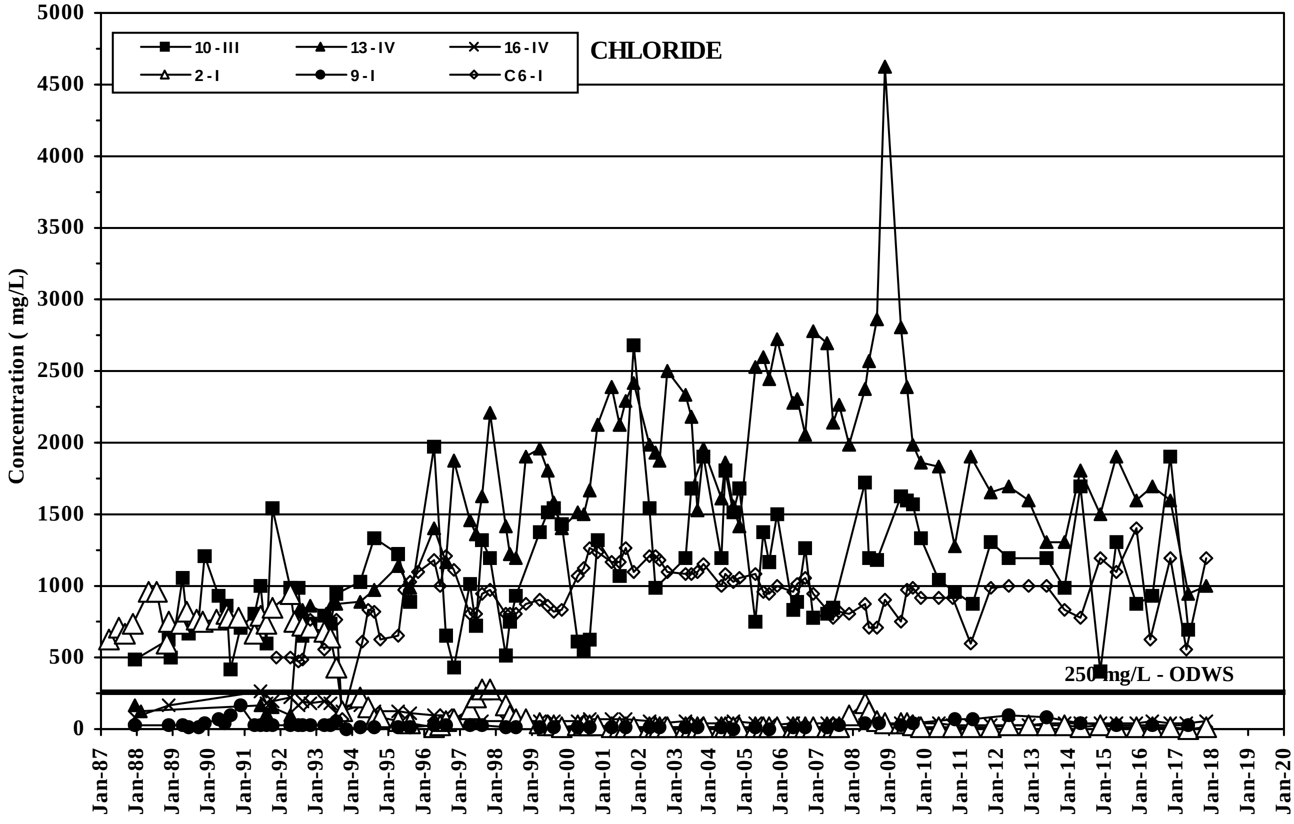
TABLE : B5 MANHOLE LEACHATE ELEVATIONS, WEST COLLECTION SYSTEM - 2017

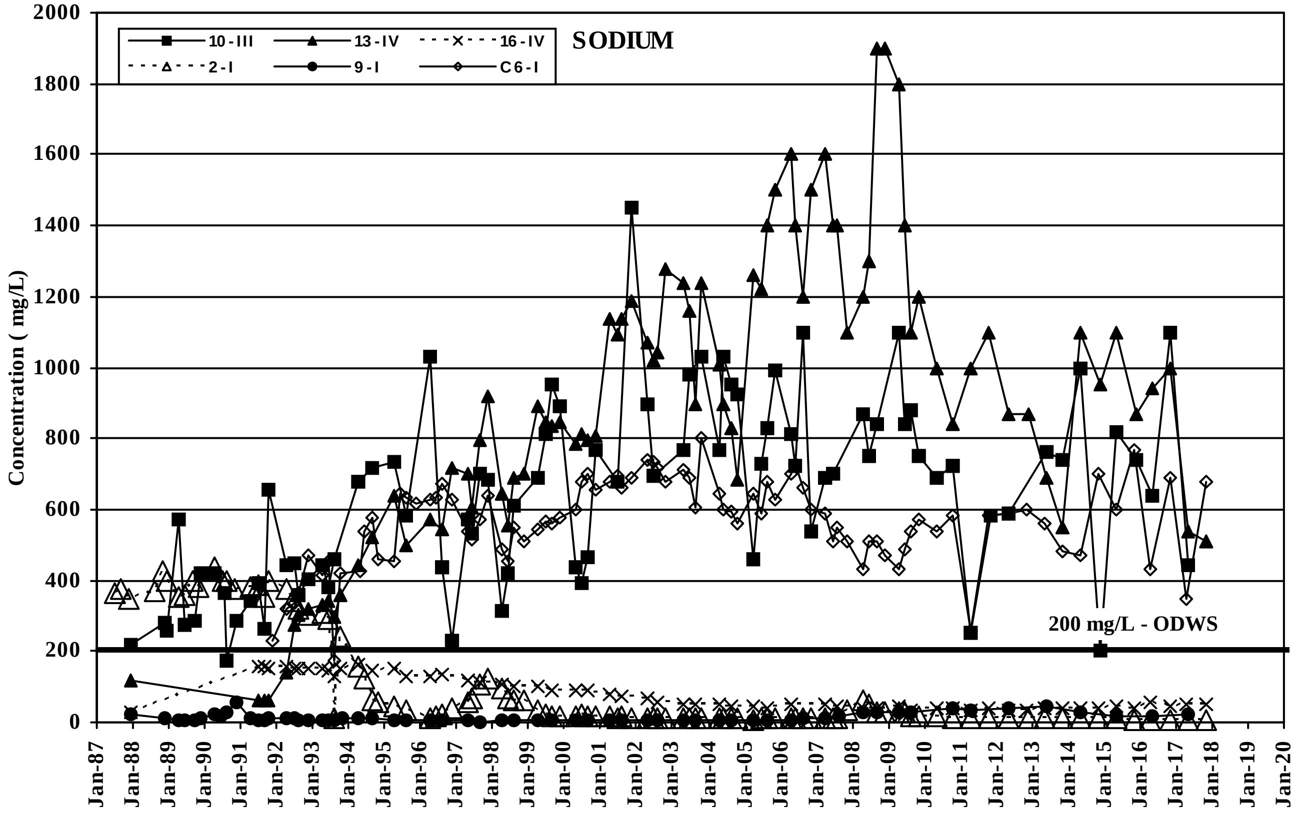
DATE	**MANHOLE LOCATIONS**									
Elevation	**1W (mASL)**	**2W (mASL)**	**3W (mASL)**	**4W (mASL)**	**5W (mASL)**	**West Pump Station**	**6W (mASL)**	**7W (mASL)**	**8W (mASL)**	**9W (mASL)**
18-Jan-2017	341.28	341.31	341.29	341.03	340.82	340.27	340.75	340.87	341.00	341.86
06-Feb-2017	341.30	341.29	341.30	341.05	340.84	340.05	340.75	340.86	340.98	341.87
14-Mar-2017	341.29	341.29	341.29	341.05	340.83	339.40	340.76	340.87	340.98	341.87
04-Apr-2017	341.29	341.25	341.26	341.03	340.83	339.59	340.75	340.86	340.97	341.87
16-May-2017	341.30	341.29	341.30	341.08	340.83	340.28	340.76	340.89	341.00	341.87
26-Jun-2017	341.55	341.54	341.54	341.09	340.88	339.49	340.78	340.93	341.04	341.87
17-Jul-2017	341.39	341.37	341.36	341.03	340.79	340.69	340.79	340.86	341.01	341.87
16-Aug-2017	341.32	341.30	341.36	341.12	340.86	340.25	340.75	340.88	340.97	341.88
13-Sep-2017	341.32	341.27	341.28	341.07	340.84	340.17	340.74	340.90	340.99	341.86
05-Oct-2017	341.34	341.34	341.33	341.09	340.87	340.16	340.75	340.85	340.98	341.87
20-Nov-2017	341.34	341.34	341.34	341.08	340.81	340.35	340.78	340.87	340.99	341.86
28-Dec-2017	341.32	341.34	341.46	341.06	340.86	339.94	340.78	340.91	341.02	341.88
Elevations of:										
Pipe Invert	**341.20**	**341.10**	**340.95**	**340.85**	**340.75**	**340.70**	**340.75**	**340.85**	**340.95**	**342.00**
Top of Sheet Pile Wall	-----------	-----------	-----------	-----------	**343.50**	**343.60**	**343.50**	**344.50**	**345.20**	**345.90**

Appendix C

Groundwater, Surface Water and Leachate Quality and Chemistry Trends

- C1. Groundwater Routine Landfill Leachate Analysis
- C2. Groundwater Routine Monitoring Analyses
- C3. Surface Water Routine Monitoring Analyses
- C4. Surface Water Field Observations
- C5. Leachate MISA Monitoring Analyses
- C6. Organics Analysis – Landfill Leachate
- C7. Comparison of Downgradient Monitors in Buffer Land Boundary to Guideline B7 Criteria for 2017
- C8. Comparison of Downgradient Bedrock Boundary Monitors in Buffer Land to Guideline B7 Criteria for 2017
- Groundwater Chemistry Trends (Figures C1 – C18)





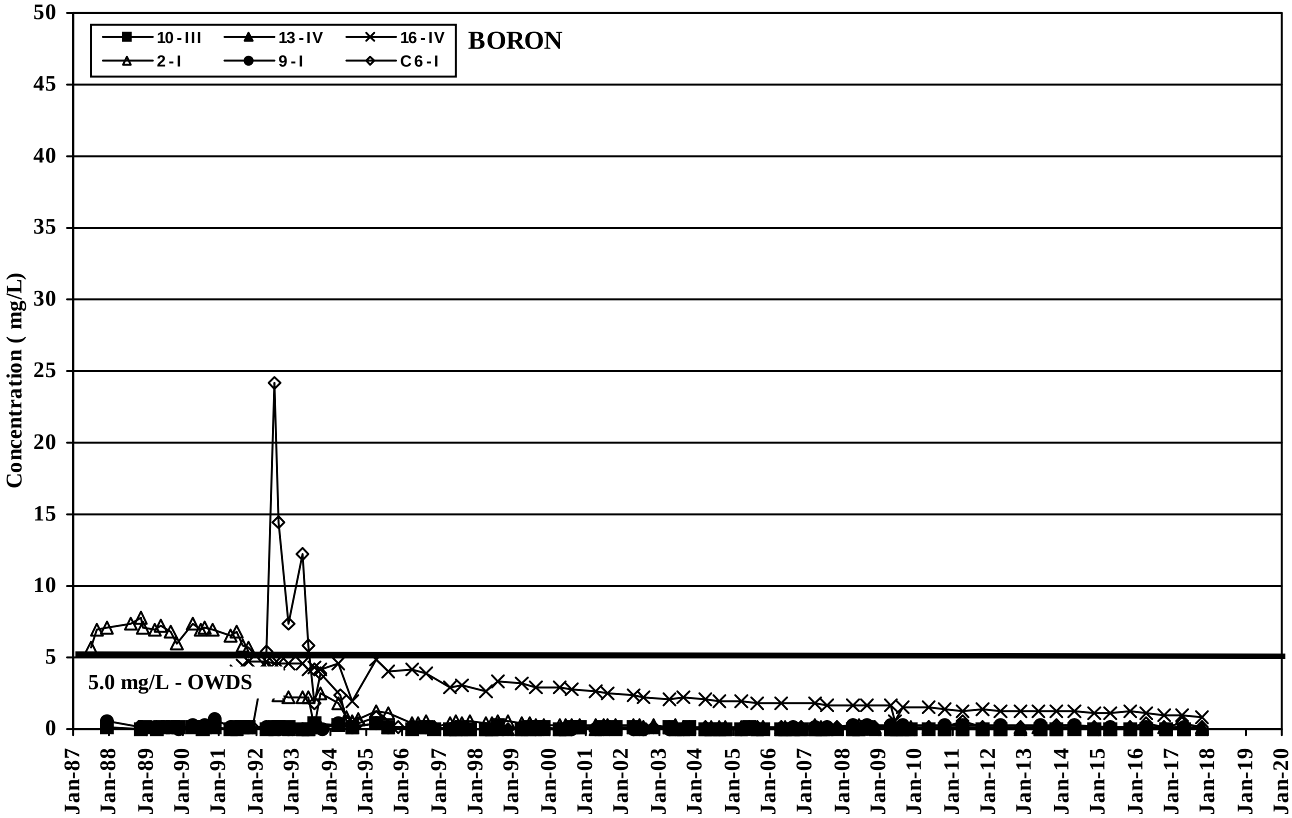
AECOM

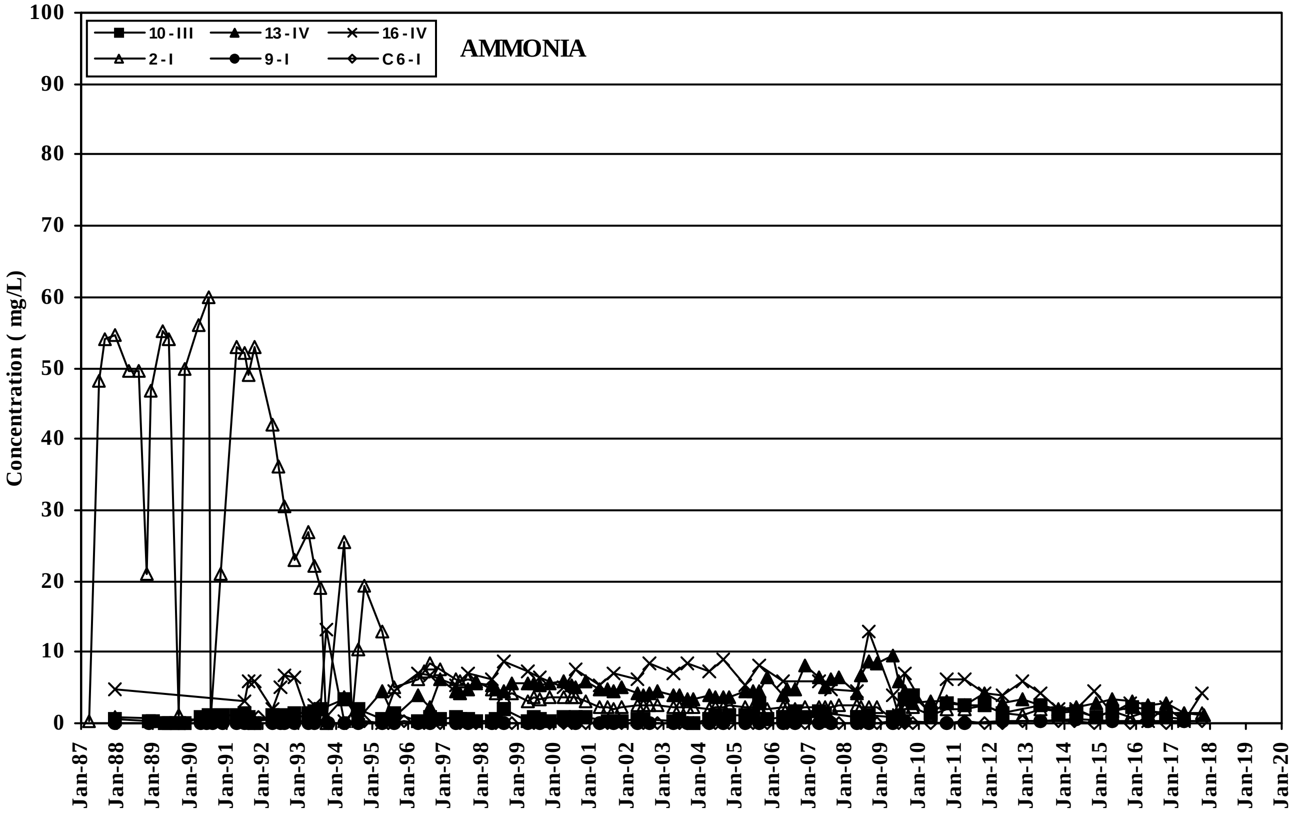
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Shallow Overburden South of Landfill

FIGURE
C1

60565850
12b C1 GW Chem Cl and Na - South of Land





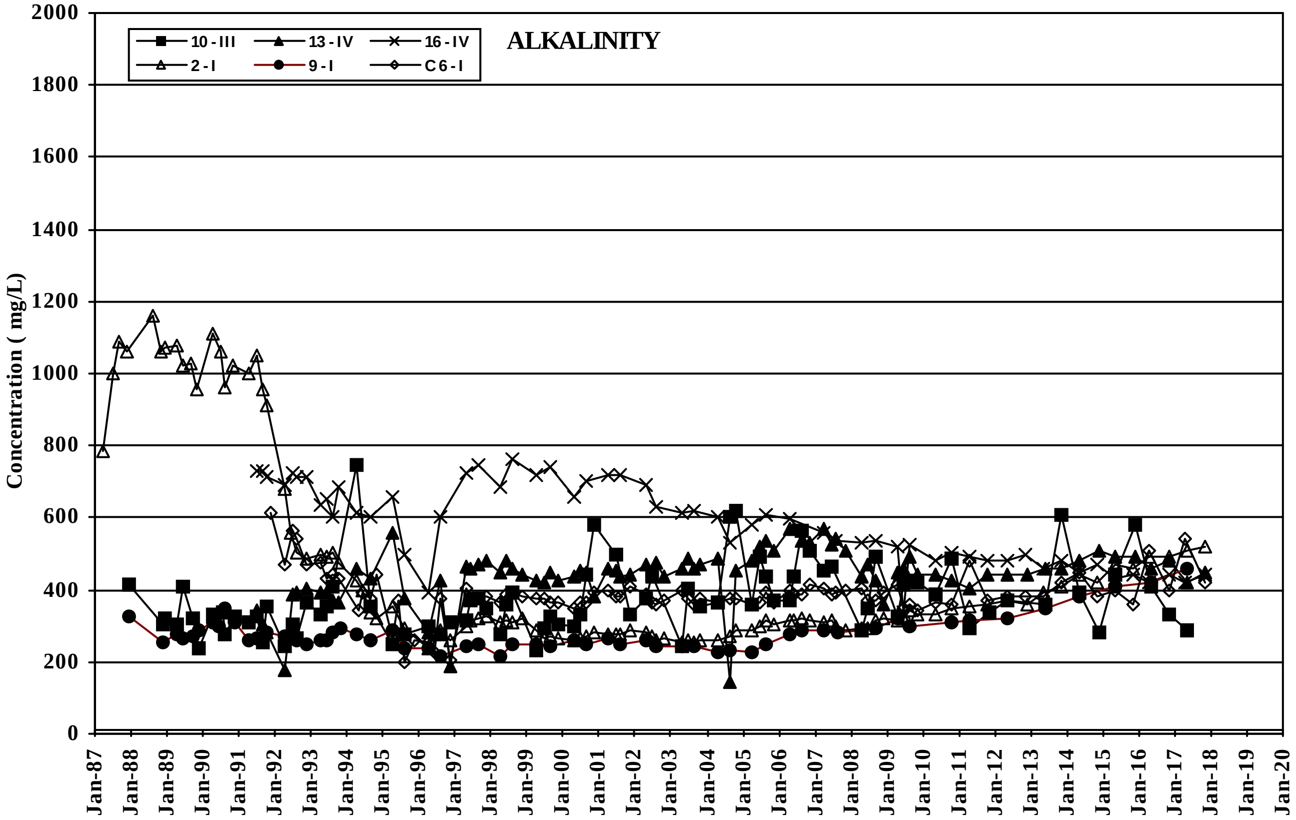
AECOM

Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Shallow Overburden South of Landfill

FIGURE
C2

60565850
12b C2 GW Chem B and NH3 - South of Land



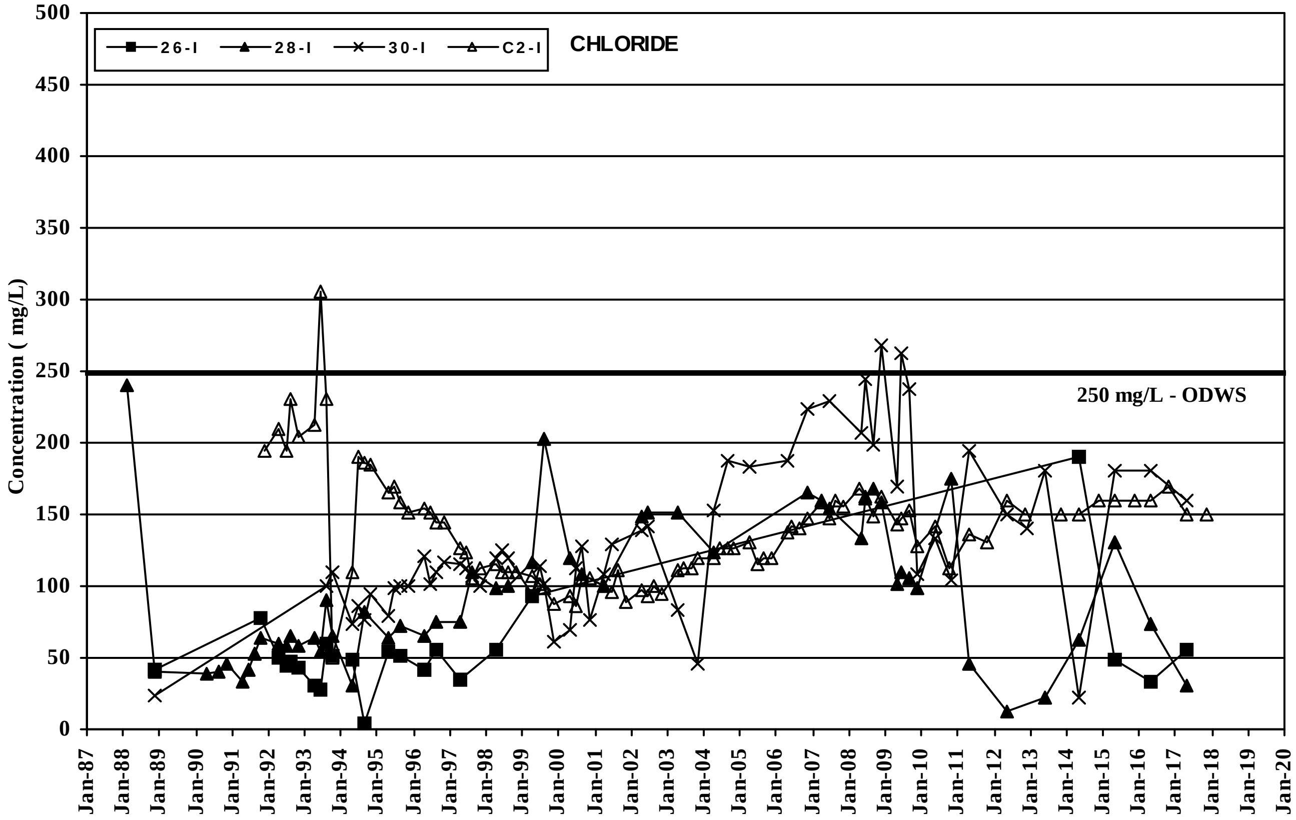
AECOM

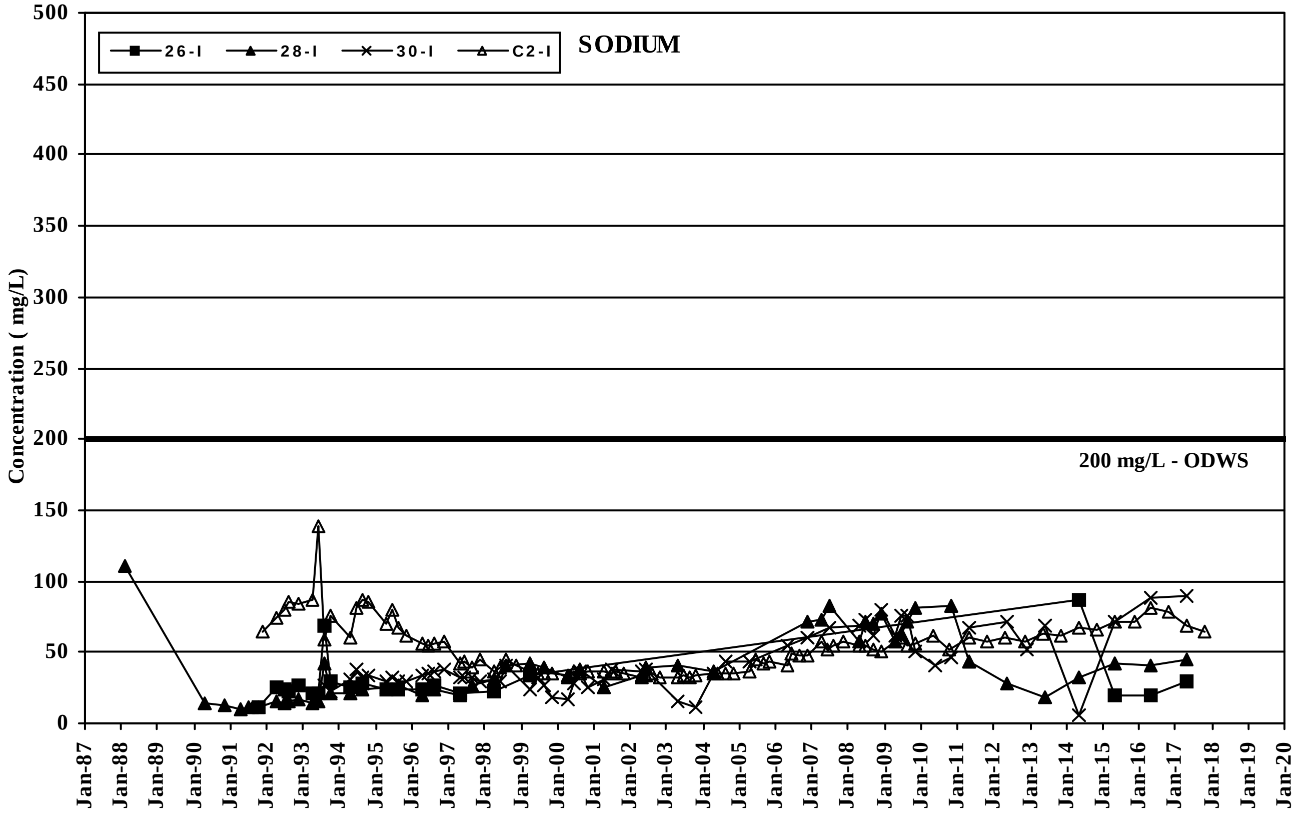
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Shallow Overburden South of Landfill

FIGURE
C3

60565850
12b C3 GW Chem Alk - South of Landfill





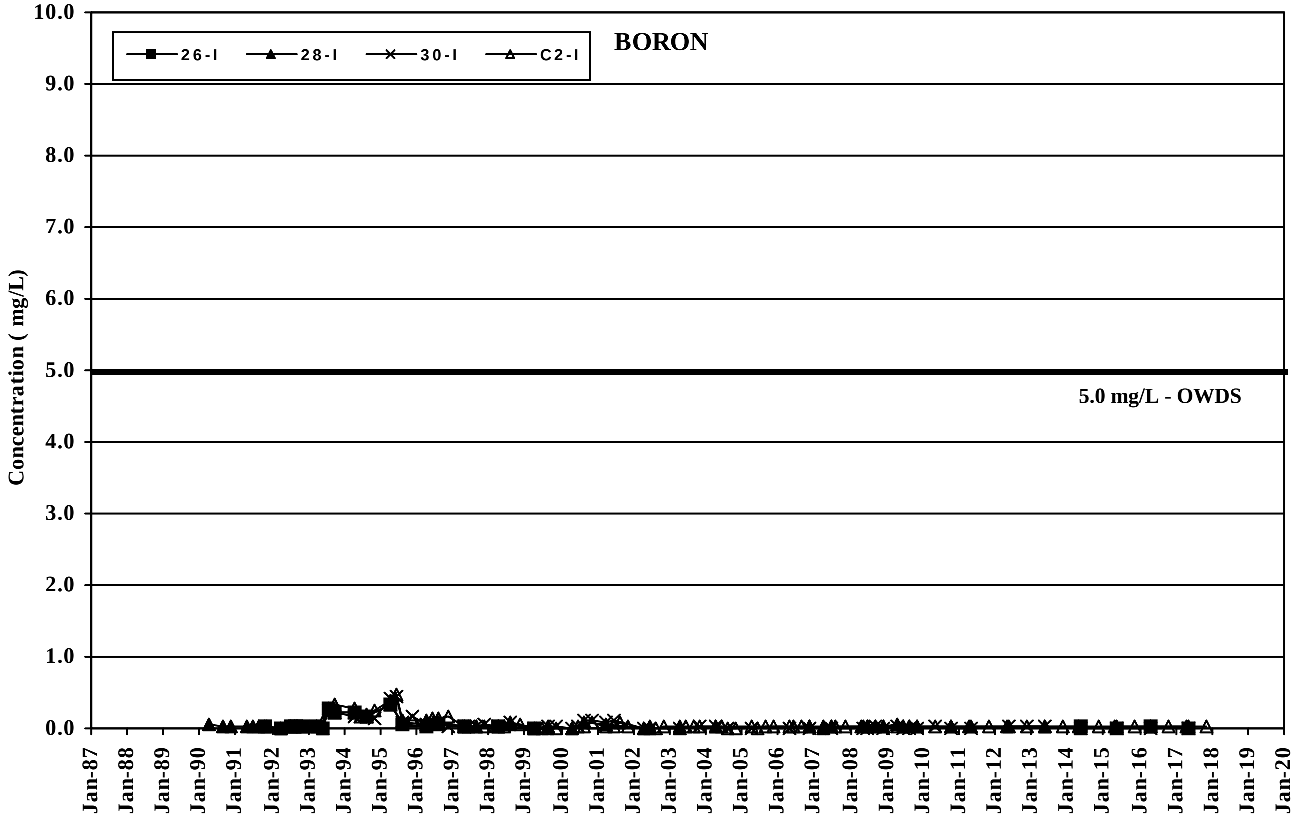
AECOM

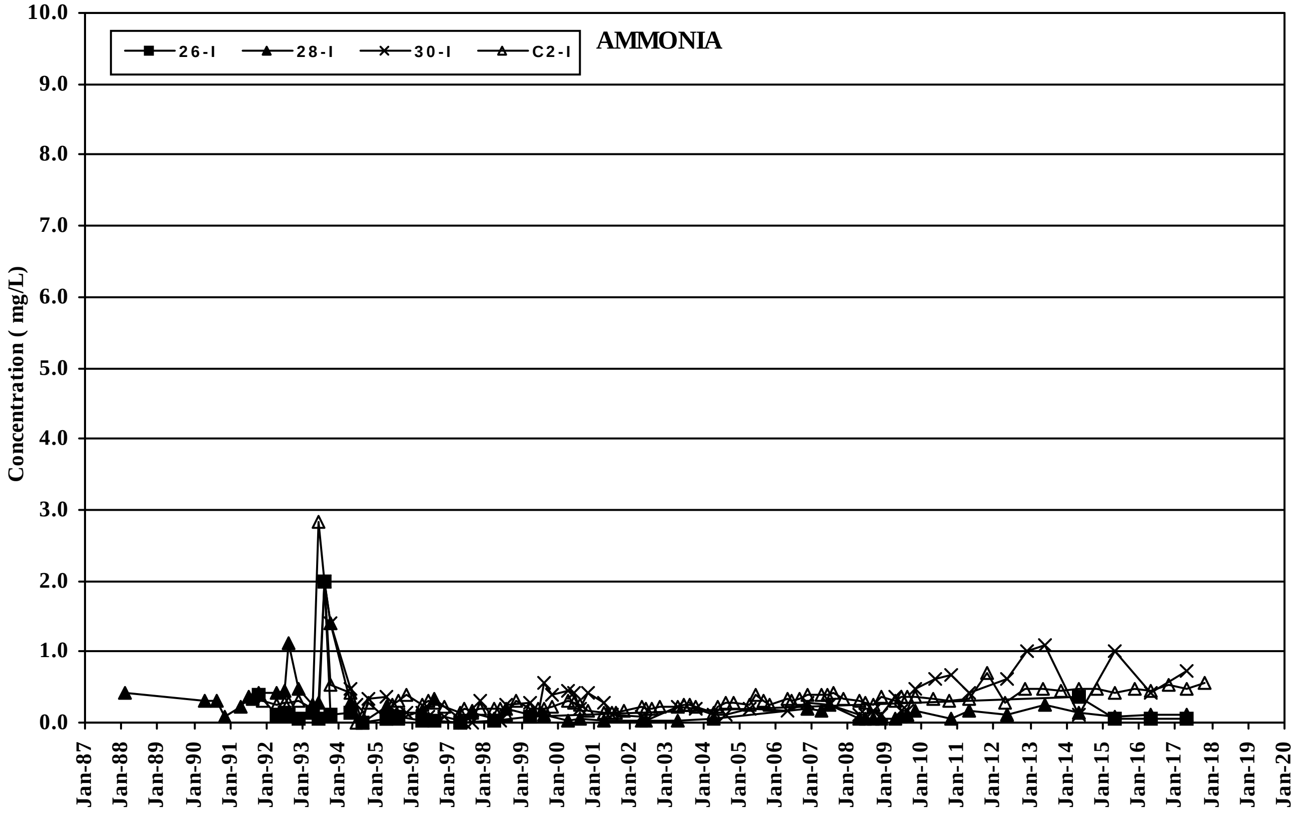
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Shallow Overburden South of Landfill

FIGURE
C4

60565850
12b C4 GW Chem Cl and Na - West of Landf





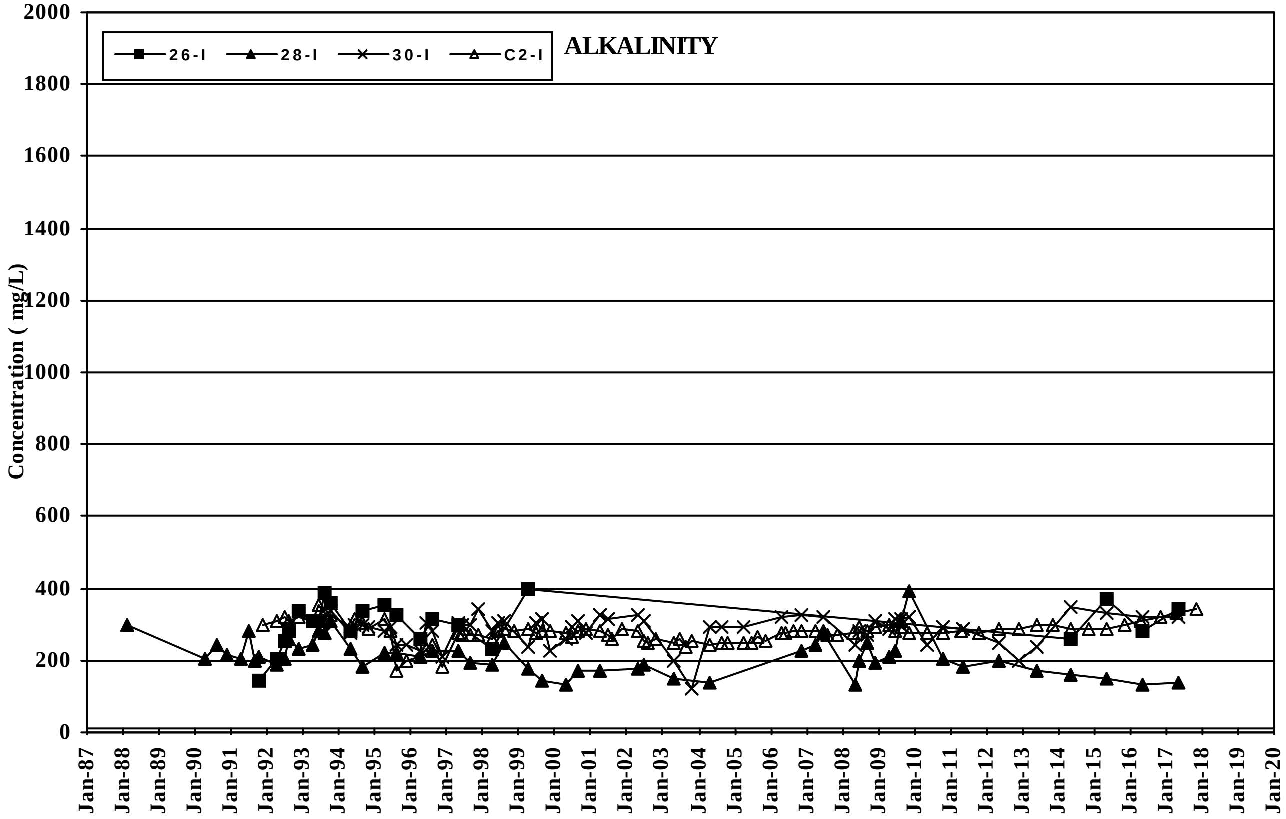
AECOM

Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Shallow Overburden South of Landfill

FIGURE
C5

60565850
12b C5 GW Chem B and NH3 - West of Landf



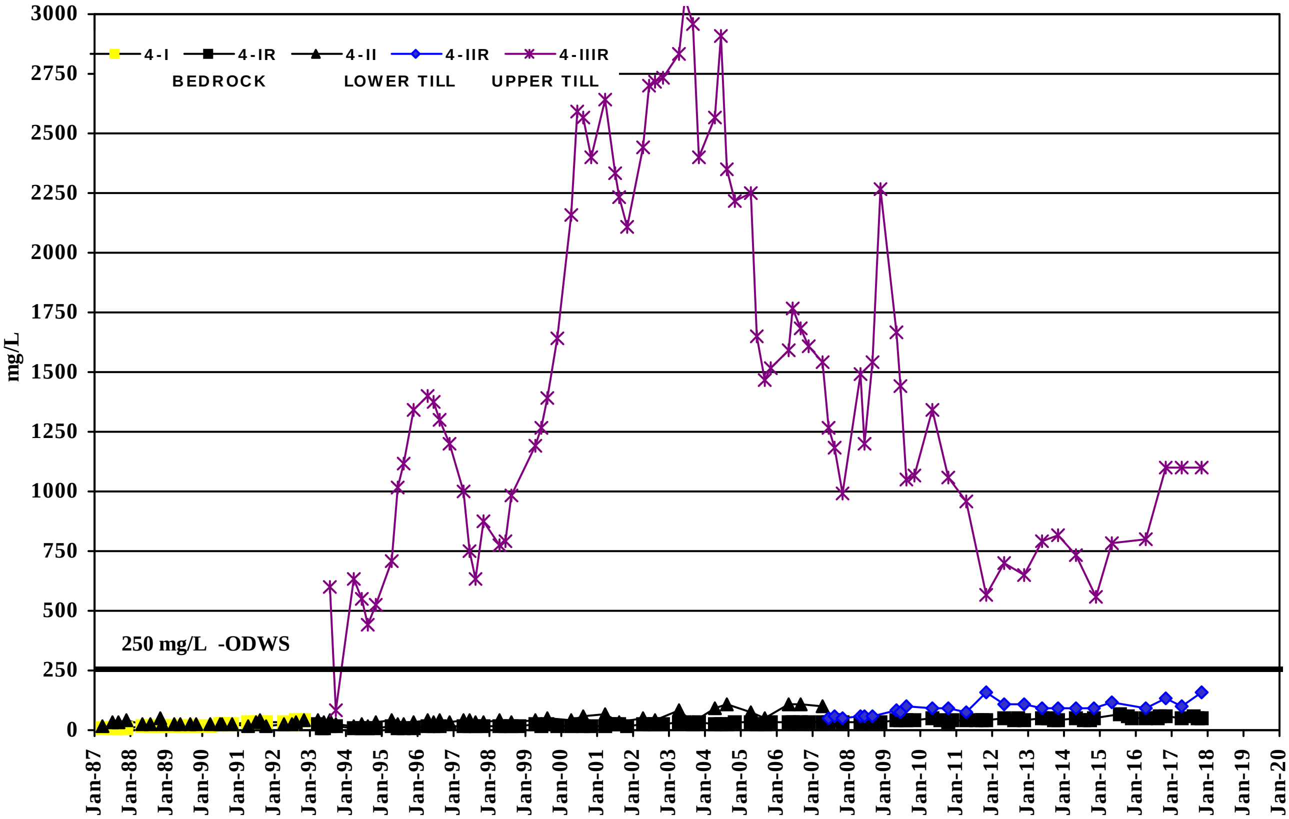
AECOM

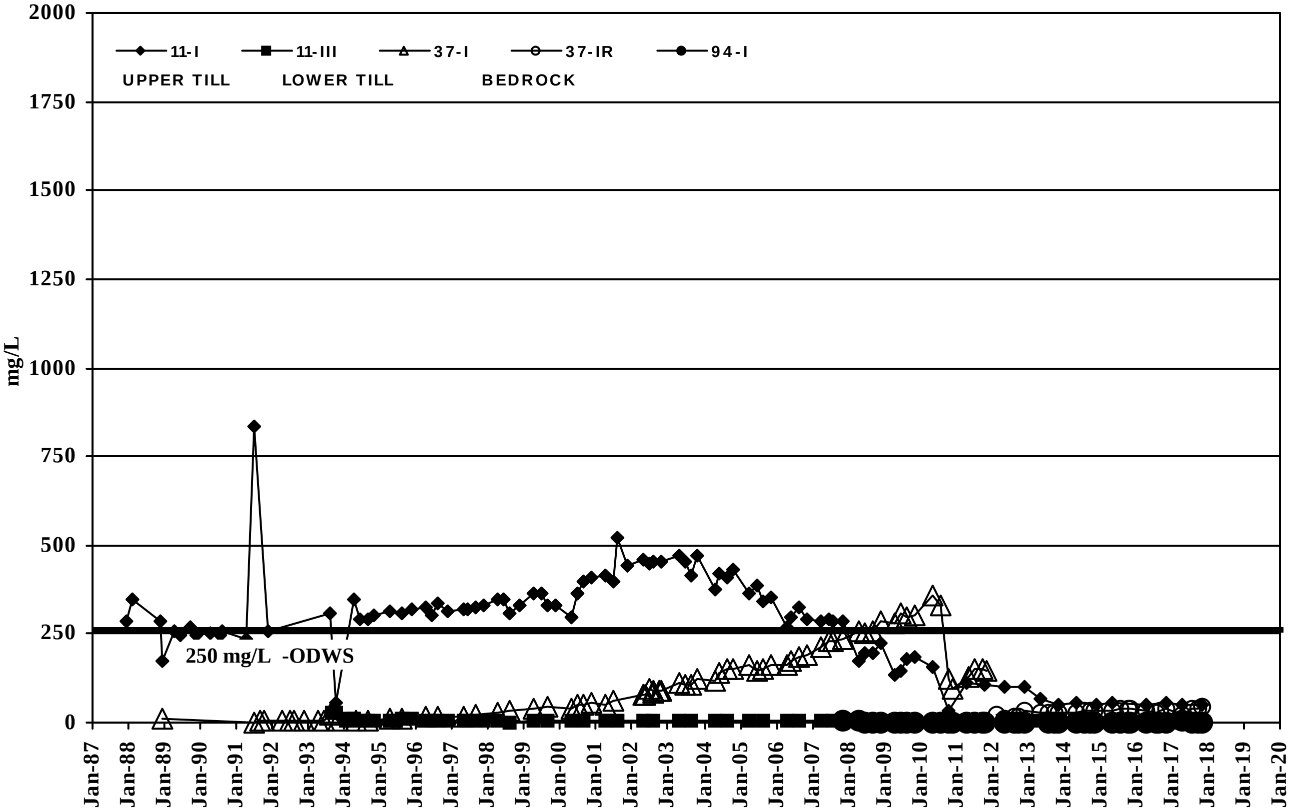
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Shallow Overburden South of Landfill

FIGURE
C6

60565850
12b C6 GW Chem Alk - West of Landfill





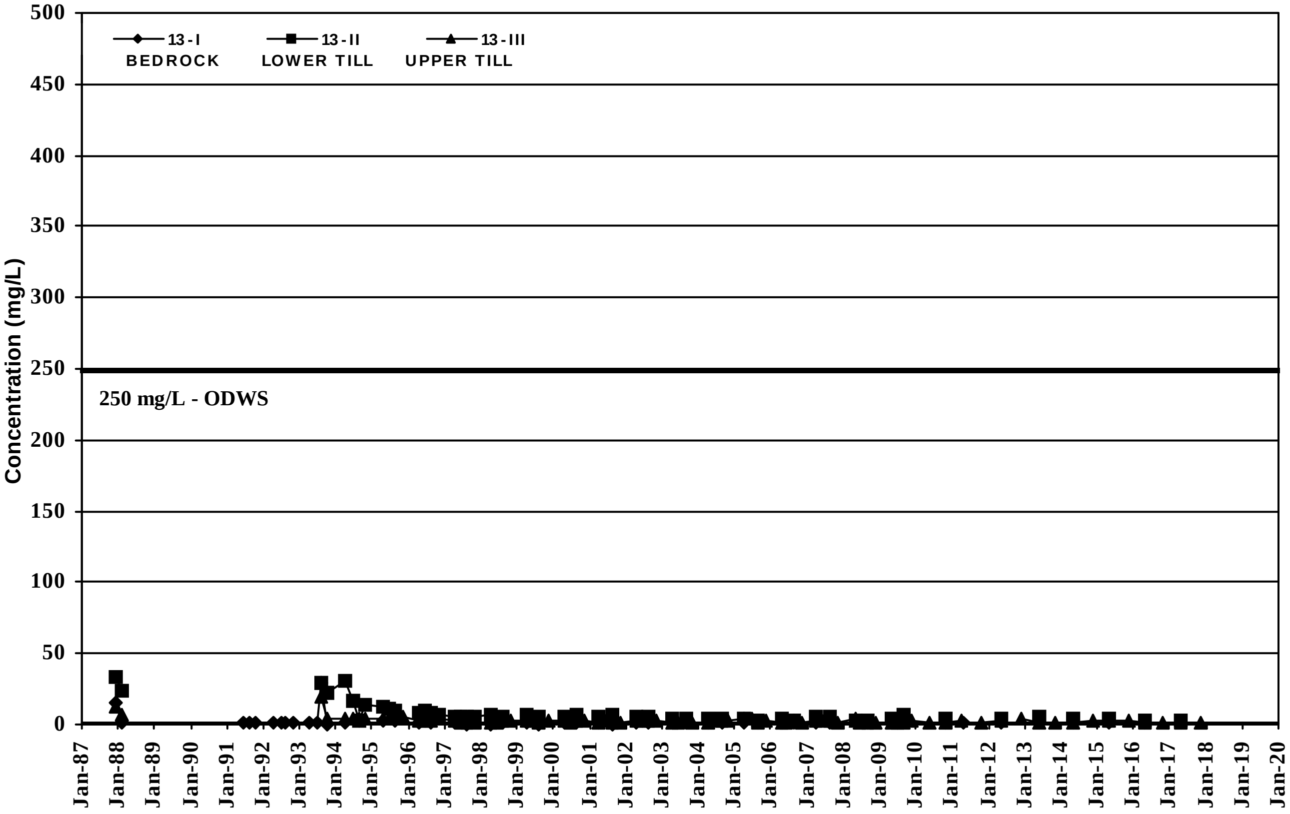
AECOM

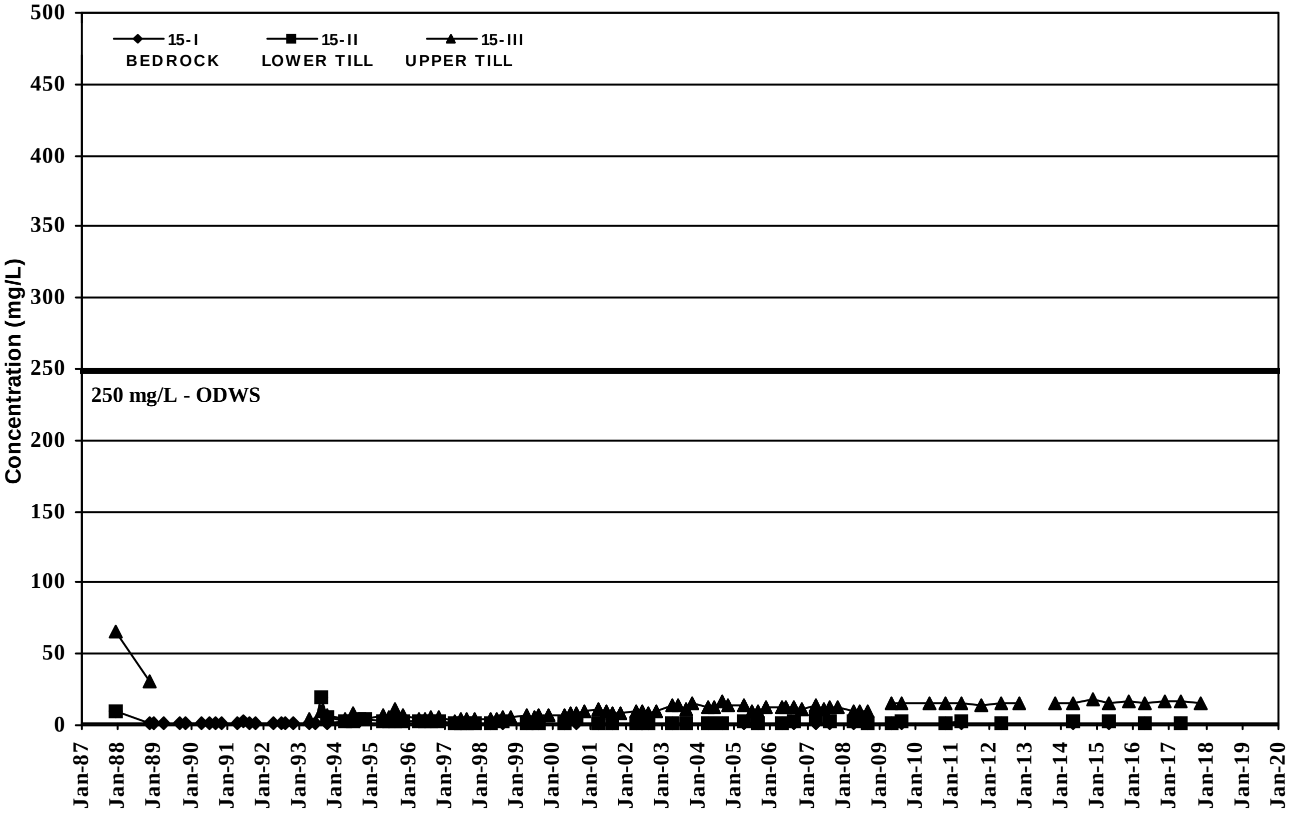
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Chloride Concentration Profile

FIGURE
C7

60565850
12b C7 GW Chem Cl Concentration 4 and 11





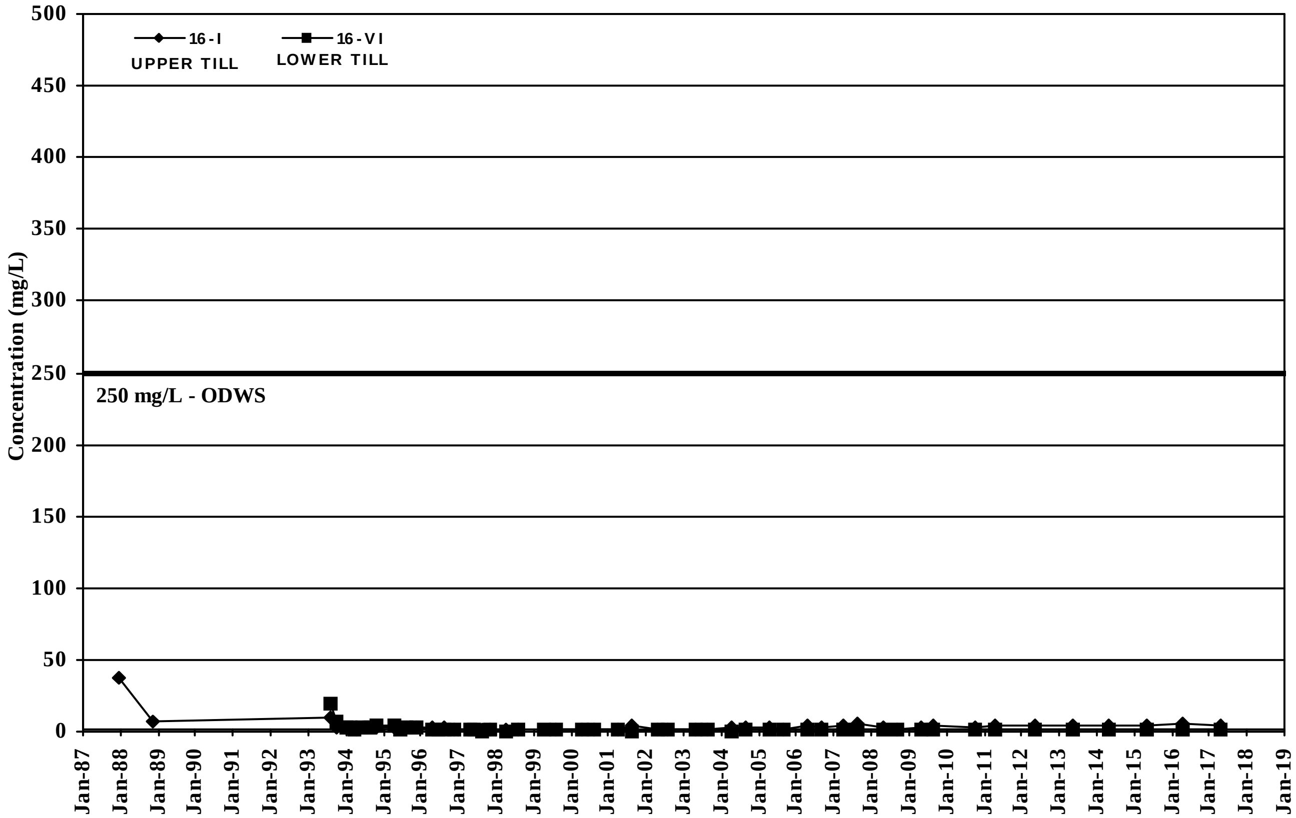
AECOM

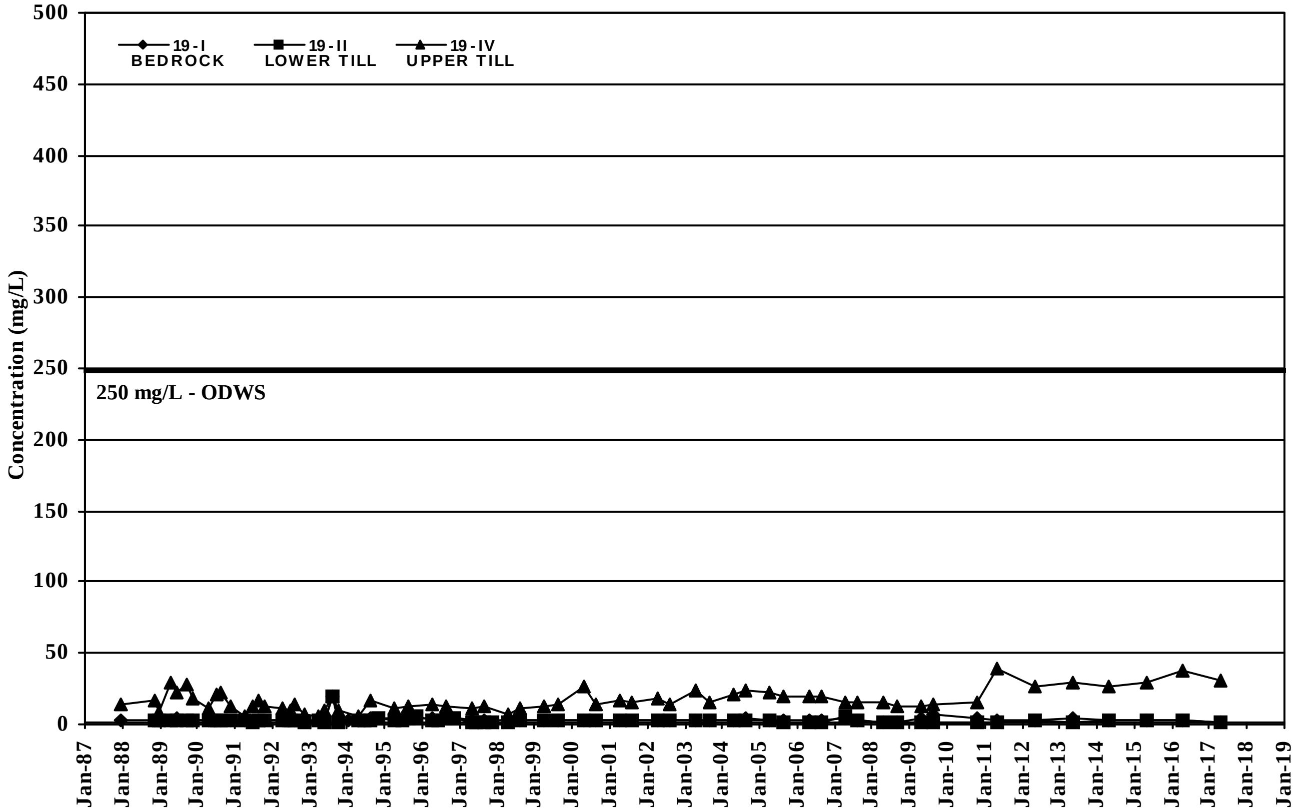
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Chloride Concentration Profile

FIGURE
C8

60565850
12b C8 GW Chem Cl Concentration 13 and 1





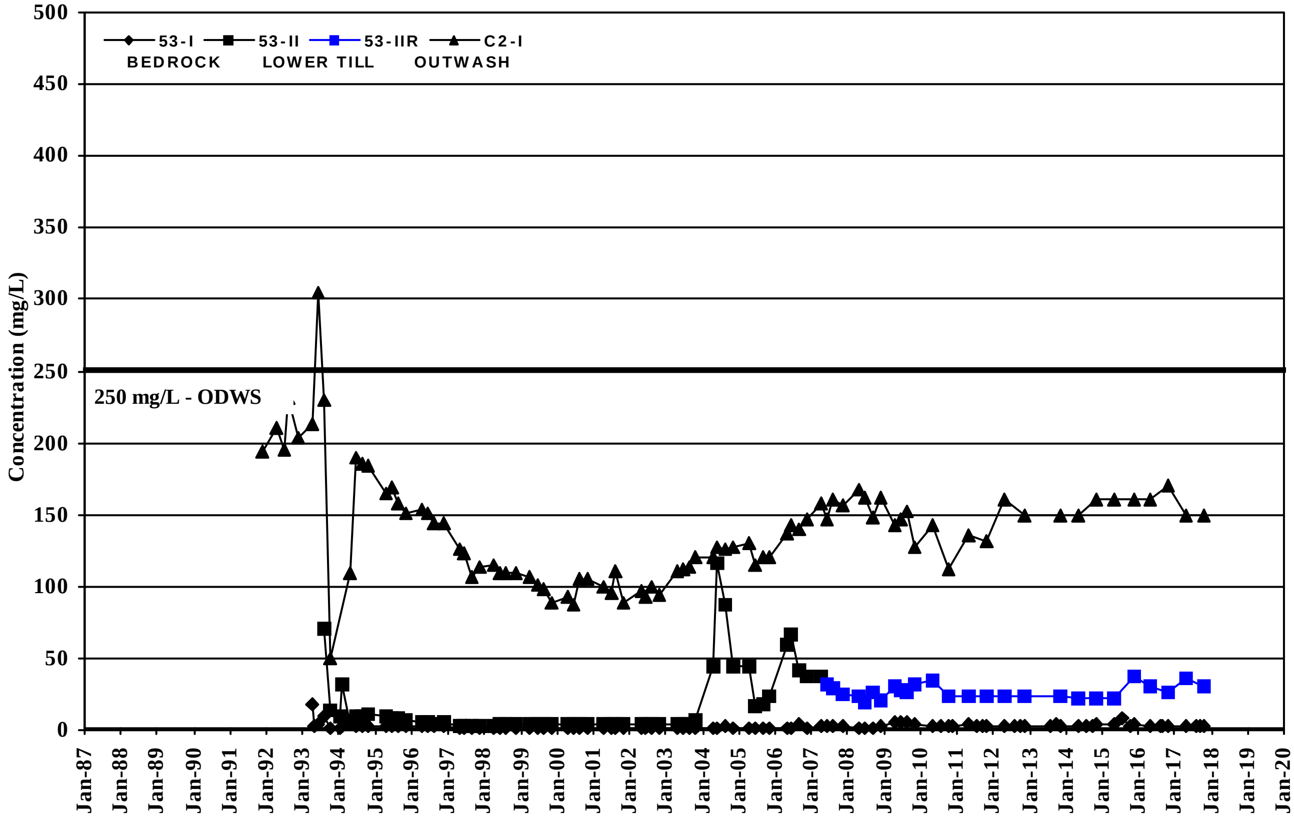
AECOM

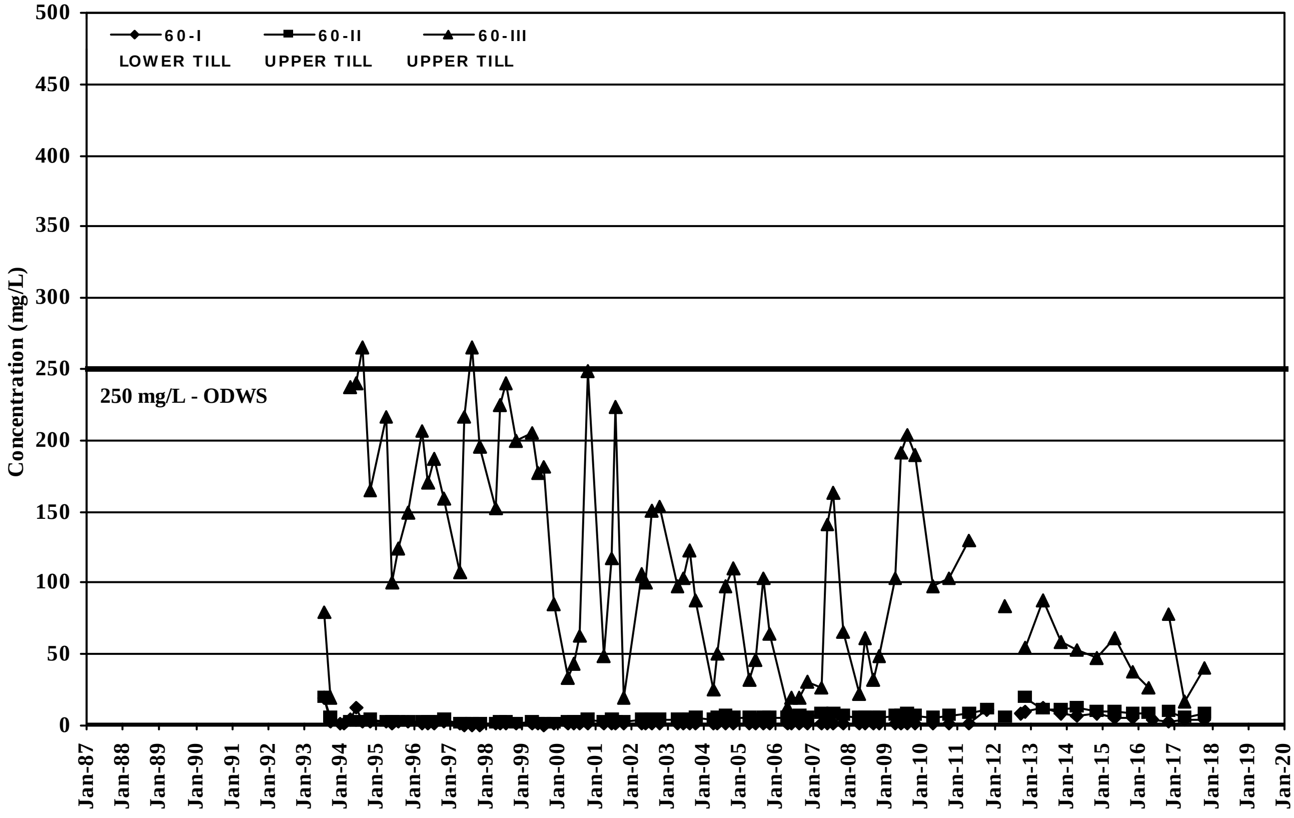
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Chloride Concentration Profile

FIGURE
C9

60565850
12b C9 GW Chem Cl Concentration 16 and 1





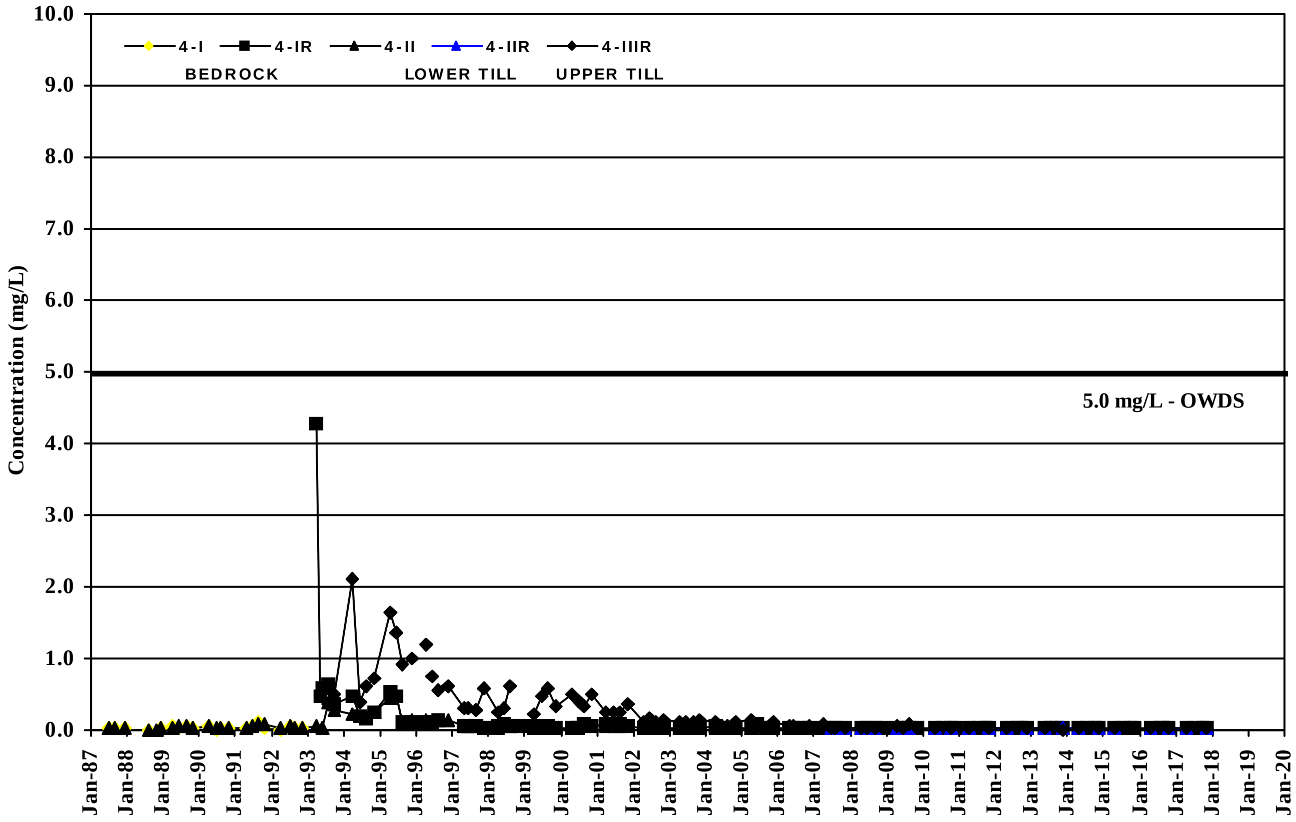
AECOM

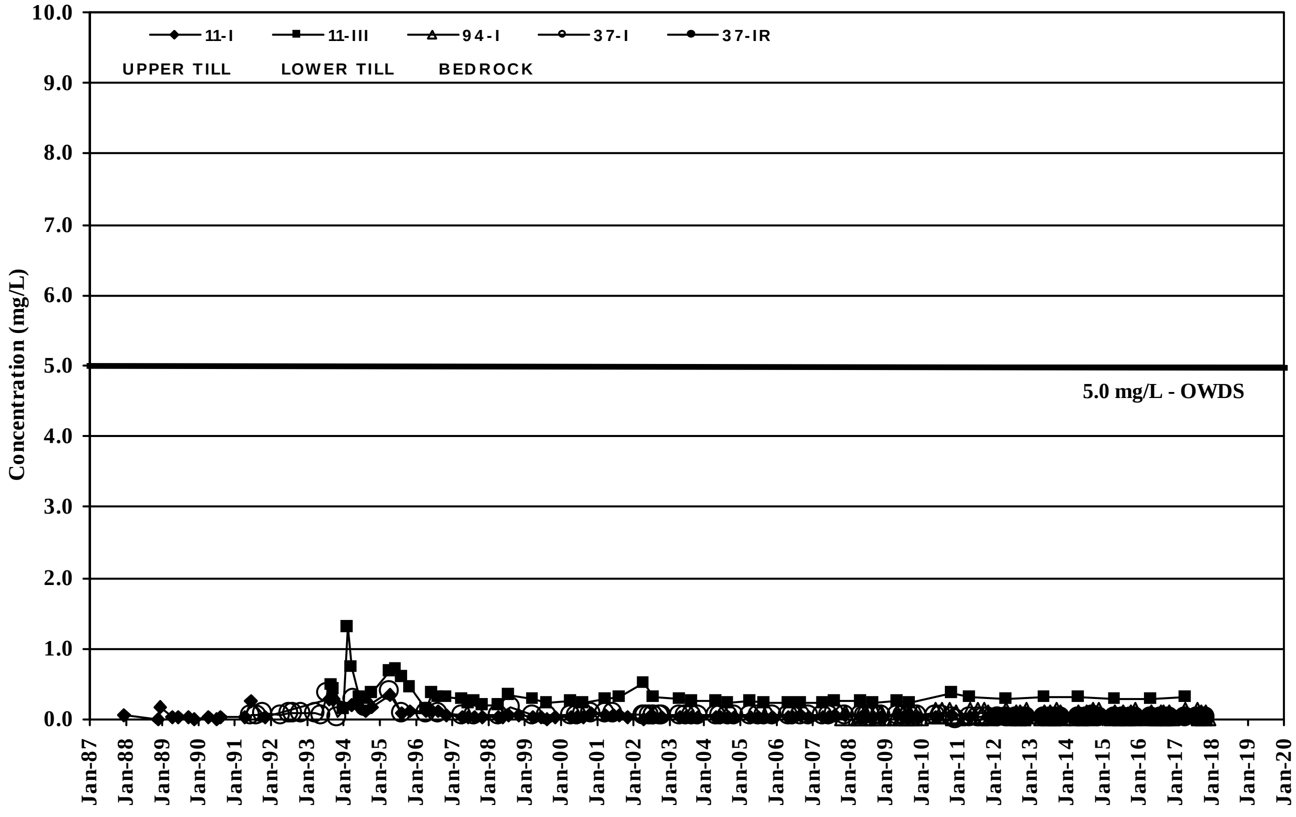
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Chloride Concentration Profile

FIGURE
C10

60565850
12c C10 GW Chem Cl Concentration 53 and





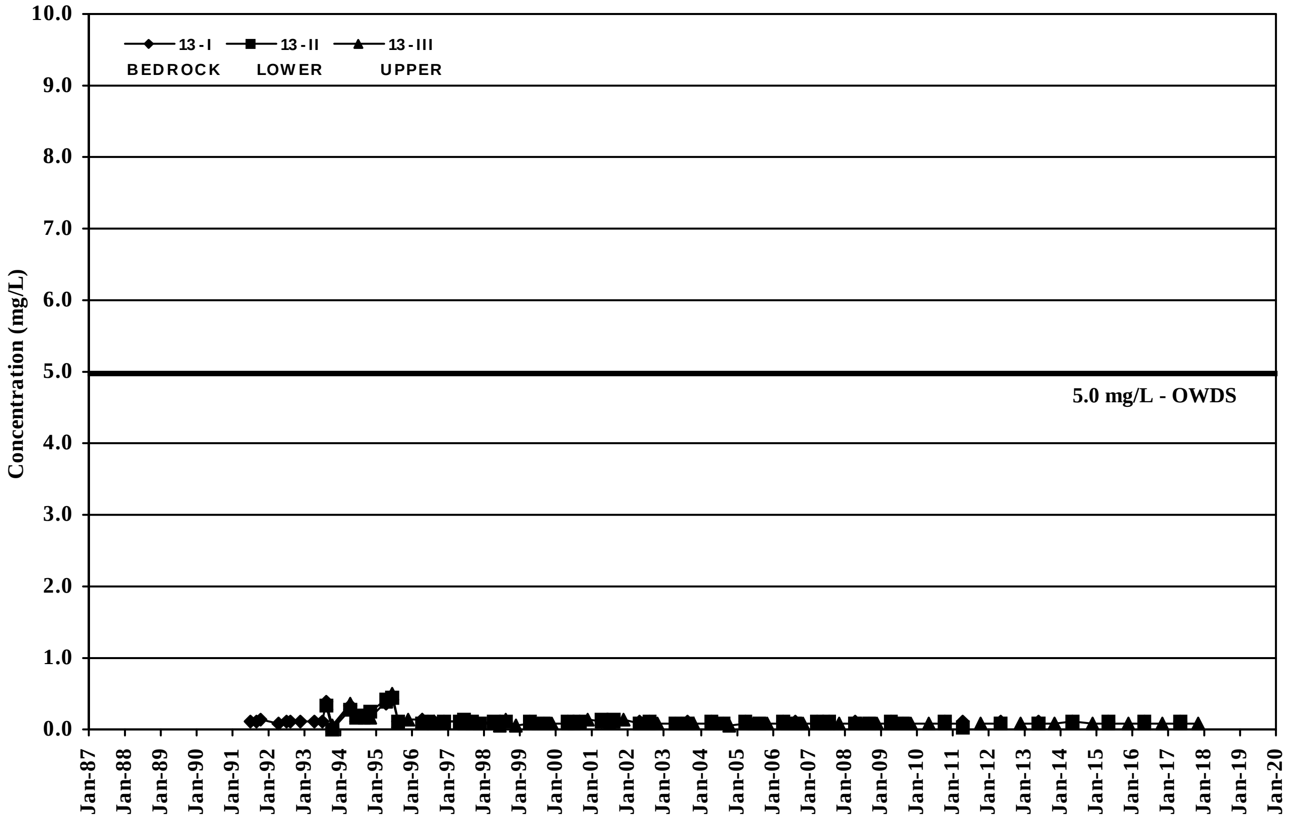
AECOM

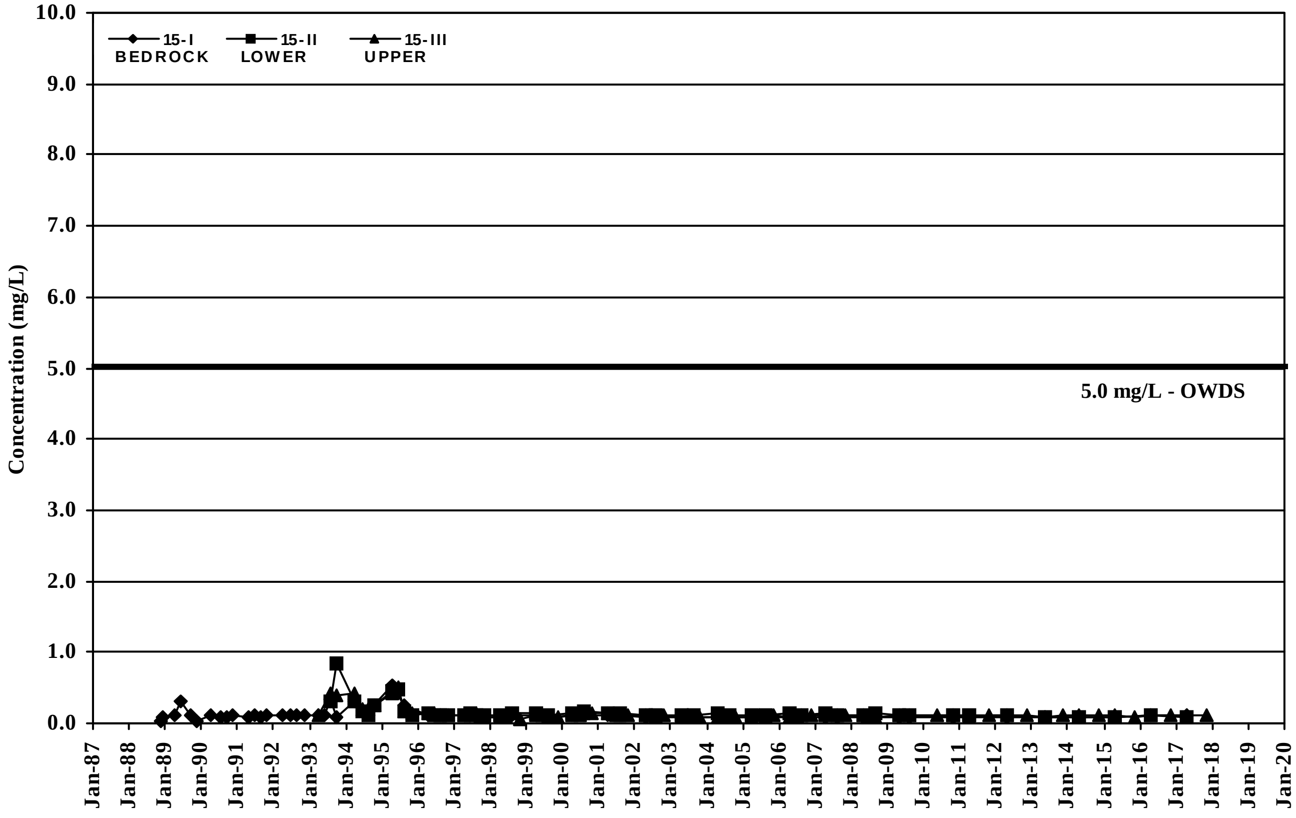
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Boron Concentration Profile

FIGURE
C11

60565850
12c C11 GW Chem B Concentration 4 and 11





AECOM

Closed Eastview Road Landfill Site

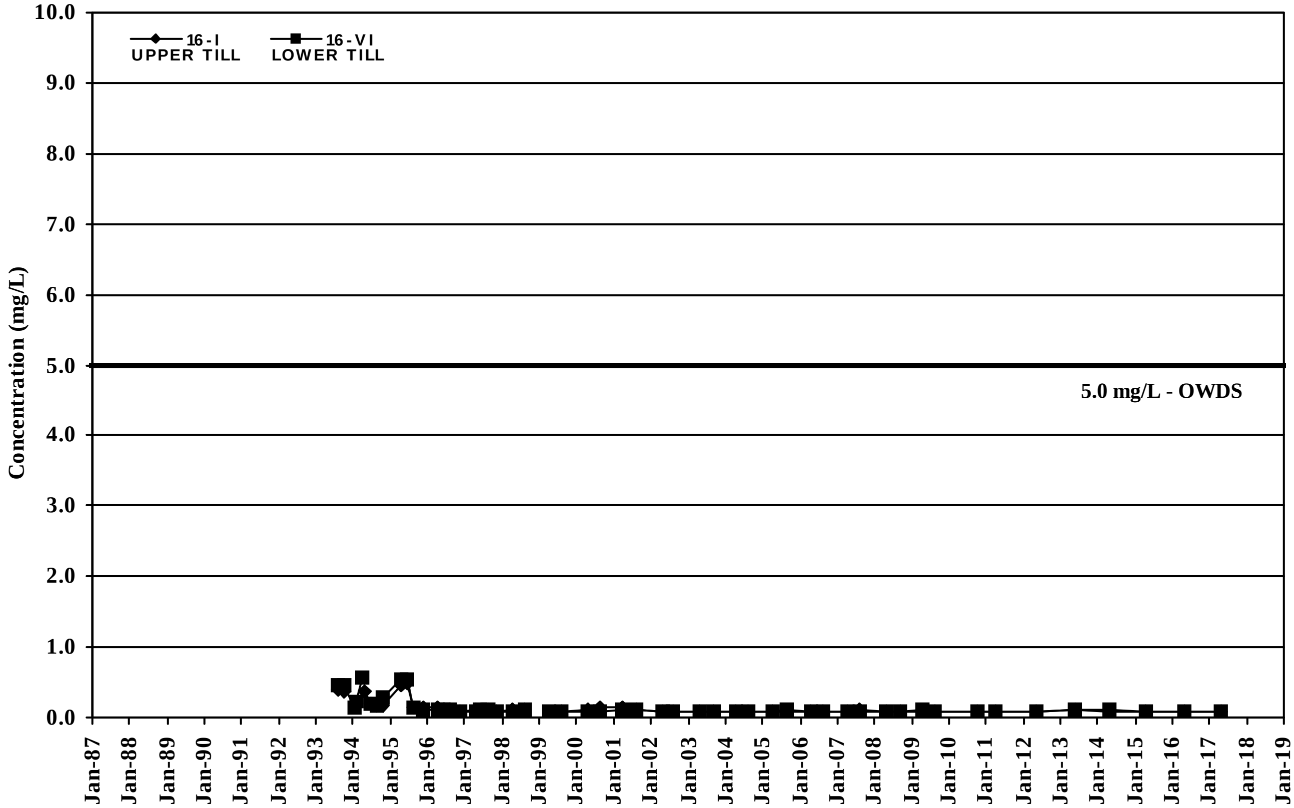
Ground Water Chemistry Trends
Boron Concentration Profile

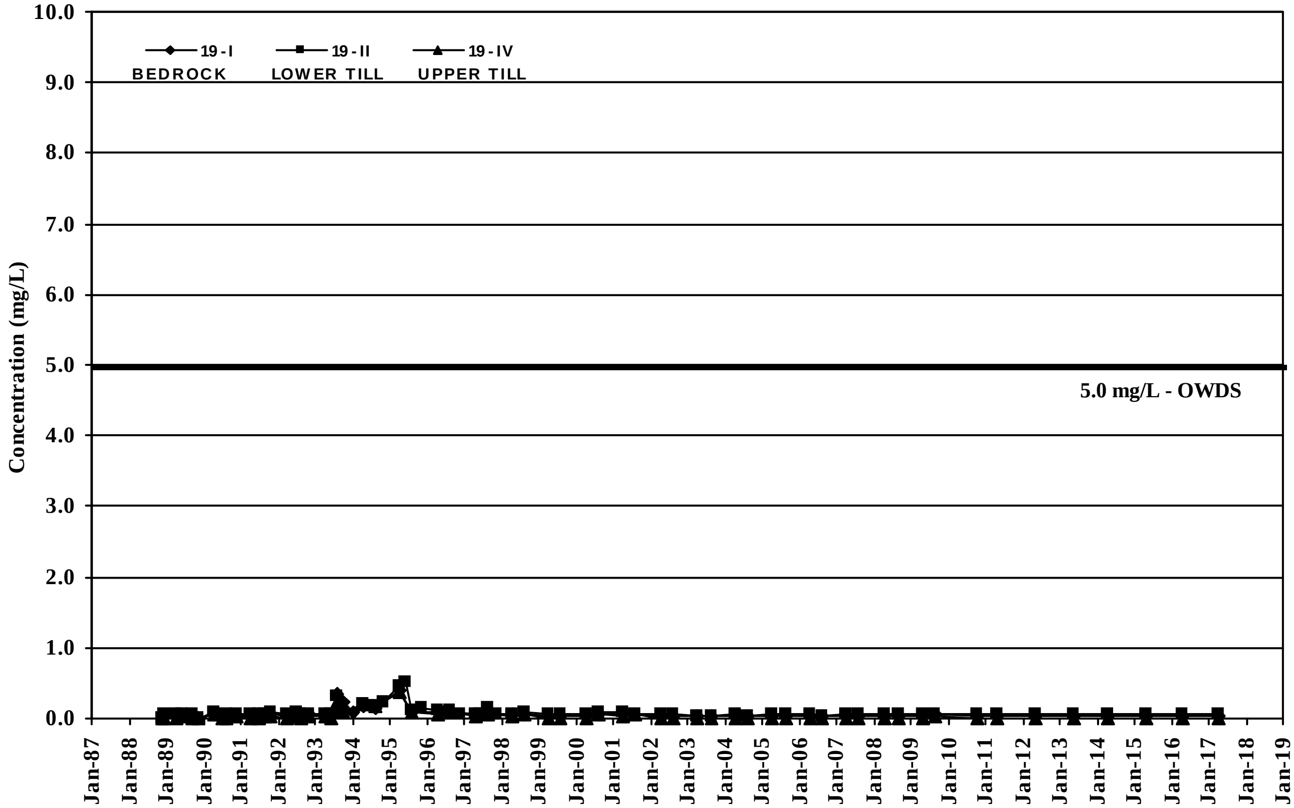
FIGURE

C12

60565850

12c C12 GW Chem B Concentration 13 and 1





AECOM

Closed Eastview Road Landfill Site

Ground Water Chemistry Trends

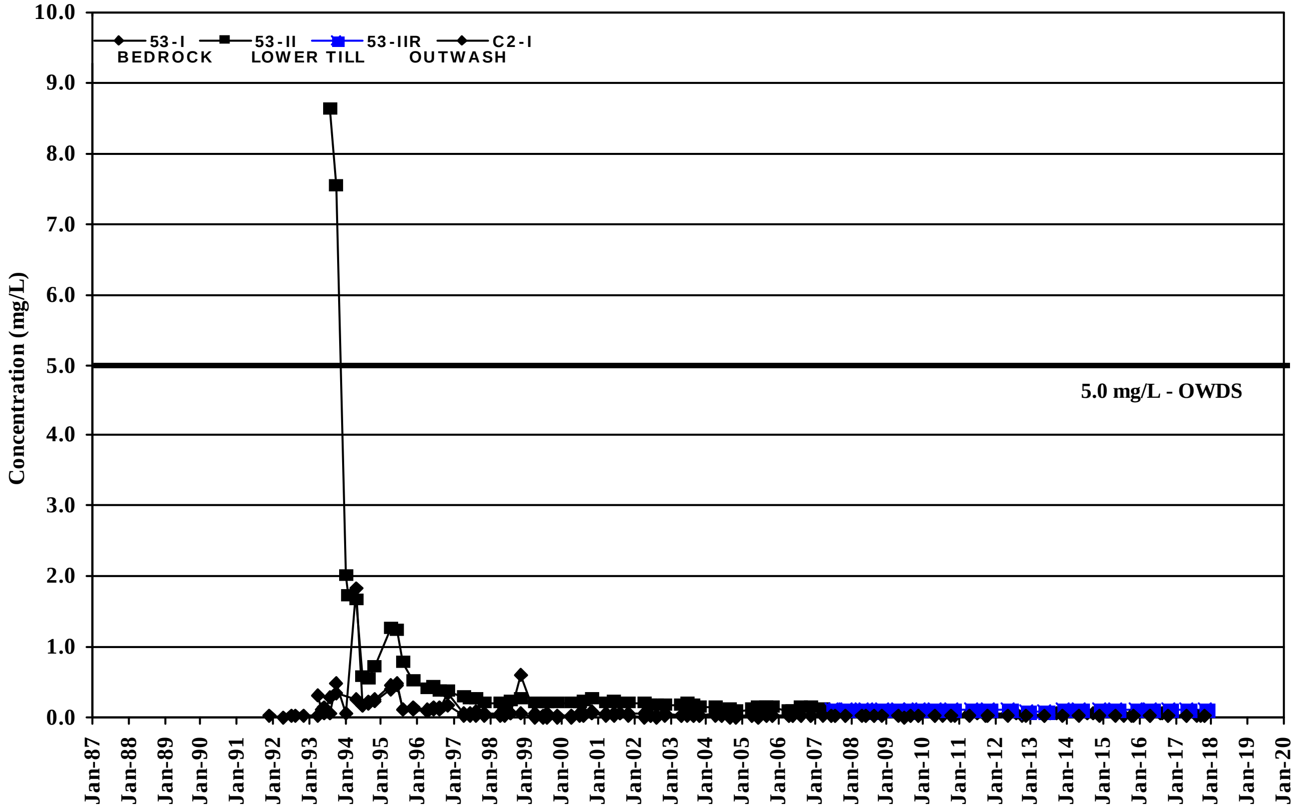
Boron Concentration Profile

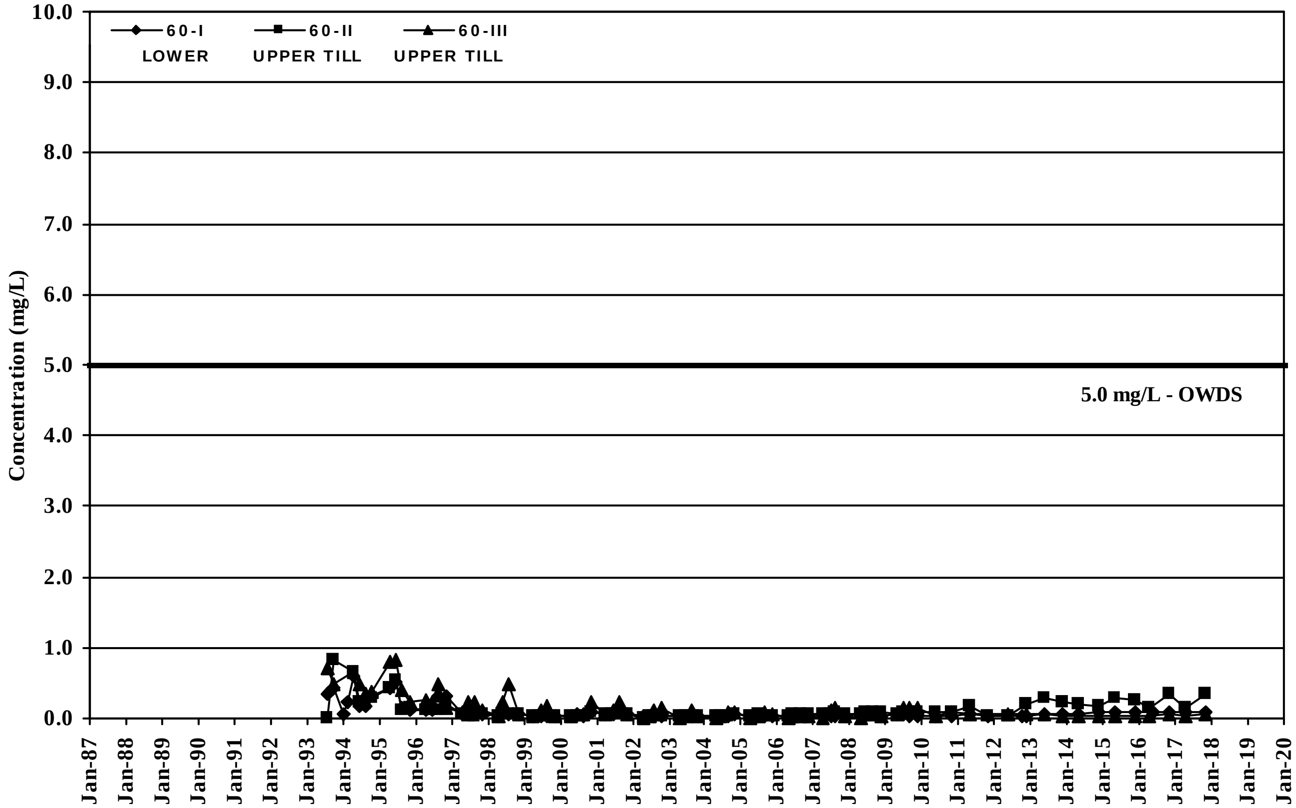
FIGURE

C13

60565850

12c C13 GW Chem B Concentration





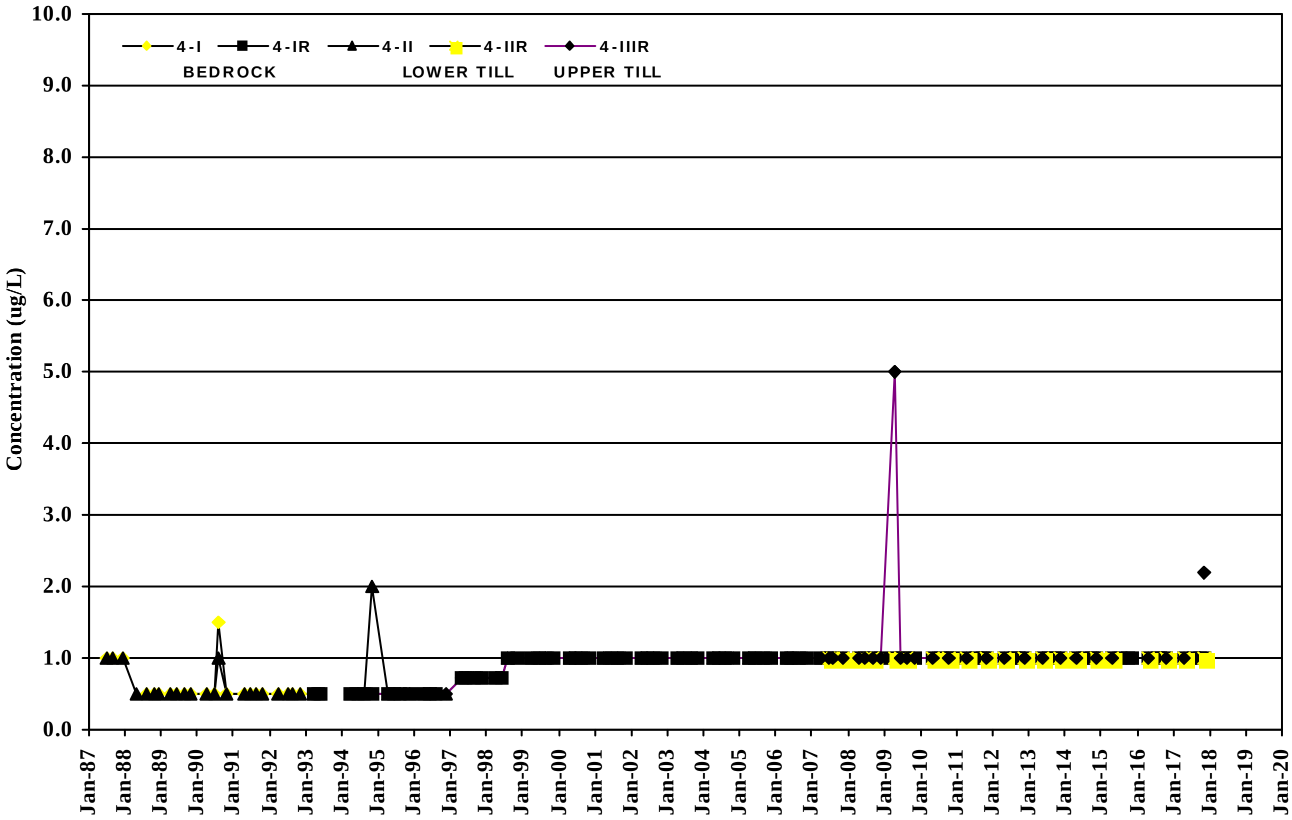
AECOM

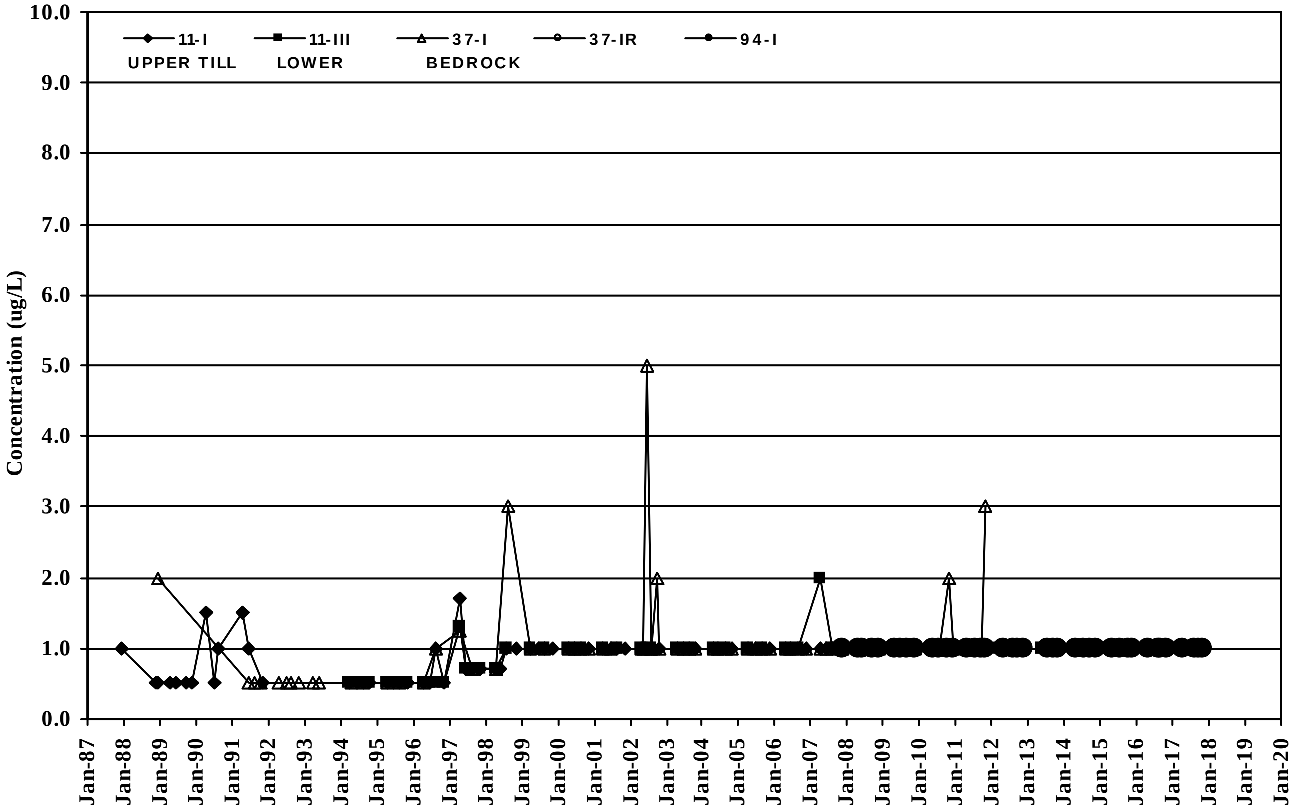
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Boron Concentration Profile

FIGURE
C14

60565850
12c C14 GW Chem B Concentration





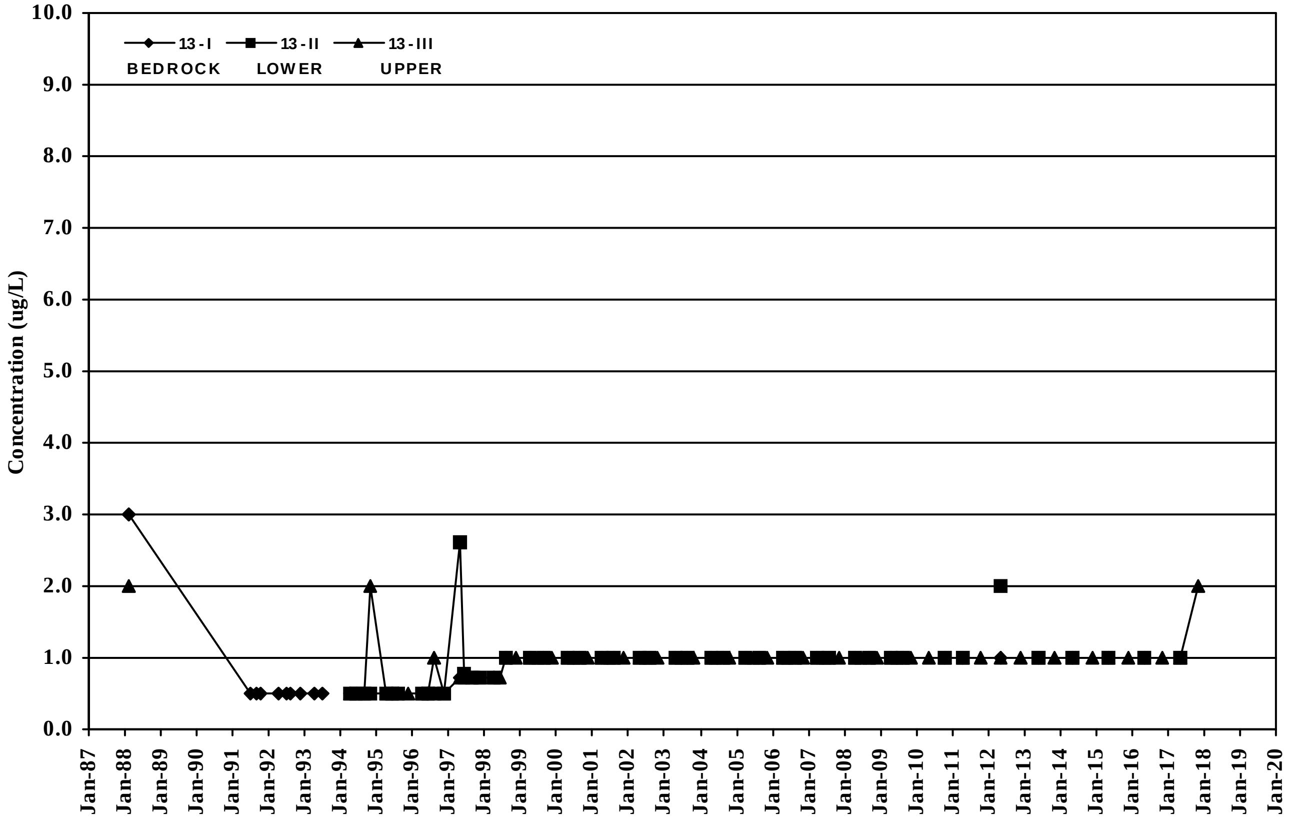
AECOM

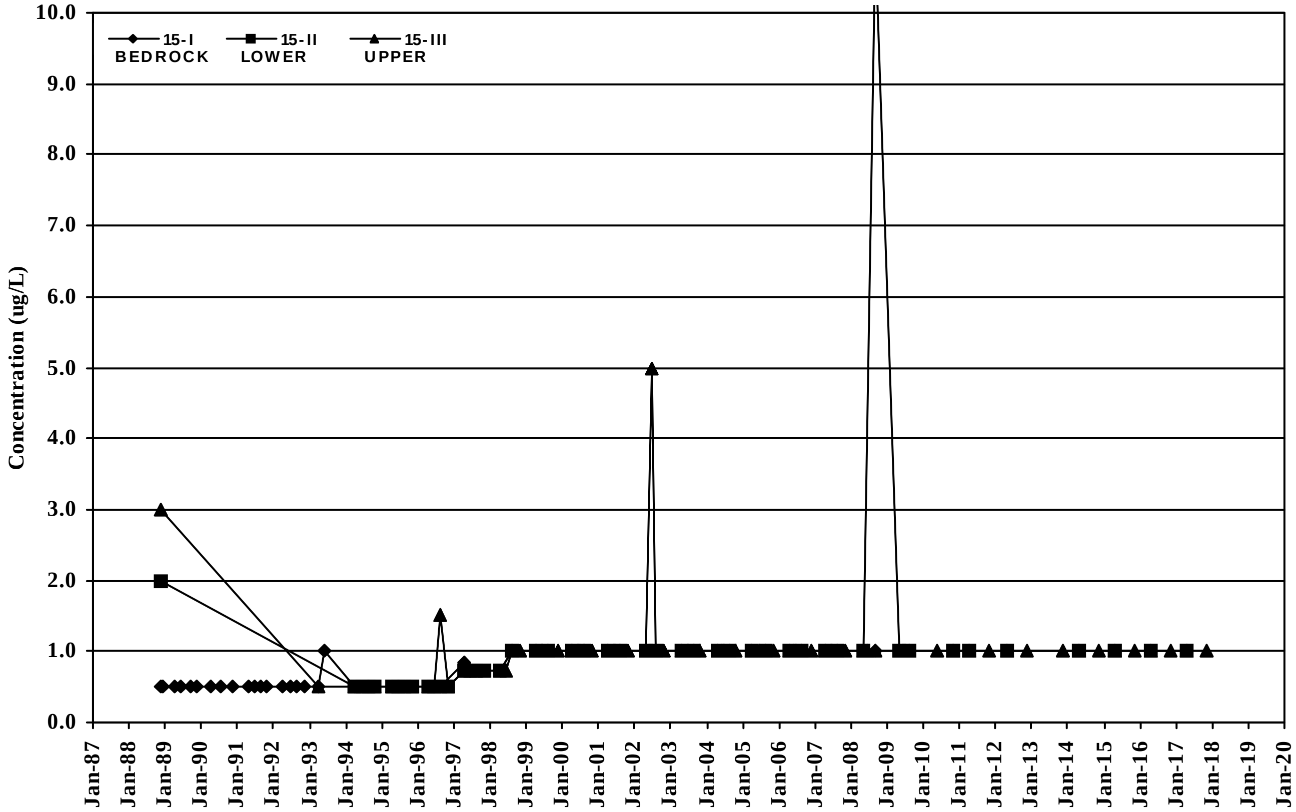
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Phenol Concentration Profile

FIGURE
C15

60565850
12c C15 GW Chem Phenol Concentration 4 a





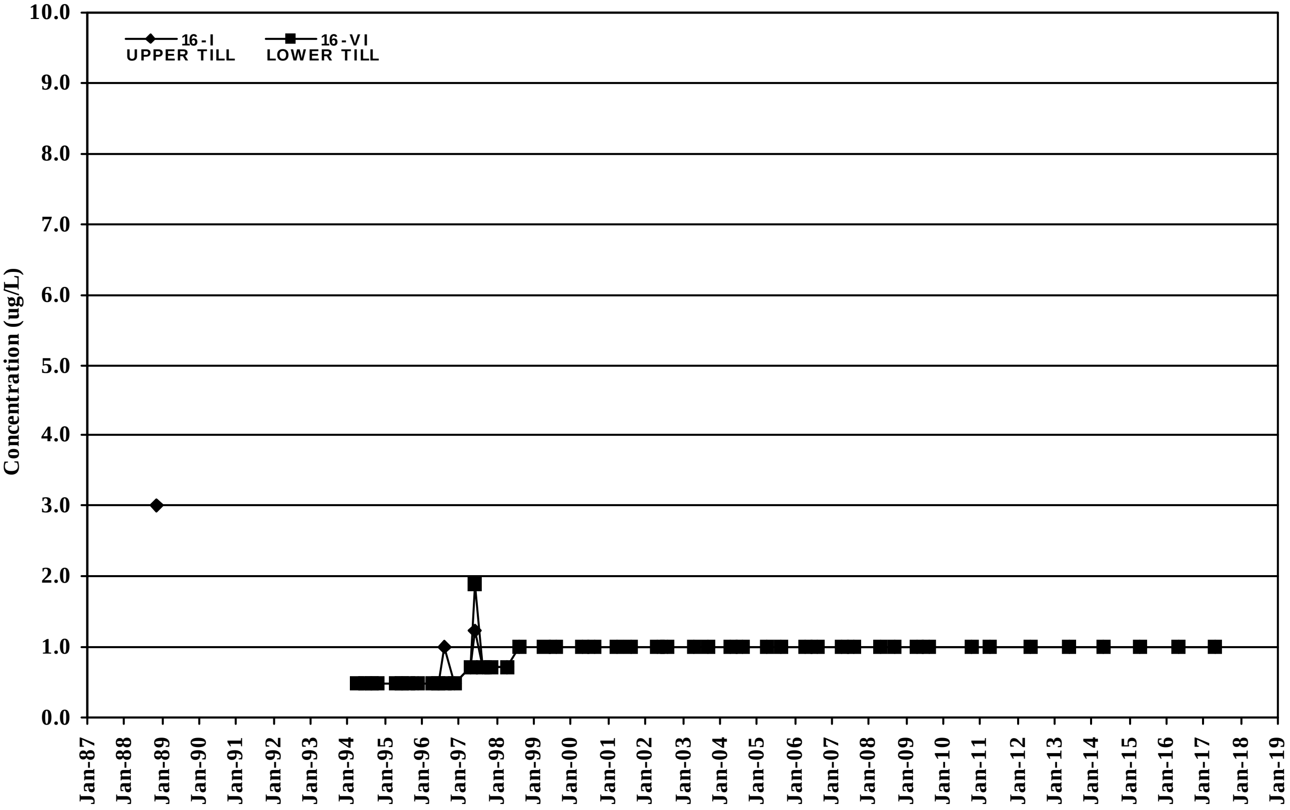
AECOM

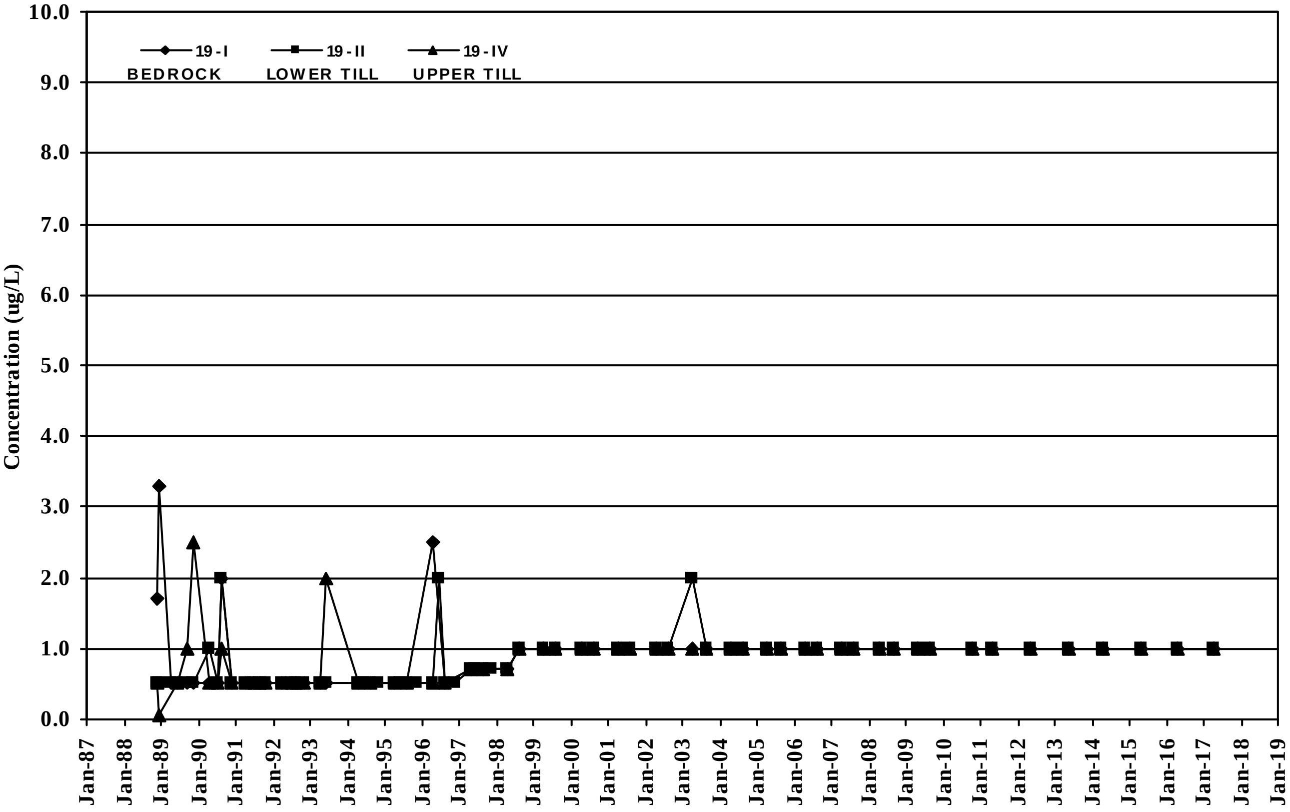
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Phenol Concentration Profile

FIGURE
C16

60565850
12c C16 GW Chem Phenol Concentration 13





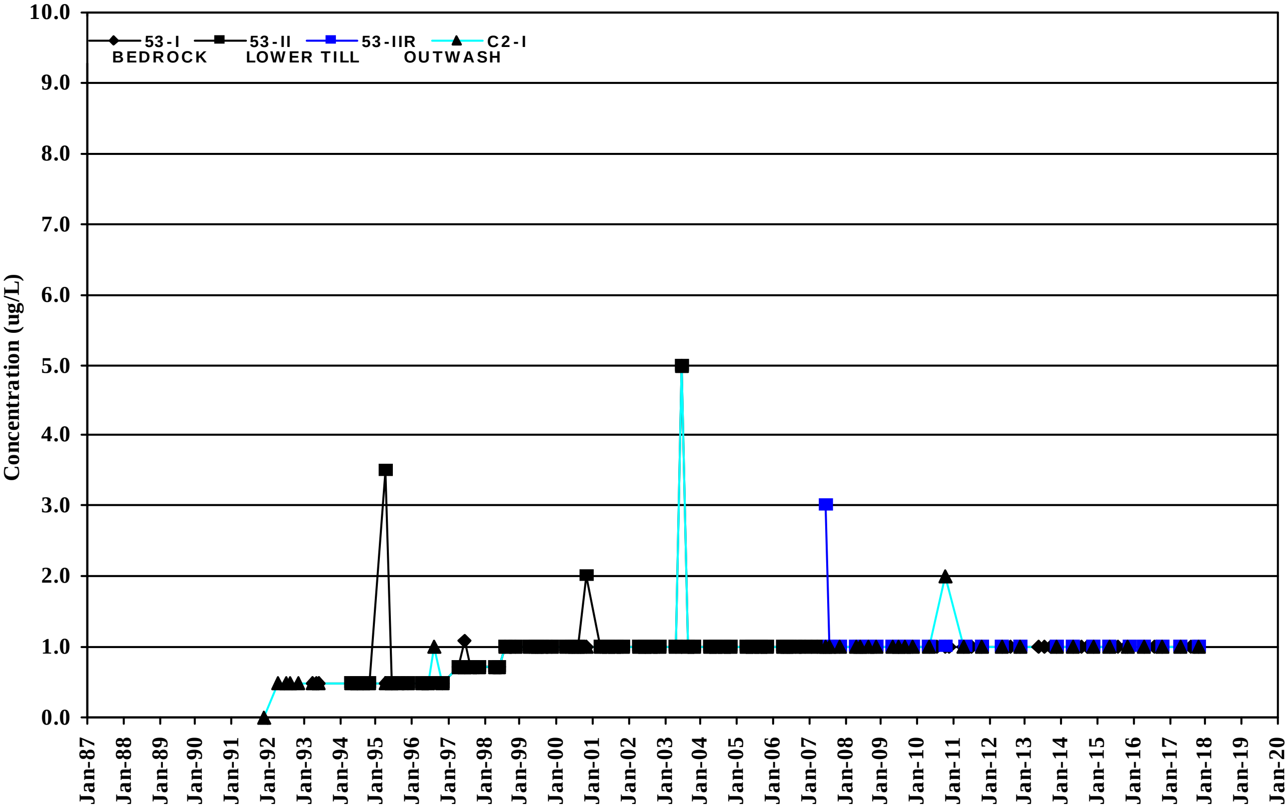
AECOM

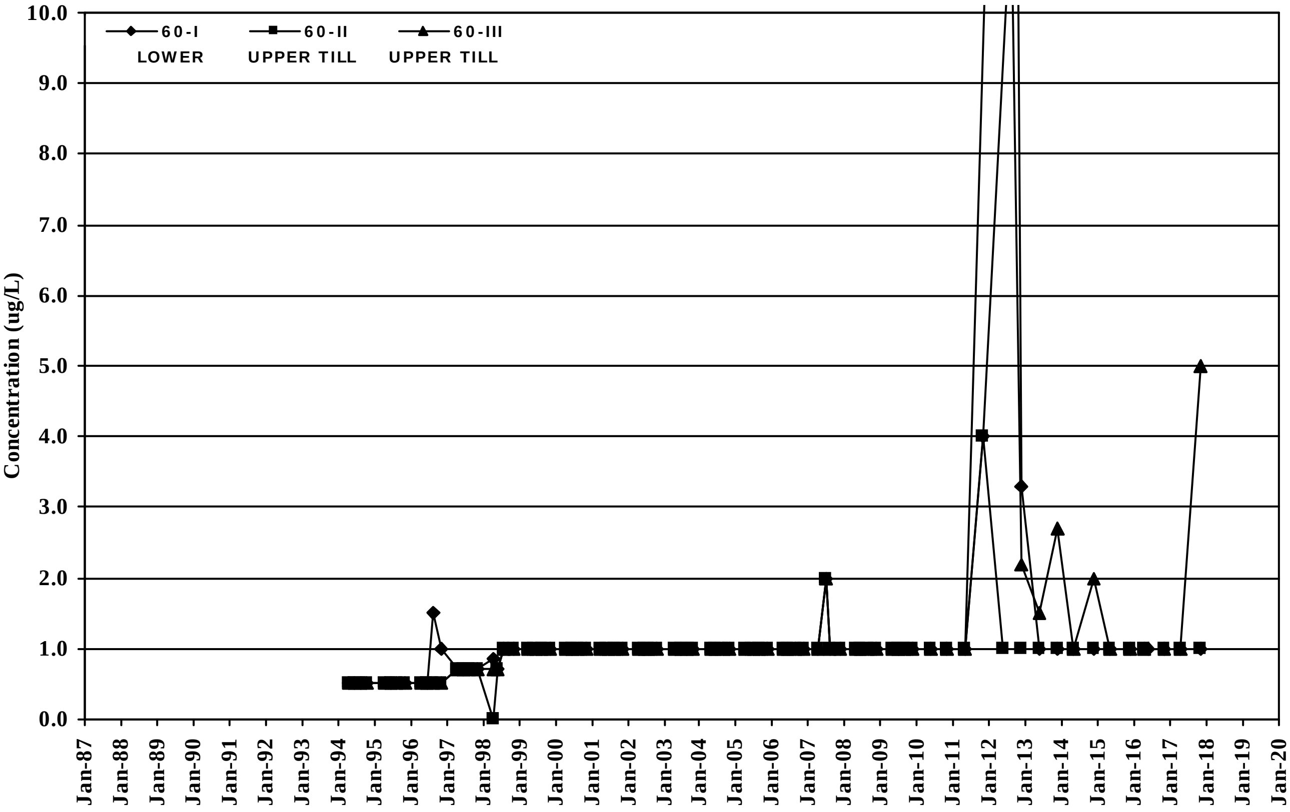
Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Phenol Concentration Profile

FIGURE
C17

60565850
12c C17 GW Chem Phenol Concentr





AECOM

Closed Eastview Road Landfill Site

Ground Water Chemistry Trends
Phenol Concentration Profile

FIGURE
C18

60565850
12c C18 GW Chem Phenol Concentr

C1: Routine Leachate Quality - General Analysis - Closed Eastview Road Landfill Site

AECOM

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents			
	Date	Lab	pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard. as CaCO3 mg/L	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	BOD mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS		6.5-8.5 a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a			500 a	1.0 ht	10.0 h
Monitor 1-IR Outwash	5/7/2012	INSV																		
	11/21/2012	INSV																		
Monitor 51-IR Waste 7.3 - 22.6 m	5/14/2012	Maxx	7.68	13000	5100	2000	1600	14	220	150	1100	410	450	4.4	0.13	920		20	< 0.01	< 0.1
	11/26/2012	Maxx	7.46	16000	6200	1600	2100	21	40	91	1400	340	630	5.7	0.078	920		10	< 0.1	< 1
	5/31/2013	MAX	7.87	15000	5300	1800	1900	16	47	120	1200	370	540	6	0.11	960		5.6	< 0.1	< 1
	11/20/2013	MAX	7.75	16000	5600	1400	2400	21	94	69	1400	290	660	21	0.061	890		5	< 0.1	< 1
	5/14/2014	MAX	7.52	16000	5900	1500	2200	23	110	67	1500	310	680	5.8	0.031	980		50	0.11	< 1
	11/26/2014	MAX	7.67	14000	4900	1400	1900	20	180	60	1500	310	690	14	0.047	770		18	< 0.1	< 1
	5/15/2015	MAX	7.49	16000	5400	1500	2100	24	39	64	1600	330	740	9.5	0.16	820		50	< 0.2	< 2
	11/25/2015	MAX	7.88	16000	7000	1600	2100	25	39	66	1600	340	720	12	0.057	850		6.7	< 0.1	< 1
	5/9/2016	MAX	7.66	16000	6700	1700	2200	25	44	71	1700	360	750	4	0.06	900		20	< 0.1	< 1
	11/9/2016	MAX	7.71	15000	6100	1600	2100	24	54	67	1500	340	680	9	0.046	700		10	< 0.05	< 0.5
	5/4/2017	MAX	7.74	16000	5200	1600	2200	23	33	69	1500	340	670	13	0.054	720		5	< 0.1	< 1
	11/15/2017	MAX	7.78	15000	5900	1600	2000	24	120	80	1400	350	620	13	0.088	730		10	0.028	< 0.1
Monitor 51-II Outwash 23.6 - 26.7 m	5/14/2012	Maxx	7.63	6700	2700	2100	940	6.2	180	150	700	420	120	6.2	0.015	77		10	0.019	< 0.1
	11/26/2012	Maxx	7.38	6700	2800	2100	930	6.8	8.2	150	680	410	110	7.4	0.015	74		1.7	0.025	< 0.1
	5/31/2013	MAX	7.82	6700	2700	2200	900	6	< 5	150	720	440	110	5.4	0.015	83		8.1	< 0.01	< 0.1
	11/20/2013	MAX	7.71	6700	2700	2200	910	5.3	23	150	700	440	110	9.1	0.019	75		10	0.16	1.1
	5/14/2014	MAX	7.41	6700	2700	2100	950	6.2	98	160	690	420	110	8.7	0.018	76		12	< 0.01	< 0.1
	11/26/2014	MAX	7.48	6900	2700	2200	960	7	140	160	710	440	110	10	0.017	68		8.7	0.011	< 0.1
	5/15/2015	MAX	7.43	6900	2800	2200	990	7.1	< 2	160	750	450	120	8.7	0.017	77		14	< 0.05	< 0.5
	11/25/2015	MAX	7.67	6700	2700	2100	990	5.9	6.5	140	760	430	120	8.6	0.019	73		12	0.033	< 0.1
	5/9/2016	MAX	7.41	6700	2600	2000	1000	6.4	< 5	140	670	390	110	9.5	0.017	80		10	< 0.01	< 0.1
	11/9/2016	MAX	7.33	6600	2400	1900	1000	5.9	15	140	710	380	110	< 0.5	0.015	65		10	0.03	0.45
	5/4/2017	MAX	7.59	7000	2400	2000	1100	6	< 1	140	730	390	100	< 0.5	0.018	63		3.3	0.049	1.26
	11/15/2017	MAX	7.42	6700	2600	1900	1100	6.4	96	150	710	370	96	11	0.024	76		5	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C1: Routine Leachate Quality - General Analysis - Closed Eastview Road Landfill Site

AECOM

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents			
	Date	Lab	pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	BOD mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS		6.5-8.5 a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a			500 a	1.0 ht	10.0 h
Monitor **55-IR** **Outwash** **11.2 - 15.8 m**	5/15/2012	Maxx	7.29	3500	1300	1100	460	4.1	28	260	230	120	41	8.9	0.077	52		10	< 0.01	< 0.1
	11/29/2012	Maxx	7.13	3600	1300	1200	480	4.1	12	270	240	120	43	4.6	0.078	51		10	< 0.01	< 0.1
	6/4/2013	MAX	7.39	3600	1200	1300	500	4.1	8	290	260	130	45	0.53	0.075	56		1.4	< 0.01	< 0.1
	11/25/2013	MAX	7.21	3600	1300	1200	510	4.1	16	270	260	120	45	0.37	0.07	51		10	< 0.01	< 0.1
	5/12/2014	MAX	7.17	3100	1100	1100	430	3.3	13	240	230	110	34	0.14	0.11	47		5	< 0.01	< 0.1
	11/27/2014	MAX	7.47	3600	1200	1300	510	4.4	22	290	280	130	48	0.49	0.13	48		5	0.022	< 0.1
	5/19/2015	MAX	7.44	2800	1000	1000	350	2.7	6.8	260	190	91	31	1.3	0.2	31		5	< 0.01	< 0.1
	11/25/2015	INSV																		
	5/9/2016	MAX	7.13	1900	680	690	190	1.3	9.5	180	110	60	19	2.1	0.12	18		3.5	< 0.01	< 0.1
	11/9/2016	INSV																		
	5/9/2017	MAX	7.5	4100	1300	1300	600	4.2	15	300	290	130	44	0.48	0.09	48		10	< 0.01	< 0.1
	11/15/2017	MAX	7.68	4200	1300	1300	650	4.2	15	300	310	140	46	0.78	0.067	52		5	< 0.01	< 0.1
Monitor **56-IR** **Outwash** **12.0 - 18.1 m**	5/15/2012	Maxx	7.35	6400	1000	1500	1600	7.9	34	290	830	190	27	37	0.44	27		10	0.015	< 0.1
	11/29/2012	Maxx	7.31	6400	1000	1500	1600	8	5.3	290	830	190	26	40	0.43	30		1.7	< 0.01	< 0.1
	6/4/2013	MAX	7.48	6700	1000	1500	1800	7.3	1.3	280	830	190	30	36	0.38	38		1.3	< 0.01	< 0.1
	11/25/2013	MAX	7.13	6300	1000	1500	1600	6.4	6.1	290	800	200	35	0.31	0.43	28		10	0.014	0.68
	5/12/2014	MAX	7.17	5500	910	1000	1400	4.7	7.1	220	520	120	22	71	0.41	29		10	< 0.01	< 0.1
	11/27/2014	MAX	7.31	6900	1000	1400	1700	6.6	20	250	820	190	32	37	0.31	39		10	0.011	< 0.1
	5/19/2015	MAX	7.83	6900	980	1500	1800	8.2	< 1	280	950	200	34	0.37	0.31	38		13	0.012	0.11
	11/26/2015	N/A																		
	5/9/2016	MAX	7.32	6100	1000	1300	1600	6.9	1.1	250	740	180	29	33	0.29	33		10	< 0.01	< 0.1
	11/9/2016	MAX	7.06	6300	1100	1300	1500	6.4	16	240	760	170	28	28	0.27	31		10	< 0.01	< 0.1
	5/9/2017	MAX	7.62	6500	1200	1500	1400	8.6	7.7	270	870	210	37	21	0.25	39		10	< 0.01	< 0.1
	11/15/2017	MAX	7.81	4400	820	930	960	5.4	< 50	180	500	110	26	< 0.5	0.18	23		6.7	0.012	< 0.1
Monitor **57-I** **Outwash** **18.5 - 26.1 m**	5/14/2012	Maxx	7.79	2400	810	990	340	0.94	23	180	170	130	2.1	6.5	0.072	1.7		5	< 0.01	< 0.1
	11/27/2012	Maxx	7.48	2400	830	1000	340	0.88	< 1	200	160	130	2.2	8	0.081	2		10	< 0.01	< 0.1
	6/3/2013	MAX	7.47	2500	840	1000	360	0.87	< 1	200	160	130	2	8	0.085	2.1		3.8	< 0.01	< 0.1
	11/21/2013	MAX	7.57	2600	900	960	370	0.76	8	190	150	120	2	8.1	0.084	2		5	< 0.01	< 0.1
	5/12/2014	MAX	7.47	2800	920	1100	420	1.2	6.5	200	190	140	2.2	8.8	0.087	2.2		5.3	< 0.01	< 0.1
	11/26/2014	MAX	7.59	2700	920	1100	380	0.99	14	230	170	140	2.3	11	0.096	2.3		1	< 0.01	< 0.1
	5/15/2015	MAX	7.4	2500	870	1100	360	0.84	< 1	240	160	130	2.2	11	0.1	2.1		5	< 0.01	< 0.1
	11/25/2015	MAX	7.73	2500	830	1100	340	0.79	< 1	220	160	130	2.2	10	0.097	2		1.3	< 0.01	< 0.1
	5/9/2016	MAX	7.53	2400	790	950	340	0.91	< 1	190	160	120	2.1	8.7	0.08	1.9		5	< 0.01	< 0.1
	11/8/2016	MAX	7.47	2400	890	1000	320	0.68	< 1	220	140	120	2.1	11	0.099	2.2		2.8	< 0.01	< 0.1
	5/4/2017	MAX	7.89	2500	770	890	370	0.89	< 1	180	170	110	2.1	7.6	0.075	1.7		8.3	< 0.01	< 0.1
	11/14/2017	MAX	7.68	2500	820	960	350	1.1	11	190	180	120	2.1	7.6	0.088	2.1		5.7	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C1: Routine Leachate Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents			
	Date	Lab	pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard. as CaCO3 mg/L	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	BOD mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS		6.5-8.5 a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a			500 a	1.0 ht	10.0 h
Monitor **58-I** **Outwash** **18.9 - 20.4 m**	5/10/2012	Maxx	8.04	1400	520	670	150	0.28	< 1	130	39	86	1.5	4.4	0.09	1.4		1.4	< 0.01	0.25
	11/27/2012	Maxx	7.67	1600	610	770	170	0.59	< 1	140	58	99	1.8	3.7	0.092	1.4		1	< 0.01	0.53
	6/4/2013	MAX	7.78	1500	570	750	170	0.31	< 1	150	42	91	2.1	5.2	0.09	2		2.1	< 0.01	0.13
	11/21/2013	MAX	7.64	1500	590	710	170	0.43	< 1	130	53	92	1.6	5.8	0.077	1.9		1.3	0.015	< 0.1
	5/12/2014	MAX	7.6	1600	590	750	190	0.22	< 1	140	39	94	1.6	5.3	0.089	2.1		1	< 0.01	< 0.1
	11/26/2014	MAX	7.69	2000	720	890	240	0.83	17	160	87	120	2.1	7.1	0.072	1.9		1	< 0.01	< 0.1
	5/15/2015	MAX	7.67	1800	630	910	220	0.86	< 1	160	92	120	1.9	2.2	0.032	1.9		5	0.014	0.24
	11/25/2015	MAX	7.61	1700	610	800	210	0.16	< 1	160	43	100	1.7	6	0.094	1.2		1.3	0.01	< 0.1
	5/9/2016	MAX	7.74	1900	670	880	230	0.7	< 1	160	82	120	2	0.3	0.006	0.7		1.8	0.011	0.67
	11/7/2016	MAX	7.64	1800	680	860	230	0.5	< 1	160	70	110	2.1	< 0.1	0.14	1.6		3.2	0.112	1.03
	5/4/2017	MAX	7.73	1400	510	620	150	0.41	< 10	120	51	77	1.9	5.1	0.065	2.8		1.6	0.03	0.13
	11/14/2017	MAX	7.86	1900	700	840	210	0.44	< 20	160	63	110	2.5	7.9	0.076	6.8		2	< 0.01	< 0.1
Monitor **59-I** **Waste** **10.8 - 20.0 m**	5/15/2012	Maxx	7.76	19000	7400	2400	2500	41	420	59	2200	560	1200	8.6	0.086	870		20	< 0.01	< 0.1
	11/28/2012	Maxx	7.73	19000	7000	2200	2400	33	83	52	1900	490	1100	9.8	0.086	810		56	< 0.1	< 1
	6/4/2013	MAX	7.67	18000	6900	2100	2300	30	98	49	1900	490	1200	8.6	0.083	930		41	< 0.2	< 2
	11/21/2013	N/A																		
	5/12/2014	MAX	7.5	19000	7700	2500	2500	44	310	49	2200	580	1300	7.8	0.074	930		50	< 0.1	< 1
	11/27/2014	MAX	7.62	19000	7000	2200	2400	34	260	52	1900	510	1200	9.1	0.096	920		20	< 0.2	< 2
	5/19/2015	MAX	7.7	15000	5200	2200	2200	17	91	100	1600	470	670	5.1	0.12	630		20	< 0.1	< 1
	11/25/2015	MAX	7.53	20000	8900	2600	2500	36	96	51	2100	600	1200	7.1	0.066	870		20	< 0.2	< 2
	5/9/2016	MAX	7.61	19000	9400	2200	2400	37	100	44	1900	520	1100	6.6	0.051	950		20	< 0.1	< 1
	11/10/2016	MAX	7.44	17000	6700	2300	2500	16	97	76	1900	510	720	6.2	0.11	730		15	< 0.1	< 1
	5/9/2017	MAX	7.73	18000	6400	2200	2600	16	79	70	1800	490	710	5.2	0.1	720		20	< 0.05	< 0.5
	11/15/2017	MAX	7.63	20000	8400	2400	2500	40	190	40	2000	560	1200	3.5	0.057	1100		20	< 0.2	< 2
Monitor **61-IR** **Outwash** **24.7 -26.7 m**	5/14/2012	Maxx	7.57	4400	1200	1300	840	2.6	45	310	370	140	3.4	19	0.14	7.5		10	< 0.01	< 0.1
	11/28/2012	Maxx	7.7	4200	1200	1400	770	3.6	< 1	310	450	170	4.2	20	0.13	4.6		10	< 0.01	< 0.1
	6/3/2013	MAX	7.26	4600	1200	1500	840	3.2	1.7	320	460	160	3.9	21	0.14	7.2		10	< 0.01	< 0.1
	11/21/2013	MAX	7.54	4900	1300	1300	990	3.5	16	250	520	170	4.2	< 0.1	0.087	5.5		10	< 0.01	< 0.1
	5/12/2014	MAX	7.38	4900	1300	1400	1000	4.2	32	270	530	180	4.3	11	0.091	8.1		10	< 0.01	< 0.1
	11/26/2014	MAX	7.62	4900	1300	1500	920	4.4	29	320	530	180	4.6	37	0.1	7.8		10	0.014	< 0.1
	5/19/2015	MAX	7.51	5100	1300	1600	1100	5	< 1	310	590	190	5	0.11	0.11	8.7		10	0.029	< 0.1
	11/26/2015	MAX	7.35	6900	2400	2600	1200	5	6.3	150	760	550	58	17	0.045	39		17	0.037	< 0.1
	5/9/2016	MAX	7.59	5300	1300	1700	1000	5.3	< 2	310	690	220	8.3	< 0.5	0.11	3.9		10	0.033	< 0.1
	11/8/2016	MAX	7.29	5200	1400	1700	1000	5.3	4.7	310	580	210	5.5	0.28	0.074	13		5	< 0.01	< 0.1
	5/9/2017	MAX	7.44	5400	1300	1600	1100	4.8	< 1	300	590	200	5.4	0.42	0.077	13		10	< 0.01	< 0.1
	11/14/2017	MAX	6.89	5300	1400	1600	1100	5	30	300	570	200	5.6	0.75	0.075	14		10	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

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C1: Routine Leachate Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents			
	Date	Lab	pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	BOD mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS		6.5-8.5 a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a			500 a	1.0 ht	10.0 h
Monitor **63-I** **Outwash** **15.1 - 16.6 m**	5/15/2012	Maxx	7.7	2200	860	900	250	0.63	4.1	190	190	110	1.3	22	0.44	0.78		15	0.012	< 0.1
	11/27/2012	Maxx	7.32	2200	860	850	260	0.73	< 1	180	180	100	1.1	20	0.35	1.1		10	< 0.01	< 0.1
	5/31/2013	MAX	7.75	2300	890	910	260	0.81	< 1	190	190	110	1.1	20	0.37	1.7		13	< 0.01	< 0.1
	11/21/2013	MAX	7.5	2600	1000	850	310	1.2	14	160	200	110	2.3	16	0.38	3.9		5	< 0.01	< 0.1
	5/12/2014	MAX	7.59	2500	970	960	310	1.3	6.9	180	220	120	1.9	15	0.42	2.4		5	< 0.01	< 0.1
	11/26/2014	MAX	7.53	2500	950	990	310	1.3	11	190	210	120	1.7	14	0.42	1.8		5	< 0.01	< 0.1
	5/15/2015	MAX	7.47	2500	940	1100	320	1.2	< 1	200	200	140	1.3	15	0.4	0.95		13	< 0.01	< 0.1
	11/27/2015	MAX	7.57	2700	1000	1100	320	1	300	200	200	140	2.8	14	0.47	21		1	< 0.01	< 0.1
	5/9/2016	MAX	7.4	2700	970	1100	330	1.1	< 2	190	190	140	1.4	12	0.42	2.1		9.6	< 0.01	< 0.1
	11/8/2016	MAX	7.31	2800	990	1200	390	1.1	2	200	220	160	1.1	1.3	0.4	1.1		3.7	< 0.01	< 0.1
	5/9/2017	MAX	7.53	2800	920	1100	380	0.92	< 20	190	200	160	1.1	41	0.46	0.39		5	< 0.01	< 0.1
	11/15/2017	MAX	7.16	2800	990	1100	260	0.73	17	180	200	150	1.8	26	0.43	5.2		2	< 0.01	< 0.1
Monitor **65-I** **Waste/Fill** **5.7 - 10.3 m**	5/15/2012	Maxx	7.66	2500	1100	980	120	0.45	2	220	180	110	28	17	1.4	6.4		210	0.2	0.4
	11/27/2012	Maxx	7.37	2600	1200	1000	150	0.53	< 1	220	250	110	42	13	0.8	9.3		110	< 0.01	< 0.1
	6/3/2013	MAX	7.45	2200	970		110	0.34	< 1	200	160	93	23	15	1.2	6.8		160	< 0.01	< 0.1
	11/21/2013	MAX	7.47	2300	1000	840	110	0.44	3.6	190	150	87	21	14	1.3	4.9		160	0.015	< 0.1
	5/12/2014	MAX	7.4	2100	990	930	79	0.3	3	220	140	90	18	25	1.7	3.9		130	< 0.01	< 0.1
	11/27/2014	MAX	7.37	2100	1100	960	78	0.47	3.7	230	110	92	28	37	1.3	7.6		48	0.031	< 0.1
	5/19/2015	MAX	7.27	2000	990	950	83	0.35	< 1	240	110	87	23	44	1.4	7.7		44	0.049	< 0.1
	11/27/2015	MAX	7.43	2300	1100	960	130	0.39	1.5	230	150	92	26	32	1.2	10		7.1	0.024	< 0.1
	5/9/2016	MAX	7.29	1600	800	760	38	0.19	< 1	200	66	64	12	35	1.5	4.3		45	< 0.01	< 0.1
	11/8/2016	MAX	7.22	2500	1200	1000	160	0.53	2.1	250	170	98	34	39	1.1	15		1.2	< 0.01	< 0.1
	5/9/2017	MAX	7.55	1500	770	730	30	0.18	< 1	200	51	57	11	37	1.4	3.8		39	< 0.01	< 0.1
	11/15/2017	MAX	7.48	2500	1200	980	170	0.49	5.7	240	160	91	31	40	0.99	15		7.4	0.013	< 0.1
Monitor **66-IR** **Outwash** **18.4 - 20.6 m**	5/14/2012	Maxx	7.37	8500	1300	2000	2200	0.78	48	340	1100	270	13	48	0.61	10		230	< 0.01	< 0.1
	11/27/2012	Maxx	7.02	7500	1200	2000	1900	0.72	< 1	360	890	280	13	46	0.54	7.8		170	< 0.01	< 0.1
	6/4/2013	MAX	7.29	7100	1100	1900	1800	0.67	3.7	330	860	270	13	45	0.41	11		150	< 0.01	< 0.1
	11/25/2013	MAX	7.02	6000	1900	2200	1100	3.6	11	240	670	390	5.1	25	0.15	1.5		51	0.025	1.3
	5/12/2014	MAX	7.39	6500	2700	2300	960	6.1	44	180	660	450	46	11	0.058	39		14	0.29	0.46
	11/27/2014	MAX	7.61	7300	2900	2700	1100	6.3	63	160	730	570	72	8.6	0.04	60		10	0.054	< 0.5
	5/15/2015	MAX	7.33	6900	2600	2400	1100	4.8	< 2	140	700	490	59	15	0.042	47		10	0.049	< 0.1
	11/26/2015	MAX	7.52	5100	1300	1600	1100	4.4	< 2	300	640	210	5	< 0.5	0.12	5.4		10	0.018	0.39
	5/9/2016	MAX	7.53	6900	2500	2300	1100	5.3	< 5	140	680	480	57	13	0.038	37		10	< 0.01	< 0.1
	11/8/2016	MAX	7.54	6100	2100	2300	1100	5.1	< 5	130	680	480	52	0.65	0.032	31		44	< 0.01	< 0.1
	5/9/2017	MAX	7.95	6600	2300	2200	1100	4.9	13	140	660	450	56	0.21	0.033	28		42	< 0.01	< 0.1
	11/15/2017	MAX	7.39	6700	1800	1900	1400	3.8	33	120	590	400	46	1.3	0.045	20		41	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C1: Routine Leachate Quality - General Analysis - Closed Eastview Road Landfill Site

Monitor

67-I
Waste
16.2 - 20.7 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents			
Date	Lab	pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard. mg/L	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	BOD mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS		6.5-8.5 a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a			500 a	1.0 ht	10.0 h
5/14/2012	Maxx	7.38	3600	890	1200	690	1.8	47	240	360	140	8.1	37	0.34	1.9		10	< 0.01	< 0.1
11/21/2012	INSV																		
6/4/2013	MAX	7.33	2700	860	1000	390	2.7	< 1	210	320	130	20	28	0.53	2.7		36	< 0.01	< 0.1
11/25/2013	MAX	7.3	4600	1400	1300	700	5.9	59	170	560	200	140	11	1.1	72		110	< 0.01	< 0.1
5/12/2014	MAX	7.57	12000	2200	2700	2000	15	61	270	1500	480	410	13	0.34	160		1600	< 0.05	< 0.5
11/27/2014	MAX	7.68	9000	2000	1900	1700	12	59	120	1200	370	300	5.6	0.19	160		460	0.425	0.6
5/19/2015	MAX	7.4	7100	1900	1600	1300	9.7	9.3	140	980	300	260	4.7	0.22	160		230	0.011	< 0.1
11/26/2015	MAX	7.27	6800	1700	1700	1300	5	12	200	810	300	100	13	0.28	91		160	0.014	< 0.1
5/9/2016	MAX	7.47	5800	1500	1400	1100	4.9	4	170	650	230	90	3.7	0.28	67		90	0.129	< 0.1
11/10/2016	MAX	7.75	5700	1400	1600	1100	4.8	2.4	190	710	270	88	< 0.1	0.17	48		210	0.114	< 0.1
5/9/2017	MAX	7.69	6200	1500	1300	1100	5.2	< 20	160	700	230	110	17	0.17	110		140	0.107	< 0.1
11/15/2017	MAX	7.53	5200	1300	1100	1000	3.1	80	150	510	180	69	12	0.26	49		68	0.105	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Reletaed Objective, h - Heath Related Objective

C1: Routine Leachate Quality - Trace Metels Analysis - Closed Eastview Road Lan

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor	5/7/2012	INSV					
1-IR	11/21/2012	INSV					
Outwash							
Monitor	5/14/2012	Maxx	1.7	< 20		0.15	0.01
	11/26/2012	Maxx	2	< 10	0.05	0.23	< 0.025
51-IR	5/31/2013	MAX	2.5	< 2	0.045	0.2	< 0.025
Waste	11/20/2013	MAX	1.7	< 50	< 0.05	0.24	< 0.05
7.3 - 22.6 m	5/14/2014	MAX	2.4	< 50	0.042	0.29	0.022
	11/26/2014	MAX	1.9	< 10	0.062	0.27	< 0.05
	5/15/2015	MAX	2.4	< 50	< 0.05	0.31	< 0.05
	11/25/2015	MAX	2.2	12	< 0.05	0.28	< 0.05
	5/9/2016	MAX	3.4	< 20	< 0.05	0.32	< 0.05
	11/9/2016	MAX	2.3	< 10	< 0.05	0.27	< 0.05
	5/4/2017	MAX	< 5	< 5	< 0.05	0.28	< 0.05
	11/15/2017	MAX	< 0.5	18	< 0.05	0.24	< 0.05
Monitor	5/14/2012	Maxx	1.1	< 10	< 0.005	0.079	0.036
	11/26/2012	Maxx	1.3	3.7	0.011	0.073	0.034
51-II	5/31/2013	MAX	1.5	4.3	< 0.025	0.087	0.046
Outwash	11/20/2013	MAX	1.2	< 10	< 0.025	0.079	0.064
23.6 - 26.7 m	5/14/2014	MAX	1.5	< 10	< 0.01	0.069	0.055
	11/26/2014	MAX	1.1	< 10	0.0071	0.067	0.035
	5/15/2015	MAX	1.3	< 10	0.0073	0.076	0.021
	11/25/2015	MAX	1.3	< 10	< 0.025	0.094	0.03
	5/9/2016	MAX	1.5	< 10	0.0062	0.11	0.04
	11/9/2016	MAX	1.4	< 10	< 0.025	0.099	0.26
	5/4/2017	MAX	< 5	< 1	< 0.025	0.11	0.29
	11/15/2017	MAX	1.4	11	< 0.025	0.1	0.056
Monitor	5/15/2012	Maxx	0.55	< 10	< 0.005	0.018	0.0074
	11/29/2012	Maxx	0.69	< 10	< 0.005	0.024	0.006
55-IR	6/4/2013	MAX	0.68	1.9	0.013	0.021	0.011
Outwash	11/25/2013	MAX	0.6	< 10	< 0.005	0.021	0.012
11.2 - 15.8 m	5/12/2014	MAX	0.54	< 5	< 0.005	0.016	0.015
	11/27/2014	MAX	0.46	< 5	< 0.005	0.019	0.01
	5/19/2015	MAX	0.43	< 5	< 0.005	0.014	0.0056
	11/25/2015	INSV					
	5/9/2016	MAX	0.15	< 2	< 0.005	0.0065	< 0.005
	11/9/2016	INSV					
	5/9/2017	MAX	0.81	< 10	< 0.005	0.02	< 0.005
	11/15/2017	MAX	0.74	7.6	< 0.005	0.023	0.014
Monitor	5/15/2012	Maxx		< 10	< 0.025	0.17	0.029
	11/29/2012	Maxx	0.77	3.8	< 0.01	0.17	0.01
56-IR	6/4/2013	MAX	0.79	4.7	< 0.025	0.15	< 0.025
Outwash	11/25/2013	MAX	0.72	< 10	< 0.025	0.14	0.037
12.0 - 18.1 m	5/12/2014	MAX	0.74	< 10	< 0.005	0.079	0.02
	11/27/2014	MAX	0.48	< 10	< -0.001	0.14	0.012
	5/19/2015	MAX	0.63	< 10	< 0.005	0.16	0.047
	11/26/2015	N/A					
	5/9/2016	MAX	0.73	< 10	< 0.025	0.12	< 0.025
	11/9/2016	MAX	0.82	< 10	< 0.005	0.11	0.0076
	5/9/2017	MAX	0.88	< 10	< 0.005	0.13	0.01
	11/15/2017	MAX	0.29	7.7	< 0.025	0.065	< 0.025

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Related Objective, h - Heath Related Objective

C1: Routine Leachate Quality - Trace Metels Analysis - Closed Eastview Road Lan

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 57-I Outwash 18.5 - 26.1 m	5/14/2012	Maxx	0.36	< 5	< 0.005	0.015	0.0068
	11/27/2012	Maxx	0.46	< 10	< 0.005	0.016	< 0.005
	6/3/2013	MAX	0.45	1.5	< 0.005	0.016	< 0.005
	11/21/2013	MAX	0.43	< 5	< 0.005	0.017	0.0075
	5/12/2014	MAX	0.66	< 5	< 0.005	0.022	0.041
	11/26/2014	MAX	0.42	1.4	< 0.005	0.017	< 0.005
	5/15/2015	MAX	0.42	< 5	< 0.005	0.015	0.0058
	11/25/2015	MAX	< 0.1	1.8	< 0.005	0.011	0.0066
	5/9/2016	MAX	0.49	< 5	< 0.005	0.014	< 0.005
	11/8/2016	MAX	0.6	< 2	< 0.005	0.011	< 0.005
	5/4/2017	MAX	0.42	< 1	< 0.025	0.014	0.0061
	11/14/2017	MAX	< 0.1	< 5	< 0.005	0.017	0.0057
Monitor 58-I Outwash 18.9 - 20.4 m	5/10/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/27/2012	Maxx	0.17	< 1	< 0.005	0.002	< 0.005
	6/4/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/21/2013	MAX	< 0.1	< 1	< 0.005	0.0018	< 0.005
	5/12/2014	MAX	0.2	< 1	< 0.005	0.001	0.006
	11/26/2014	MAX	0.21	< 1	< 0.005	0.0039	0.0057
	5/15/2015	MAX	0.18	< 5	< 0.005	0.0045	0.0065
	11/25/2015	MAX	< 0.1	< 2	< 0.005	< 0.001	0.0054
	5/9/2016	MAX	0.39	< 2	< 0.005	0.0038	0.01
	11/7/2016	MAX	< 0.1	< 1	< 0.005	0.0038	< 0.005
	5/4/2017	MAX	< 0.1	< 1	< 0.005	0.0018	< 0.005
	11/14/2017	MAX	< 0.1	< 2	< 0.005	0.0018	< 0.005
Monitor 59-I Waste 10.8 - 20.0 m	5/15/2012	Maxx	1.7	< 20	0.12	0.3	< 0.1
	11/28/2012	Maxx	2.1	< 10	0.17	0.28	< 0.05
	6/4/2013	MAX	2.5	< 20	0.12	0.31	< 0.05
	11/21/2013	N/A					
	5/12/2014	MAX	12	< 50	0.12	0.32	< 0.05
	11/27/2014	MAX	1.4	< 20	0.097	0.3	< 0.05
	5/19/2015	MAX	1.1	< 20	0.028	0.15	< 0.025
	11/25/2015	MAX	2.1	< 20	0.13	0.3	< 0.05
	5/9/2016	MAX	1.8	< 20	0.1	0.32	< 0.05
	11/10/2016	MAX	1.1	< 10	0.03	0.14	< 0.025
	5/9/2017	MAX	1.3	< 20	0.028	0.14	< 0.025
	11/15/2017	MAX	1.6	< 20	0.081	0.32	< 0.05
Monitor 61-IR Outwash 24.7 -26.7 m	5/14/2012	Maxx	0.6	< 10	< 0.005	0.045	0.012
	11/28/2012	Maxx	0.89	< 10	< 0.005	0.064	0.18
	6/3/2013	MAX		< 10	< 0.01	0.054	< 0.005
	11/21/2013	MAX	0.84	< 10	< 0.005	0.071	0.18
	5/12/2014	MAX	1.1	< 10	< 0.025	0.068	0.083
	11/26/2014	MAX	0.73	< 10	< 0.005	0.065	0.024
	5/19/2015	MAX	1	< 10	< 0.005	0.08	0.26
	11/26/2015	MAX	1.3	< 10	< 0.025	0.084	< 0.025
	5/9/2016	MAX	< 0.1	< 10	< 0.025	0.082	0.19
	11/8/2016	MAX	0.84	< 5	< 0.005	0.076	0.044
	5/9/2017	MAX	1	< 10	< 0.005	0.073	0.034
	11/14/2017	MAX	0.81	< 10	< 0.005	0.075	0.01
Monitor 63-I Outwash 15.1 - 16.6 m	5/15/2012	Maxx	0.61	< 5	< 0.005	0.019	0.0064
	11/27/2012	Maxx	1.5	< 10	< 0.005	0.019	< 0.005
	5/31/2013	MAX	1.2	1.7	< 0.005	0.018	< 0.005
	11/21/2013	MAX	1.1	< 5	< 0.005	0.022	0.01
	5/12/2014	MAX	0.96	< 5	< 0.005	0.018	0.01
	11/26/2014	MAX	0.94	< 5	< 0.005	0.018	0.008
	5/15/2015	MAX	0.95	< 5	< 0.005	0.016	0.0065
	11/27/2015	MAX	0.76	2	< 0.005	0.016	0.023
	5/9/2016	MAX	0.58	< 5	< 0.005	0.016	0.011
	11/8/2016	MAX	0.96	< 2	< 0.005	0.017	< 0.005
	5/9/2017	MAX	0.9	< 5	< 0.005	0.015	< 0.005
	11/15/2017	MAX	0.72	3.7	< 0.005	0.016	0.0055

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Related Objective, h - Heath Related Objective

C1: Routine Leachate Quality - Trace Metels Analysis - Closed Eastview Road Lan

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor	5/15/2012	Maxx		< 1	< 0.005	0.0035	< 0.005
	11/27/2012	Maxx	0.37	< 1	< 0.005	0.0037	< 0.005
65-I	6/3/2013	MAX	0.23	< 1	< 0.005	0.0021	0.0083
Waste/Fill	11/21/2013	MAX	0.23	< 1	< 0.005	0.0032	0.007
5.7 - 10.3 m	5/12/2014	MAX	0.15	< 1	< 0.005	0.0036	< 0.005
	11/27/2014	MAX	0.14	< 1	< 0.005	0.0051	0.0086
	5/19/2015	MAX	0.17	< 1	< 0.005	0.0056	< 0.005
	11/27/2015	MAX	0.14	< 2	< 0.005	0.012	0.0051
	5/9/2016	MAX	0.26	< 1	< 0.005	0.0032	< 0.005
	11/8/2016	MAX	0.31	< 1	< 0.005	0.0057	< 0.005
	5/9/2017	MAX	0.26	< 1	< 0.005	0.0028	0.0073
	11/15/2017	MAX	0.44	< 1	< 0.005	0.0077	< 0.005
Monitor	5/14/2012	Maxx	1.7	< 20	< 0.025	0.059	< 0.025
	11/27/2012	Maxx	2.5	< 10	< 0.02	0.056	0.014
66-IR	6/4/2013	MAX	2.8	7	< 0.025	0.057	< 0.025
Outwash	11/25/2013	MAX	1.6	< 10	0.0057	0.085	0.0099
18.4 - 20.6 m	5/12/2014	MAX	1.4	< 10	< 0.01	0.085	0.0088
	11/27/2014	MAX	1.1	< 10	< 0.025	0.097	< 0.025
	5/15/2015	MAX	1.3	< 10	< 0.001	0.075	0.0092
	11/26/2015	MAX	< 0.1	< 10	< 0.025	0.073	0.19
	5/9/2016	MAX	1.3	< 10	< 0.005	0.088	0.035
	11/8/2016	MAX	1.4	5.1	< 0.025	0.089	0.072
	5/9/2017	MAX	0.98	< 10	< 0.005	0.081	0.053
	11/15/2017	MAX	1.3	13	< 0.025	0.089	0.052
Monitor	5/14/2012	Maxx	0.33	< 10	< 0.1	0.052	0.015
	11/21/2012	INSV					
67-I	6/4/2013	MAX	0.8	< 5	< 0.005	0.044	< 0.005
Waste	11/25/2013	MAX	0.61	< 10	0.012	0.052	< 0.005
16.2 - 20.7 m	5/12/2014	MAX	1.2	< 20	0.032	0.13	0.035
	11/27/2014	MAX	0.88	< 10	< 0.025	0.099	0.028
	5/19/2015	MAX	1.3	< 10	0.0096	0.088	0.015
	11/26/2015	MAX	1.5	< 10	< 0.025	0.13	< 0.025
	5/9/2016	MAX	1.3	< 10	0.0052	0.11	0.03
	11/10/2016	MAX	1.5	< 10	< 0.005	0.12	0.049
	5/9/2017	MAX	0.99	< 10	< 0.005	0.081	0.0093
	11/15/2017	MAX	1.5	< 10	< 0.025	0.069	< 0.025

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Related Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond- uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 2-I Outwash 9.75 - 10.36 m	5/7/2012	Maxx	7.97	880	370	460	21	0.14	< 1	110	11	46	4.7	5.6	0.073	1.5	89	0.013	0.11
	11/27/2012	Maxx	7.73	880	360	500	24	0.18	< 1	120	12	49	5	5.6	0.081	1.2	90	0.064	0.94
	5/23/2013	MAX	7.98	950	390	500	25	0.13	< 1	120	13	48	4.5	6.5	0.083	1.9	85	< 0.01	< 0.1
	11/14/2013	MAX	7.57	940	410	500	24	0.15	< 1	120	12	48	4.8	6.2	0.085	1.8	82	0.013	< 0.1
	5/7/2014	MAX	7.81	980	440	530	18	0.14	< 1	130	13	52	4.4	6.9	0.082	1.9	74	< 0.01	< 0.1
	11/21/2014	MAX	7.79	950	420	540	23	0.12	< 1	130	10	51	4.7	5.7	0.072	0.76	78	0.045	1.89
	5/5/2015	MAX	7.76	970	470	540	12	0.11	< 1	130	8.6	52	4.2	8	0.086	1.8	58	< 0.01	< 0.1
	11/17/2015	MAX	7.97	950	460	540	11	0.12	< 1	130	8.2	52	4.4	5.9	0.084	0.84	58	0.128	1.31
	4/28/2016	MAX	7.87	950	490	550	7.8	0.1	< 1	130	7.7	57	4.1	8.1	0.083	1.7	52	< 0.01	< 0.1
	11/1/2016	MAX	7.9	960	490	500	7.6	0.097	< 1	120	6.9	48	3.9	6.1	0.081	1.4	49	< 0.01	0.28
	5/2/2017	MAX	7.8	1000	510	550	6.4	0.094	< 1	130	6.8	52	4	8.8	0.087	1.5	49	< 0.01	< 0.1
	11/8/2017	MAX	7.66	1000	520	540	8.4	0.092	< 1	130	6.4	50	3.7	8.4	0.092	1.5	45	< 0.01	< 0.1
Monitor 2-II Outwash 0.2 - 4.57 m	5/7/2012	Maxx	7.8	870	430	530	4	0.066	4	170	4	23	2.4	4.7	0.62	0.85	41	0.018	0.47
	5/23/2013	MAX	7.86	720	350	440	3.3	0.044	< 1	150	3.4	18	1.6	0.13	0.058	0.073	26	< 0.01	0.63
	5/7/2014	MAX	7.68	640	310	330	4.1	0.036	< 1	110	2.8	13	1.7	< 0.1	< 0.002	0.057	11	< 0.01	3.2
	5/5/2015	MAX	7.66	740	380	400	5	0.036	< 1	130	3.6	17	1.9	< 0.1	0.0043	< 0.05	13	< 0.01	3.39
	4/28/2016	MAX	7.78	790	390	340	19	0.028	< 1	110	14	14	2.3	< 0.1	< 0.002	< 0.05	27	< 0.01	0.74
	5/2/2017	MAX	8.08	670	330	290	6	0.028	< 1	95	27	13	2.4	< 0.1	0.0064	< 0.05	17	< 0.01	1.69

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor	5/8/2012	Maxx	8.07	690	250	330	47	0.032	< 1	70	11	37	0.96	0.44	0.011	0.11	60	< 0.01	< 0.1
4-IR	8/15/2012	Maxx	8.03	690	240	350	43	0.03	< 1	73	12	41	1	0.54	0.01	0.17	56	< 0.01	< 0.1
Bedrock	10/3/2012	Maxx	8.1	690	250	330	46	0.023	< 1	68	12	39	0.98	0.5	0.01	0.25	57	< 0.01	< 0.1
19.4 - 20.9 m	11/21/2012	Maxx	8.08	690	250	340	45	0.028	< 1	71	12	41	0.96	0.5	0.011	0.18	55	< 0.01	< 0.1
	5/24/2013	MAX	8.07	700	240	350	46	0.039	< 1	75	12	41	0.96	0.42	0.012	0.26	58	< 0.01	< 0.1
	7/30/2013	MAX	7.99	690	240	350	48	0.027	< 1	75	12	39	0.95	0.49	0.011	0.19	60	< 0.01	< 0.1
	9/27/2013	MAX	8.21	690	240	360	45	0.03	< 1	75	12	41	1	0.52	0.011	0.18	57	< 0.01	< 0.1
	11/13/2013	MAX	8.09	700	240	340	45	0.023	< 1	72	12	40	0.95	0.5	0.011	0.17	57	< 0.01	< 0.1
	5/6/2014	MAX	8.14	700	240	350	46	0.032	< 1	73	12	40	0.97	0.46	0.012	0.22	57	< 0.01	< 0.1
	8/1/2014	MAX	8.04	690	240	340	45	0.028	< 1	69	12	40	0.89	0.46	0.011	0.23	60	< 0.01	< 0.1
	10/2/2014	MAX	8.02	690	250	340	44	0.03	< 1	71	12	40	0.95	0.5	0.011	0.22	57	< 0.01	< 0.1
	11/18/2014	MAX	8.04	720	240	360	46	0.034	< 1	75	13	41	1	0.56	0.011	0.17	58	< 0.01	< 0.1
	5/6/2015	MAX	8.02	1100	250	380	70	0.028	< 1	81	65	44	1.1	0.49	0.013	0.17	57	0.022	< 0.1
	7/30/2015	MAX	7.92	760	240	360	63	0.024	< 1	75	21	41	1	0.47	0.011	0.19	62	< 0.01	< 0.1
	10/15/2015	MAX	8.07	720	240	340	55	0.022	< 1	71	15	39	0.97	0.52	0.011	0.17	61	< 0.01	< 0.1
	11/19/2015	MAX	8.09	710	240	360	49	0.029	< 1	74	14	42	0.98	0.46	0.011	0.18	58	< 0.01	< 0.1
	4/26/2016	MAX	8.02	720	240	350	48	0.03	< 1	75	15	41	1	0.5	0.011	0.18	58	0.018	< 0.1
	8/10/2016	MAX	8.04	730	240	350	51	0.025	< 1	76	14	39	1	0.5	0.011	0.2	59	< 0.01	< 0.1
	9/1/2016	MAX	8.05	740	240	340	56	0.028	< 1	71	16	39	1	0.43	0.0095	0.15	62	0.012	0.26
	11/1/2016	MAX	8.2	730	250	340	56	0.028	< 1	70	15	40	0.95	0.5	0.01	0.19	59	< 0.01	< 0.1
	4/25/2017	MAX	8.15	770	250	350	54	0.03	< 1	72	24	41	0.99	0.37	0.013	0.16	59	0.013	0.18
	8/10/2017	MAX	8.04	740	250	350	58	0.03	< 1	72	18	40	0.96	0.43	0.011	0.16	65	0.07	< 0.1
	9/28/2017	MAX	8.21	710	250	340	53	0.025	< 1	70	16	39	0.89	0.35	0.0089	0.15	61	0.023	< 0.1
	11/8/2017	MAX	8.09	730	250	350	51	0.028	< 1	72	16	40	1	0.4	0.01	0.16	60	< 0.01	0.12
Monitor	5/8/2012	Maxx	8.02	960	260	420	110	0.027	< 1	90	17	47	1.2	0.99	0.027	0.15	83	0.043	< 0.1
4-IIR	11/21/2012	Maxx	7.79	960	270	450	110	0.023	< 1	94	19	53	1.3	1.1	0.032	0.23	78	0.012	< 0.1
Lower Till	5/24/2013	MAX	8.02	880	250	440	90	0.028	< 1	94	18	50	1.3	0.91	0.028	0.57	75	< 0.01	< 0.1
11.9 - 13.7 m	11/13/2013	MAX	8.01	900	250	430	91	0.021	< 1	92	17	49	1.2	0.35	0.016	0.15	78	0.017	0.15
	5/6/2014	MAX	8.1	860	250	430	89	0.027	< 1	91	22	48	1.2	0.78	0.027	0.24	70	0.012	< 0.1
	11/18/2014	MAX	7.97	890	250	430	91	0.029	< 1	90	19	49	1.2	1.1	0.023	0.22	74	0.011	< 0.1
	5/6/2015	MAX	8	970	260	450	120	0.023	< 1	95	23	51	1.2	1	0.025	0.2	75	0.06	< 0.1
	4/26/2016	MAX	8.01	910	250	440	90	0.026	< 1	95	20	50	1.3	0.87	0.023	0.2	73	0.084	0.11
	11/1/2016	MAX	8.08	1000	260	470	130	0.025	< 1	99	27	54	1.4	1.3	0.027	0.24	83	< 0.01	< 0.1
	4/25/2017	MAX	8.09	960	260	450	100	0.025	< 1	93	20	53	1.3	0.62	0.019	0.19	76	0.029	0.11
	11/7/2017	MAX	7.89	1200	270	520	160	0.02	< 1	110	36	58	1.3	1.4	0.027	0.24	76	0.011	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

AECOM

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 4-IIIR Upper Till 1.06 - 4.11 m	5/8/2012	Maxx	8.02	2800	360	250	700	0.019	< 1	70	480	18	0.85	< 0.1	< 0.002	< 0.05	43	< 0.01	6.2
	11/21/2012	Maxx	7.85	2700	350	270	650	0.014	< 1	76	500	20	0.96	< 0.1	0.004	0.061	33	< 0.01	6
	5/24/2013	MAX	7.87	3000	320	410	790	0.015	< 1	110	510	30	1.1	< 0.1	< 0.002	0.15	33	< 0.01	4.7
	11/13/2013	MAX	7.83	3100	300	460	820	0.012	< 1	130	490	33	1.1	< 0.1	0.0026	< 0.05	39	0.014	4.9
	5/6/2014	MAX	7.92	2900	330	450	730	0.021	< 1	130	480	32	0.91	< 0.1	< 0.002	< 0.05	42	< 0.01	3.68
	11/24/2014	MAX	7.88	2500	350	350	560	0.02	< 1	98	400	26	0.93	< 0.1	< 0.002	< 0.05	35	< 0.01	6.03
	5/6/2015	MAX	7.85	2800	330	410	780	0.021	< 1	110	450	31	0.86	< 0.1	< 0.002	< 0.05	35	< 0.01	5.29
	4/26/2016	MAX	7.9	3300	320	550	800	0.021	< 1	150	480	41	1	< 0.1	< 0.002	< 0.05	29	< 0.01	4.96
	11/1/2016	MAX	7.86	3900	290	670	1100	0.017	< 1	180	520	52	1.4	< 0.1	< 0.002	0.066	31	< 0.01	5.23
	4/25/2017	MAX	7.87	4200	300	780	1100	0.015	< 1	210	530	61	1.2	< 0.1	< 0.002	< 0.05	36	< 0.01	4.63
	11/8/2017	MAX	7.77	4400	500	770	1100	0.025	2.2	210	690	60	4.6	< 0.1	0.0062	0.089	130	0.096	3.61
Monitor 5-II Upper Till 1.71 - 7.81 m	5/8/2012	Maxx	7.93	2500	320	470	640	0.018	< 1	120	330	39	0.83	< 0.1	< 0.002	< 0.05	21	< 0.01	0.68
	11/28/2012	Maxx	7.84	2300	340	450	520	0.015	< 1	120	280	35	0.82	< 0.1	< 0.002	< 0.05	17	< 0.01	0.36
	5/24/2013	MAX	7.81	4000	270	840	1100	0.014	< 1	230	510	66	1.2	< 0.1	< 0.002	0.076	25	< 0.01	0.83
	11/19/2013	MAX	7.53	4700	390	820	1300	0.013	< 1	230	590	62	1.5	< 0.1	< 0.002	< 0.05	35	< 0.01	1.4
	5/7/2014	MAX	7.77	4300	360	680	1200	0.018	< 1	190	630	51	1.1	< 0.1	< 0.002	0.12	31	< 0.01	0.81
	11/24/2014	MAX	7.73	2900	360	550	720	< 0.01	< 1	150	350	42	0.82	< 0.1	0.0058	< 0.05	18	< 0.01	0.39
	5/12/2015	MAX	7.64	4300	330	700	1200	0.015	< 1	200	640	51	1.1	< 0.1	< 0.002	< 0.05	29	< 0.01	0.76
	11/20/2015	MAX	7.71	4200	400	710	1100	0.023	< 1	210	630	48	1.3	< 0.1	< 0.002	< 0.05	36	< 0.01	0.83
	5/2/2016	MAX	7.94	3300	480	320	710	< 0.01	< 1	91	560	22	< 0.2	< 0.1	< 0.002	< 0.05	30	< 0.01	0.49
	11/3/2016	MAX	7.82	4300	460	590	1100	0.02	< 1	170	780	39	1.3	< 0.1	< 0.002	< 0.05	36	< 0.01	0.54
	5/1/2017	MAX	7.97	3700	460	320	870	0.019	< 1	92	660	22	0.93	< 0.1	< 0.002	< 0.05	25	< 0.01	0.28
	11/9/2017	MAX	7.98	3200	460	280	830	0.021	< 1	80	540	19	0.97	< 0.1	< 0.002	< 0.05	24	< 0.01	0.38
Monitor 9A-I Bedrock 25.1 - 25.9 m	5/10/2012	Maxx	8.37	350	170	94	9.7	0.12	< 1	19	40	11	0.79	0.2	0.0096	0.27	8.5	< 0.01	< 0.1
	5/30/2013	MAX	8.29	360	160	97	9.5	0.12	< 1	21	40	11	0.95	0.19	0.0087	0.54	8.1	< 0.01	< 0.1
	5/13/2014	MAX	8.24	360	170	94	9.2	0.13	< 1	19	39	11	0.88	0.19	0.0089	0.51	9.9	< 0.01	< 0.1
	5/11/2015	MAX	7.84	360	160	99	9.5	0.12	< 1	19	41	12	0.95	0.21	0.012	0.38	8.7	0.02	< 0.1
	5/4/2016	MAX	8.35	370	160	100	8.5	0.13	< 1	21	41	12	0.91	0.27	0.011	0.38	11	< 0.01	< 0.1
	5/2/2017	MAX	8.27	370	170	98	8.8	0.12	< 1	19	40	12	0.88	0.4	0.015	0.34	11	< 0.01	< 0.1
Monitor 9-I Outwash 5.53 - 6.75 m	5/10/2012	Maxx	8.18	1200	320	520	97	0.29	< 1	130	41	49	2.3	0.11	0.25	0.15	180	< 0.01	< 0.1
	5/31/2013	MAX	8.09	1100	350	510	83	0.27	< 1	130	44	46	2.7	< 0.1	0.22	0.41	130	0.013	< 0.1
	5/13/2014	MAX	7.87	960	380	490	42	0.23	< 1	120	29	46	3.4	0.19	0.2	0.46	86	< 0.01	0.15
	5/11/2015	MAX	8	920	410	480	31	0.18	< 1	120	19	45	2.6	0.18	0.19	0.34	77	0.016	< 0.1
	5/4/2016	MAX	8.02	910	420	510	21	0.18	< 1	130	17	47	2.6	0.23	0.16	0.29	63	< 0.01	0.15
	5/2/2017	MAX	8	1000	460	490	24	0.17	< 1	120	20	47	2.5	0.24	0.16	0.32	63	< 0.01	0.18

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C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 10-II Outwash 2.95 - 3.56 m	5/10/2012	Maxx	8	3400	290	940	980	0.031	< 1	230	350	89	2.2	0.71	0.34	1.7	32	0.45	0.45
	11/26/2012	Maxx	7.69	3500	290	910	990	0.03	< 1	220	350	84	2.3	0.17	0.058	0.48	32	0.044	1.9
	5/30/2013	MAX	7.9	3500	280	900	970	0.03	< 1	230	370	82	2.3	3.8	0.23	1	34	0.04	2.2
	11/19/2013	MAX	7.82	3500	290	910	960	0.024	< 1	220	340	87	2.2	< 0.1	0.2	1.1	42	0.19	1.6
	5/12/2014	MAX	7.7	3400	290	900	950	0.033	< 1	220	330	85	1.9	1.1	0.41	1.6	36	0.113	0.71
	11/24/2014	MAX	7.8	3400	280	870	940	0.016	< 5	210	320	82	1.8	0.7	0.25	0.77	31	0.061	1.8
	5/12/2015	MAX	7.76	3300	280	890	900	0.035	< 1	220	370	84	2	0.8	0.14	0.37	33	0.489	0.98
	11/24/2015	MAX	7.78	3400	280	910	900	0.036	< 1	220	330	89	2.6	0.87	0.2	0.66	34	0.062	1.98
	5/3/2016	MAX	8.06	3400	290	920	950	0.034	< 1	230	390	86	2.3	< 0.1	0.017	0.095	38	< 0.01	1.42
	11/3/2016	MAX	7.88	3300	290	840	900	0.036	< 1	210	340	77	2.2	6.8	0.31	1.6	32	0.171	0.95
	5/3/2017	MAX	7.94	3700	300	840	920	0.033	< 1	210	380	78	2.2	0.13	0.054	0.14	35	0.018	1.63
	11/13/2017	Dec																	
Monitor 10-III Outwash/Peat 0.27 - 1.49 m	5/10/2012	Maxx	8.07	4300	370	510	1200	0.03	1.5	160	590	25	1.5	5.8	0.69	1.5	30	< 0.01	< 0.1
	11/21/2012	INSV																	
	5/30/2013	MAX	7.71	4200	360	570	1200	< 0.05	48	180	760	27	1.9	6.2	0.9	2.5	20	0.043	< 0.1
	11/19/2013	MAX	7.62	4000	610	620	990	0.021	3.4	200	740	31	2.1	13	0.98	1.5	10	0.026	< 0.1
	5/12/2014	MAX	7.68	5700	390	780	1700	0.064	14	250	1000	40	2.4	12	1.4	1.7	10	< 0.01	< 0.1
	11/24/2014	MAX	7.72	1800	280	260	400	< 0.01	< 2	84	200	13	0.73	4.2	0.3	0.86	3.7	< 0.01	< 0.1
	5/12/2015	MAX	7.81	4600	440	780	1300	0.021	3.7	250	820	40	2.8	14	1.5	1.7	10	0.028	< 0.1
	11/24/2015	MAX	7.57	3700	580	730	880	0.035	< 1	240	740	35	3.3	23	1.4	2.3	10	0.023	< 0.2
	5/3/2016	MAX	7.83	3500	410	570	930	0.014	1.3	180	640	27	2.5	8.7	1.2	2	53	< 0.01	< 0.1
	11/3/2016	MAX	7.65	6600	330	870	1900	0.045	< 1	280	1100	41	3.4	5.6	0.9	0.98	40	0.016	0.26
	5/3/2017	MAX	7.84	2900	290	380	700	0.025	< 1	120	440	18	1.6	2	0.56	0.6	15	< 0.01	< 0.1
	11/13/2017	Dec																	
Monitor 11-I Upper Till 4.58 - 5.8 m	5/9/2012	Maxx	8.2	1100	380	200	100	0.043	< 1	37	170	25	1.1	< 0.1	0.018	< 0.05	48	< 0.01	< 0.1
	11/22/2012	Maxx	8.09	1100	380	210	100	0.041	< 1	41	170	26	1.3	< 0.1	< 0.002	< 0.05	46	< 0.01	0.16
	5/23/2013	MAX	8.27	950	360	220	66	0.046	< 1	45	170	27	1.2	< 0.1	0.0043	< 0.05	39	< 0.01	0.1
	11/14/2013	MAX	8.07	880	370	190	51	0.047	< 1	39	130	21	1.1	< 0.1	< 0.002	< 0.05	35	0.015	< 0.1
	5/8/2014	MAX	8.03	880	360	180	54	0.04	< 1	39	130	21	0.93	< 0.1	< 0.002	0.056	35	< 0.01	< 0.1
	11/25/2014	MAX	8.13	890	370	180	52	0.025	< 1	39	130	21	1	< 0.1	< 0.002	< 0.05	36	< 0.01	< 0.1
	5/5/2015	MAX	8.08	910	360	180	58	0.041	< 1	37	140	22	1	< 0.1	< 0.002	< 0.05	36	< 0.01	< 0.1
	4/27/2016	MAX	8.33	860	360	180	50	0.039	< 1	37	150	21	0.94	< 0.1	< 0.002	0.051	33	< 0.01	< 0.1
	10/31/2016	MAX	8.08	920	370	170	54	0.043	< 1	32	160	22	1.1	< 0.1	0.012	0.062	35	< 0.01	< 0.1
	4/25/2017	MAX	8.24	890	360	180	48	0.039	< 1	36	140	22	0.98	< 0.1	0.0038	< 0.05	30	< 0.01	< 0.1
	11/7/2017	MAX	8.02	900	380	160	49	0.035	< 1	31	140	20	0.93	< 0.1	0.028	0.11	31	< 0.01	< 0.1

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C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond- uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 11-II Outwash 0.18 - 2.93 m	5/9/2012	Maxx	7.87	610	260	240	24	0.042	< 1	72	34	15	1	< 0.1	0.04	< 0.05	22	< 0.01	0.62
	5/23/2013	MAX	8.07	680	280	350	31	0.047	< 1	110	32	21	1.2	< 0.1	0.047	0.063	22	< 0.01	0.41
	5/8/2014	MAX	7.58	880	330	400	75	0.06	< 1	120	34	22	0.72	< 0.1	0.0023	< 0.05	20	< 0.01	0.49
	5/5/2015	MAX	7.71	980	330	410	110	0.049	< 1	120	52	24	0.95	< 0.1	0.026	< 0.05	16	< 0.01	0.32
	4/27/2016	MAX	8.03	810	270	280	84	0.036	< 1	84	68	16	0.79	< 0.1	< 0.002	0.15	22	< 0.01	0.12
	4/25/2017	MAX	7.89	1300	260	440	210	0.05	< 1	140	89	21	0.28	< 0.1	0.0083	< 0.05	20	< 0.01	< 0.1
Monitor 11-III Lower Till 17 - 18.52 m	5/9/2012	Maxx	8.15	280	140	51	3.4	0.29	< 1	12	43	4.9	0.68	< 0.1	0.0031	< 0.05	4.2	< 0.01	0.13
	5/23/2013	MAX	8.26	270	140	62	2.9	0.3	< 1	15	48	5.7	0.78	< 0.1	0.006	0.071	4.1	< 0.01	0.13
	5/8/2014	MAX	8.12	270	140	50	2.6	0.3	< 1	12	42	4.6	0.62	< 0.1	0.0052	< 0.05	3.8	< 0.01	0.11
	5/5/2015	MAX	7.95	280	150	58	3.3	0.28	< 1	14	43	5.3	0.78	< 0.1	0.0022	0.21	4.2	0.055	< 0.1
	4/27/2016	MAX	8.24	260	140	54	2.2	0.27	< 1	13	42	5	0.63	< 0.1	0.0058	0.064	3.7	0.017	0.18
	4/25/2017	MAX	8.3	280	150	57	2.6	0.31	< 1	14	43	5.5	0.74	< 0.1	0.014	0.27	4.7	< 0.01	< 0.1
Monitor 13-I Bedrock 24.4 - 25.62 m	5/14/2012	Maxx	7.99	280	150	81	< 1	0.11	< 1	18	37	8.6	0.82	0.11	0.0075	0.21	1	< 0.01	< 0.1
	5/29/2013	MAX	8.25	280	150	77	< 1	0.1	< 1	17	36	8.2	0.75	< 0.1	0.0079	0.4	1	< 0.01	< 0.1
	5/13/2014	MAX	8.18	280	150	71	< 1	0.12	< 1	16	36	7.6	0.78	0.2	0.0079	0.44	1	< 0.01	< 0.1
	5/8/2015	MAX	7.63	280	150	82	< 1	0.1	< 1	18	33	8.8	0.83	0.18	0.0096	0.37	7.4	< 0.01	< 0.1
	5/3/2016	MAX	8.25	280	150	77	< 1	0.11	< 1	18	38	8	0.8	0.18	0.0074	0.34	1	< 0.01	< 0.1
	5/3/2017	MAX	8.25	290	160	73	< 1	0.1	< 1	16	36	7.7	0.77	0.17	0.0071	0.31	1	< 0.01	< 0.1
Monitor 13-II Lower Till 19.48 - 20.09 m	5/14/2012	Maxx	7.93	300	150	39	3.5	0.085	2	11	53	2.6	0.55	0.24	0.027	0.078	4	< 0.01	< 0.1
	5/29/2013	MAX	8.07	300	150	44	5.7	0.097	< 1	13	57	2.8	0.55	0.27	0.029	0.25	5.1	< 0.01	< 0.1
	5/13/2014	MAX	8.09	310	160	41	3.6	0.1	< 1	12	55	2.7	0.72	1.4	0.081	0.48	3	< 0.01	< 0.1
	5/8/2015	MAX	7.72	310	170	42	3.7	0.098	< 1	12	57	2.8	0.69	0.84	0.054	0.36	3.5	0.016	< 0.1
	5/3/2016	MAX	8.25	310	160	43	2.7	0.1	< 1	13	58	2.7	0.65	0.57	0.037	0.29	3.2	< 0.01	< 0.1
	5/3/2017	MAX	8.21	320	160	40	2.9	0.1	< 1	12	56	2.6	0.63	0.4	0.032	0.23	4	< 0.01	< 0.1
Monitor 13-III Upper Till 7.58 - 8.8 m	5/10/2012	Maxx	8.38	320	170	120	2.1	0.087	< 1	22	24	16	0.79	< 0.1	0.0031	< 0.05	7.7	< 0.01	0.2
	11/26/2012	Maxx	7.89	320	180	120	4.1	0.082	< 1	22	25	15	0.92	< 0.1	0.014	0.087	3.8	< 0.01	0.31
	5/29/2013	MAX	8.24	330	160	130	2	0.096	< 1	24	25	16	0.86	< 0.1	0.0022	0.14	6.4	< 0.01	0.11
	11/19/2013	MAX	8.09	320	170	120	2	0.087	< 1	23	24	16	0.93	< 0.1	0.01	0.095	5.3	< 0.01	0.2
	5/13/2014	MAX	8.22	320	170	120	1.9	0.1	< 1	22	23	16	0.83	< 0.1	0.0046	0.17	6.6	< 0.01	0.17
	11/27/2014	MAX	8.03	320	170	130	2.4	0.087	< 1	25	25	16	0.92	< 0.1	0.011	0.12	3.3	< 0.01	0.44
	5/8/2015	MAX	7.92	320	170	130	2.3	0.086	< 1	24	24	16	0.84	< 0.1	0.0043	0.067	5.7	< 0.01	0.18
	11/25/2015	MAX	8.1	320	170	120	2.2	0.091	< 1	24	24	16	0.83	< 0.1	0.0046	0.075	4.1	< 0.01	0.23
	5/3/2016	MAX	8.26	320	170	130	1.3	0.092	< 1	24	25	16	0.89	< 0.1	0.0055	0.13	5	< 0.01	0.3
	11/4/2016	MAX	8.19	310	170	120	< 1	0.094	< 1	23	24	16	0.87	< 0.1	0.031	0.15	3	0.012	< 0.1
	5/3/2017	MAX	8.23	330	170	120	1.9	0.094	< 1	23	24	16	0.88	< 0.1	0.0048	< 0.05	6.6	< 0.01	0.17
	11/13/2017	MAX	8.1	340	180	120	1.8	0.086	< 2	23	24	16	0.99	1.5	0.12	0.54	1.3	< 0.01	0.13

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-	Alk.	Hard.	Cl	B	Phenol	Ca	Na	Mg	K	Fe	Mn	NH3-N	SO4	NO2-N	NO3-N
				uctivity	as CaCO3 mg/L		mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 13-IV Outwash 4.08 - 5.3 m	5/10/2012	Maxx	7.82	5900	440	700	1700	0.034	< 1	180	870	59	2.3	8.7	0.21	2.9	24	0.48	1.1
	11/26/2012	Maxx	7.49	5500	440	740	1600	0.043	< 1	190	870	64	2.8	6.7	0.22	3.4	11	0.019	< 0.1
	5/29/2013	MAX	7.78	4700	460	640	1300	0.042	< 1	170	690	54	2	6.2	0.19	2.6	11	< 0.01	< 0.1
	11/19/2013	MAX	7.59	4600	460	580	1300	0.036	< 1	150	550	48	1.8	7.4	0.16	1.9	17	0.6	1.7
	5/13/2014	MAX	7.79	6100	480	750	1800	0.078	1	190	1100	67	2.5	6.9	0.2	2.3	10	0.063	0.97
	11/27/2014	MAX	7.76	5500	510	590	1500	0.043	< 2	150	950	55	2.6	5.5	0.17	2.9	10	0.368	0.41
	5/8/2015	MAX	7.69	6200	490	780	1900	< 0.05	2	190	1100	71	2.8	6.8	0.21	3.3	10	0.013	< 0.1
	11/25/2015	MAX	7.64	5800	490	630	1600	0.045	< 1	160	870	58	2.7	6.7	0.18	3	10	0.195	< 0.1
	5/3/2016	MAX	7.86	5700	460	770	1700	0.042	< 1	200	940	68	2.7	5.9	0.19	2.5	10	0.022	< 0.1
	11/4/2016	MAX	7.81	5600	480	740	1600	0.049	< 1	180	1000	67	2.9	7.4	0.21	2.7	10	< 0.01	< 0.1
	5/3/2017	MAX	7.96	3900	420	450	940	0.026	< 1	120	540	36	1.6	2.8	0.087	1.3	13	< 0.01	0.25
	11/13/2017	MAX	7.78	4000	450	410	1000	0.033	< 1	110	510	33	1.7	2.3	0.091	1.2	9.6	0.016	0.1
Monitor 13-V Outwash 0.1 - 2.24 m	5/10/2012	Maxx	8.21	980	420	400	44	0.023	< 1	120	85	21	< 0.2	< 0.1	< 0.002	< 0.05	70	< 0.01	< 0.1
	11/26/2012	Maxx	7.56	1100	470	470	41	0.021	2.3	150	83	25	0.27	0.64	0.053	0.12	60	< 0.01	< 0.1
	5/29/2013	MAX	7.81	980	460	440	24	0.037	< 1	140	57	21	< 0.2	< 0.1	0.0099	0.096	26	< 0.01	< 0.1
	11/19/2013	MAX	7.77	870	430	390	17	0.015	1.8	120	38	19	< 0.2	< 0.1	0.0044	0.21	35	< 0.01	0.19
	5/13/2014	MAX	7.87	750	360	340	21	0.025	5	110	32	17	< 0.2	< 0.1	0.015	0.26	23	< 0.01	< 0.1
	11/27/2014	MAX	7.81	890	460	420	15	< 0.01	8.4	140	30	20	< 0.2	0.11	0.014	0.18	24	< 0.01	< 0.1
	5/8/2015	MAX	7.54	890	430	470	26	0.019	14	150	30	22	0.25	0.83	0.033	0.53	21	< 0.01	< 0.1
	11/25/2015	MAX	7.86	970	460	490	24	0.015	< 1	160	42	24	0.26	0.16	0.035	< 0.05	34	< 0.01	< 0.1
	5/3/2016	MAX	7.98	700	340	370	13	0.019	1.2	120	25	17	0.26	< 0.1	0.013	0.37	21	< 0.01	< 0.1
	11/4/2016	MAX	7.64	1400	640	670	91	0.029	< 1	220	51	29	0.7	7.9	0.13	0.085	1.4	< 0.01	< 0.1
	5/3/2017	MAX	7.99	770	390	370	9.7	0.018	< 1	120	20	16	0.25	< 0.1	0.0084	< 0.05	15	< 0.01	< 0.1
	11/13/2017	MAX	7.5	1300	660	620	40	0.023	< 5	200	34	27	1.1	1.4	0.16	0.11	1	< 0.01	< 0.1
Monitor 14-II Outwash 4.52 - 5.13 m	5/14/2012	Maxx	8.07	1900	400	520	360	0.092	1.6	130	190	50	2.1	< 0.1	0.058	< 0.05	60	0.023	0.73
	11/26/2012	Maxx	7.74	1600	390	410	270	0.097	7.6	100	170	38	2.5	2.8	0.08	0.76	17	0.024	0.65
	6/3/2013	MAX	7.87	1800	370	410	330	0.079	< 1	99	180	39	1.8	0.31	0.038	0.32	20	0.018	0.46
	11/20/2013	MAX	8.07	1400	390	380	240	0.08	< 1	93	160	35	1.9	1.5	0.12	< 0.05	6.9	< 0.01	1
	5/15/2014	MAX	7.96	1700	360	420	320	0.068	< 1	100	160	40	1.8	0.59	0.053	0.13	11	< 0.01	0.67
	11/21/2014	MAX	7.93	1600	380	390	270	0.095	< 1	95	150	37	2	0.88	0.072	0.23	5.7	0.029	0.92
	5/19/2015	MAX	7.87	1500	390	410	230	0.086	< 1	100	160	38	1.8	0.11	0.017	0.15	6.1	< 0.01	0.64
	11/25/2015	MAX	7.93	1300	400	410	160	0.082	< 1	99	150	39	1.9	2	0.1	0.19	4	0.02	0.67
	5/3/2016	MAX	8.24	1300	410	420	190	0.084	< 1	100	140	39	1.8	< 0.1	0.008	0.092	5.7	< 0.01	0.63
	11/7/2016	MAX	7.77	1200	450	400	130	0.085	< 1	98	110	37	1.7	9.3	0.41	0.99	2.7	0.135	< 0.1
	5/8/2017	MAX	8.12	1300	490	430	120	0.087	< 1	110	110	39	1.7	0.17	0.016	< 0.05	3.6	< 0.01	0.6
	11/13/2017	MAX	7.82	1300	530	430	110	0.091	< 1	110	110	42	1.8	3.8	0.38	0.91	3.6	0.024	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

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C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

AECOM

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor **14-III** **Outwash** **0.15 - 2.29 m**	5/14/2012	Maxx	7.73	1200	640	630	26	0.095	2.5	160	27	54	3	9.2	1.4	< 0.05	11	< 0.01	< 0.1
	11/26/2012	Maxx	7.41	980	500	530	26	0.12	< 1	140	22	43	2.3	4.4	0.76	< 0.05	15	< 0.01	< 0.1
	6/3/2013	MAX	7.62	800	410	420	12	0.11	< 1	120	12	30	1.9	5.8	0.43	< 0.05	6.4	< 0.01	< 0.1
	11/20/2013	MAX	7.75	1000	560	490	19	0.11	< 1	130	17	39	1.5	14	0.84	< 0.05	2.8	< 0.01	< 0.1
	5/15/2014	MAX	7.75	790	420	350	13	0.081	< 1	99	9.3	25	2	3.2	0.21	0.069	4.3	< 0.01	0.1
	11/25/2014	MAX	7.77	640	320	280	15	0.073	< 1	87	6.5	15	5.9	2.6	0.12	< 0.05	5.5	< 0.01	< 0.1
	5/19/2015	MAX	7.52	1200	640	690	30	0.16	< 1	170	32	62	2.8	18	0.88	< 0.05	7.3	< 0.01	< 0.1
	11/25/2015	MAX	7.54	1400	720	730	39	0.12	< 1	180	38	67	2.5	17	0.87	< 0.05	10	< 0.01	< 0.1
	5/3/2016	MAX	7.78	1100	570	580	25	0.079	< 1	150	23	51	1.9	13	0.72	0.1	2.7	< 0.01	< 0.1
	11/7/2016	MAX	7.48	1500	830	800	64	0.13	< 1	210	49	68	5.9	26	1.1	0.057	4.8	< 0.01	< 0.1
	5/8/2017	MAX	7.92	630	320	320	8.3	0.077	< 1	94	8.5	21	2.3	0.78	0.12	< 0.05	7.1	< 0.01	< 0.1
	11/13/2017	MAX	7.69	1400	700	710	44	0.12	< 1	180	34	60	2.3	7	0.4	0.08	34	< 0.01	< 0.1
Monitor **14-IV** **Bedrock** **25.63 - 27.15 m**	5/14/2012	Maxx	8.11	300	160	75	1.4	0.089	< 1	18	40	7.3	1.1	< 0.1	0.003	0.063	1	< 0.01	< 0.1
	11/26/2012	Maxx	7.91	300	160	77	1.2	0.093	< 1	19	41	7.5	1.3	< 0.1	< 0.002	0.21	1	< 0.01	< 0.1
	6/3/2013	MAX	8.13	300	160	73	1.1	0.098	< 1	18	41	7	1.1	< 0.1	< 0.002	0.24	1	< 0.01	< 0.1
	11/20/2013	MAX	8.05	300	160	71	1.4	0.093	< 1	17	38	6.9	1.1	< 0.1	0.0022	0.18	1	< 0.01	< 0.1
	5/15/2014	MAX	8.19	300	160	79	< 1	0.089	< 1	19	40	7.4	1.1	< 0.1	0.0034	0.23	1	< 0.01	< 0.1
	11/21/2014	MAX	8.2	300	160	75	1.2	0.11	< 1	18	43	7.2	1.3	< 0.1	< 0.002	0.21	1	< 0.01	< 0.1
	5/19/2015	MAX	7.82	300	160	78	1.3	0.14	< 1	19	41	7.6	1.2	< 0.1	< 0.002	0.15	1	< 0.01	< 0.1
	11/25/2015	MAX	8.22	300	160	79	1.2	0.097	< 1	19	42	7.6	1.1	< 0.1	0.003	0.18	1	< 0.01	< 0.1
	5/3/2016	MAX	8.29	290	160	78	< 1	0.1	< 1	19	40	7.6	1.2	< 0.1	0.0027	0.17	1	< 0.01	< 0.1
	11/7/2016	MAX	8.04	300	160	78	1.7	0.099	< 1	19	39	7.5	1.2	< 0.1	< 0.002	0.19	1	< 0.01	< 0.1
	5/8/2017	MAX	8.27	300	160	85	1.1	0.088	< 1	21	40	7.8	1.2	< 0.1	< 0.002	0.15	1	< 0.01	< 0.1
	11/13/2017	MAX	8.39	300	160	76	1.1	0.09	< 1	19	39	7.2	1.2	< 0.1	< 0.002	0.2	1	< 0.01	< 0.1
Monitor **15-I** **Bedrock** **25.92 - 27.14 m**	5/7/2012	Maxx	8.19	310	160	78	1.3	0.09	< 1	18	41	7.9	1.1	< 0.1	< 0.002	0.12	1	< 0.01	< 0.1
	5/27/2013	MAX	8.21	320	160	85		0.081		19	40	8.8	1.1	< 0.1	< 0.002	0.33			
	5/8/2014	MAX	8.12	310	160	79	1.3	0.096	< 1	19	41	7.9	1.1	< 0.1	< 0.002	0.26	1	< 0.01	< 0.1
	5/7/2015	MAX	7.71	300	170	76	1.4	0.087	< 1	17	41	7.9	1.1	< 0.1	< 0.002	0.23	1	< 0.01	< 0.1
	5/3/2016	MAX	8.32	300	160	82	< 1	0.1	< 1	19	43	8.5	1.2	< 0.1	< 0.002	0.24	1	< 0.01	< 0.1
	4/27/2017	MAX	8.26	310	170	75	< 1	0.11	< 1	17	43	7.7	1.2	< 0.1	< 0.002	0.2	1	< 0.01	< 0.1
Monitor **15-II** **Lower Till** **19.82 - 21.04 m**	5/7/2012	Maxx	8.17	310	170	51	1.9	0.11	< 1	14	52	3.9	0.54	< 0.1	0.017	0.12	5.4	< 0.01	< 0.1
	5/27/2013	MAX	8.22	320	170	56		0.092		15	54	4.1	0.54	< 0.1	0.015	0.3			
	5/8/2014	MAX	8.27	310	170	49	2.7	0.087	< 1	14	51	3.5	0.5	< 0.1	0.019	0.17	11	< 0.01	< 0.1
	5/7/2015	MAX	7.92	310	180	52	2.4	0.087	< 1	14	52	3.9	0.53	< 0.1	0.015	0.3	7.9	< 0.01	< 0.1
	5/3/2016	MAX	8.3	300	170	51	1.5	0.11	< 1	14	53	4	0.59	< 0.1	0.011	0.3	5.5	0.023	0.27
	4/27/2017	MAX	8.25	310	170	51	1.8	0.094	< 1	14	51	4	0.54	< 0.1	0.0075	0.19	4.7	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

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C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 15-III Upper Till 9.03 - 10.24 m	5/7/2012	Maxx	8.15	460	200	130	15	0.1	< 1	22	49	18	1.6	< 0.1	0.0029	< 0.05	17	0.016	0.59
	11/23/2012	Maxx	7.99	460	210	140	16	0.1	< 1	24	49	19	1.8	< 0.1	0.013	0.14	19	0.085	0.63
	5/27/2013	MAX	8.16	470	200	140		0.098		24	49	19	1.7	< 0.1	0.015	0.23			
	11/19/2013	MAX	8	460	200	140	16	0.099	< 1	23	46	19	1.6	< 0.1	0.01	0.3	17	< 0.01	0.49
	5/8/2014	MAX	8.16	460	200	130	16	0.11	< 1	24	48	18	1.6	< 0.1	0.0047	0.19	19	0.043	0.49
	11/21/2014	MAX	8.15	470	200	140	18	0.099	< 1	25	48	19	2.1	0.25	0.015	0.22	20	0.117	0.41
	5/7/2015	MAX	7.87	470	210	150	16	0.099	< 1	25	50	21	2	< 0.1	0.0029	0.11	18	0.019	0.49
	11/24/2015	MAX	8.09	470	200	150	17	0.098	< 1	26	49	20	1.9	0.16	0.016	0.47	19	0.279	0.19
	5/3/2016	MAX	8.36	460	200	150	16	0.11	< 1	26	48	21	1.8	< 0.1	< 0.002	0.08	19	0.014	0.5
	11/10/2016	MAX	8.02	460	210	150	17	0.1	< 1	26	47	21	1.7	< 0.1	0.016	0.31	20	0.108	0.27
	4/27/2017	MAX	8.28	480	210	140	17	0.1	< 1	25	43	20	1.6	< 0.1	< 0.002	< 0.05	21	< 0.01	0.51
	11/8/2017	MAX	8.2	470	210	150	16	0.11	< 1	26	46	21	1.8	< 0.1	0.018	0.32	20	0.061	0.28
Monitor 15-IV Outwash 5.6 - 6.82 m	5/7/2012	Maxx	8.1	740	380	420	8.7	0.066	< 1	97	8.3	43	1.8	0.55	0.14	0.18	24	0.025	0.67
	11/23/2012	Maxx	7.87	760	390	420	8.1	0.069	< 1	96	8	43	1.3	2.9	0.11	0.35	21	0.069	0.88
	5/27/2013	MAX	7.98	740	340	380		0.057		89	11	39	1.1	0.42	0.14	0.53			
	11/19/2013	MAX	7.82	720	340	380	19	0.076	< 1	88	11	39	1.3	0.67	0.13	0.18	29	< 0.01	0.98
	5/8/2014	MAX	7.98	770	370	410	18	0.07	< 1	95	11	42	1.1	0.15	0.037	0.14	26	< 0.01	0.68
	11/21/2014	MAX	7.99	800	380	430	31	0.068	< 1	100	14	44	1.2	0.37	0.16	0.35	28	0.041	0.39
	5/7/2015	MAX	8.02	840	420	450	21	0.084	< 1	100	14	46	1.1	< 0.1	0.019	0.051	26	0.018	0.63
	11/24/2015	MAX	7.79	900	450	500	22	0.072	< 1	110	14	53	1.2	0.79	0.22	0.75	25	0.171	0.3
	4/29/2016	MAX	8.1	890	470	520	16	0.068	< 1	120	12	53	1.1	< 0.1	0.012	0.088	22	< 0.01	0.73
	11/2/2016	MAX	8.04	890	470	480	20	0.06	36	110	11	50	1.2	3.5	0.27	2.2	15	< 0.01	< 0.1
	4/27/2017	MAX	8.09	1100	460	540	78	0.098	< 1	130	30	54	1.2	0.17	0.021	0.069	30	0.022	0.73
	11/8/2017	MAX	7.92	1300	470	580	130	0.27	< 2	130	57	60	1.4	3.4	0.28	1.1	41	0.062	< 0.1
Monitor 15-V Fill 0.13 - 2.26 m	5/7/2012	Maxx	7.85	810	430	430	9.6	0.14	7.5	130	7.2	26	1.6	4.6	1	0.52	4.4	< 0.01	< 0.1
	11/23/2012	Maxx	7.4	1100	530	560	29	0.31	4.9	170	10	34	1.6	24	1.7	0.52	23	< 0.01	< 0.1
	5/27/2013	MAX	7.54	820	410	440		0.17	15	130	8.6	27	1.6	34	1.3	0.44			
	11/19/2013	MAX	7.25	840	450	420	10	0.19	1	120	7.1	27	1.5	18	0.84	0.9	10	0.024	< 0.1
	5/8/2014	MAX	7.27	940	490	380	14	0.14	< 1	110	6.9	24	1.8	15	1.3	3	1.1	< 0.01	< 0.1
	11/21/2014	MAX	7.41	870	480	510	19	0.24	1.3	140	13	39	2.4	20	1.9	1.1	4.1	< 0.01	< 0.1
	5/7/2015	MAX	7.47	780	390	400	8.9	0.13	< 1	120	8.6	25	3	5	0.99	0.83	20	0.01	< 0.1
	11/24/2015	MAX	7.45	890	450	460	19	0.26	< 1	120	15	36	1.6	9.7	1.5	1	10	< 0.01	< 0.1
	4/29/2016	MAX	8	510	270	250	2.8	0.11	< 1	75	7.2	16	0.54	0.75	0.067	0.3	7.6	< 0.01	< 0.1
	11/2/2016	MAX	7.73	1500	690	920	40	0.67	< 1	280	17	54	2.4	6.8	4.2	1.2	130	0.518	< 0.1
	4/27/2017	MAX	8	560	290	290	3.2	0.14	< 1	91	5.1	16	0.95	0.21	0.045	0.21	13	< 0.01	< 0.1
	11/8/2017	MAX	7.62	1500	780	850	47	0.39	< 5	250	20	53	2.2	6	4.6	0.93	11	0.018	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Conductivity	Alk.	Hard.	Cl	B	Phenol	Ca	Na	Mg	K	Fe	Mn	NH3-N	SO4	NO2-N	NO3-N
					as CaCO3 mg/L		mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 16-I Lower Till 12.98 - 15.11 m	5/7/2012	Maxx	8.21	340	170	120	4.2	0.097	< 1	21	30	16	1.2	< 0.1	0.0042	< 0.05	11	< 0.01	0.24
	5/22/2013	MAX	8.28	350	170	140	3.5	0.11	< 1	26	33	19	1.5	< 0.1	0.012	0.082	12	< 0.01	0.22
	5/7/2014	MAX	8.23	350	170	120	3.8	0.1	< 1	22	30	16	1.2	< 0.1	0.0021	< 0.05	12	< 0.01	0.23
	5/5/2015	MAX	7.96	350	170	120	4.2	0.089	< 1	21	30	17	1.1	< 0.1	< 0.002	< 0.05	16	< 0.01	0.17
	4/28/2016	MAX	8.24	350	180	130	5.5	0.094	< 1	23	33	17	1.2	< 0.1	< 0.002	< 0.05	17	< 0.01	0.27
	4/24/2017	MAX	8.3	370	170	130	4.7	0.1	< 1	23	31	18	1.2	< 0.1	< 0.002	0.13	19	< 0.01	0.22
Monitor 16-IV Upper Till 3.81 - 4.42 m	5/7/2012	Maxx	7.9	1300	480	680	27	1.3	< 1	170	34	63	5.5	1.1	0.15	4	220	0.4	1.6
	11/21/2012	Maxx	7.84	1300	500	680	26	1.3	< 1	170	35	60	5.4	2.3	0.2	5.9	210	0.085	0.5
	5/23/2013	MAX	7.75	1300	460	680	35	1.3	< 1	170	39	61	5.2	0.32	0.19	4.2	210	0.098	1.5
	11/14/2013	MAX	7.6	1300	480	640	38	1.3	1.2	160	37	57	5.5	2	0.27	2.1	220	0.32	2.4
	5/7/2014	MAX	7.71	1300	450	660	44	1.2	< 1	170	39	61	5	1.2	0.16	1.9	200	0.442	1.72
	11/21/2014	MAX	7.62	1300	470	650	43	1.1	1.3	160	40	58	5.2	1.3	0.23	4.5	210	0.323	0.51
	5/5/2015	MAX	7.75	1300	430	640	44	1.1	< 1	160	45	59	4.4	< 0.1	0.051	1.5	210	0.257	3.15
	11/17/2015	MAX	7.99	1300	440	610	47	1.2	< 1	150	41	56	5	0.39	0.2	2.8	200	1.61	2.03
	4/28/2016	MAX	7.94	1300	420	660	50	1.1	< 1	160	54	64	4.8	< 0.1	0.025	0.17	200	0.03	3.79
	11/1/2016	MAX	7.9	1300	440	590	45	1	< 1	150	46	56	4.8	0.24	0.21	2.2	190	0.41	1.22
	4/24/2017	MAX	7.99	1300	420	610	45	1	< 1	150	49	55	4.5	< 0.1	0.017	0.28	190	0.023	3.09
	11/8/2017	MAX	7.58	1300	440	570	53	0.85	2	140	48	50	4.5	1.2	0.24	4.1	180	0.056	< 0.1
Monitor 16-V Fill 0.3 - 2.44 m	5/7/2012	Maxx	7.69	790	350	430	3.7	0.52	< 1	130	5.7	29	4	< 0.1	0.053	< 0.05	79	< 0.01	0.5
	5/22/2013	MAX	7.75	750	320	490	3.3	0.5	< 1	150	5.3	30	3.7	< 0.1	0.013	0.051	83	< 0.01	0.21
	5/7/2014	MAX	7.55	640	300	340	9.3	0.21	< 1	100	4.4	19	3.8	< 0.1	0.0098	0.054	20	< 0.01	0.5
	5/5/2015	MAX	7.38	670	320	360	6	0.21	< 1	110	4.7	22	4.2	< 0.1	0.0025	< 0.05	31	< 0.01	0.45
	4/28/2016	MAX	7.56	600	290	330	8	0.18	< 1	99	8.3	20	4.1	< 0.1	0.01	< 0.05	23	< 0.01	< 0.1
	4/24/2017	MAX	7.62	740	300	390	5.8	0.35	< 1	120	7.1	24	3.6	< 0.1	0.011	< 0.05	78	< 0.01	1.77
Monitor 16-VI Lower Till 17.63 - 19.15 m	5/7/2012	Maxx	8.19	310	160	93	< 1	0.095	< 1	19	35	11	0.83	< 0.1	0.013	0.29	1	< 0.01	< 0.1
	5/22/2013	MAX	8.29	310	160	110	< 1	0.11	< 1	22	39	12	0.92	< 0.1	0.017	0.47	1	< 0.01	< 0.1
	5/7/2014	MAX	8.2	310	170	88	< 1	0.11	< 1	19	35	9.9	0.81	< 0.1	0.011	0.26	1	< 0.01	0.21
	5/5/2015	MAX	8.05	310	170	94	< 1	0.087	< 1	19	36	11	0.79	< 0.1	0.012	0.45	1	< 0.01	< 0.1
	4/28/2016	MAX	8.31	300	170	90	< 1	0.1	< 1	18	39	11	0.75	< 0.1	0.012	0.39	1	< 0.01	< 0.1
	4/24/2017	MAX	8.22	310	170	90	< 1	0.099	< 1	18	35	11	0.82	0.13	0.012	0.39	1.6	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

AECOM

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 16-VII Bedrock 25.48 - 27 m	5/14/2012	Maxx	7.98	310	170	80	1.2	0.09	< 1	19	38	8	1.5	< 0.1	0.0037	0.25	5	< 0.01	< 0.1
	11/21/2012	Maxx	7.94	310	180	84	< 1	0.1	< 1	20	39	8.3	1.7	0.15	0.0041	0.35	1	< 0.01	< 0.1
	5/22/2013	MAX	8.24	310	160	99	< 1	0.12	< 1	24	45	9.5	1.8	< 0.1	0.0038	0.39	1.5	< 0.01	< 0.1
	11/14/2013	MAX	8.01	300	170	82	1	0.12	< 1	19	38	8.1	1.5	< 0.1	0.0037	0.38	1	0.014	< 0.1
	5/7/2014	MAX	8.24	310	170	82	< 1	0.11	< 1	20	39	7.9	1.6	< 0.1	0.0038	0.5	1	< 0.01	< 0.1
	11/19/2014	MAX	8.17	310	170	84	1.6	0.11	< 1	20	40	8.4	1.6	0.17	0.005	0.39	1	< 0.01	< 0.1
	5/4/2015	MAX	7.94	310	170	85	< 1	0.096	< 1	20	39	8.3	1.4	< 0.1	0.0056	0.41	1	< 0.01	< 0.1
	11/17/2015	MAX	8.19	300	170	82	2.4	0.12	< 1	19	40	8.1	1.6	0.11	0.0044	0.41	1	0.044	< 0.1
	4/28/2016	MAX	8.27	300	160	77	< 1	0.1	< 1	18	36	7.6	1.6	< 0.1	0.0036	0.37	1	< 0.01	< 0.1
	11/1/2016	MAX	8.21	310	170	88	< 1	0.099	< 1	21	40	8.6	1.4	0.11	0.0032	0.4	1	0.011	< 0.1
	4/24/2017	MAX	8.21	310	170	84	< 1	0.11	< 1	20	40	8.3	1.5	< 0.1	0.0041	0.33	1	< 0.01	< 0.1
	11/8/2017	MAX	8.08	310	170	79	1.4	0.089	< 1	19	36	7.5	1.2	0.14	0.0041	0.37	1	< 0.01	< 0.1
Monitor 16-VIII Deep bedrock 40 - 54.9 m	11/24/2015	MAX	11.3	730	140	140	9.7	0.03	< 1	56	23	0.58	11	0.3	0.004	0.59	39	0.015	< 0.1
	5/2/2016	MAX	11.1	560	120	120	9.2	0.031	< 1	48	21	0.44	11	< 0.1	< 0.002	0.57	39	< 0.01	< 0.1
	9/1/2016	MAX	11	400	90	110	8.9	0.029	< 1	45	21	0.49	9.9	0.13	0.0022	0.53	39	< 0.01	< 0.1
	11/1/2016	MAX	11.3	620	130	140	8.9	0.03	< 1	54	22	0.52	10	< 0.1	< 0.002	0.58	42	< 0.01	< 0.1
	8/10/2017	MAX	11.2	570	130	140	9.5	0.029	< 1	57	21	0.17	8.8	< 0.1	< 0.002	0.58	41	< 0.01	< 0.1
	9/28/2017	MAX	11.3	570	130	150	9.7	0.026	< 1	58	21	0.32	8.9	0.19	0.0043	0.59	41	< 0.01	< 0.1
	11/9/2017	MAX	11.1	580	130	150	9.5	0.029	1.4	58	20	0.38	8.8	0.32	0.0046	0.57	39	< 0.01	< 0.1
Monitor 17-I Bedrock 24.39 - 25.61 m	5/10/2012	Maxx	8.4	290	160	84	< 1	0.089	< 1	19	32	9.1	0.65	0.5	0.0061	0.35	1.1	< 0.01	< 0.1
	5/29/2013	MAX	8.19	300	160	94	< 1	0.087	< 1	22	35	9.6	0.75	0.46	0.0057	0.48	1	< 0.01	< 0.1
	5/13/2014	MAX	8.17	300	160	95	1	0.078	< 1	22	36	9.8	0.77	0.52	0.0083	0.55	1	< 0.01	< 0.1
	5/11/2015	MAX	8.09	300	160	89	< 1	0.081	< 1	20	32	9.4	0.74	0.54	0.0056	0.45	1	< 0.01	< 0.1
	5/4/2016	MAX	8.22	290	160	89	< 1	0.082	< 1	20	33	9.3	0.7	0.49	0.0059	0.46	1	< 0.01	< 0.1
	5/2/2017	MAX	8.26	300	160	90	< 1	0.08	< 1	20	34	9.5	0.74	0.53	0.0057	0.41	1	< 0.01	< 0.1
Monitor 17-II Lower Till 18.59 - 19.2 m	5/10/2012	Maxx	8.36	320	160	100	1.5	0.073	< 1	22	27	12	0.69	< 0.1	0.016	0.13	13	0.031	0.16
	5/29/2013	MAX	8.23	320	150	120	1.5	0.084	< 1	25	30	13	0.74	< 0.1	0.019	0.4	14	< 0.01	< 0.1
	5/13/2014	MAX	8.27	330	160	120	1.4	0.073	< 1	25	29	13	0.75	0.11	0.029	0.43	14	< 0.01	< 0.1
	5/11/2015	MAX	8.06	330	160	120	1.8	0.076	< 1	24	26	13	0.78	< 0.1	0.024	0.37	14	0.021	< 0.1
	5/4/2016	MAX	8.27	320	160	120	1.8	0.079	< 1	25	28	13	0.72	< 0.1	0.023	0.36	17	0.011	< 0.1
	5/2/2017	MAX	8.13	320	160	110	1.2	0.071	< 1	23	28	13	0.72	< 0.1	0.017	0.26	14	< 0.01	0.1
Monitor 17-III Upper Till 5.91 - 7.12 m	5/10/2012	Maxx	8.06	510	260	300	4.6	< 0.01	< 1	64	3.4	34	0.99	< 0.1	< 0.002	< 0.05	29	< 0.01	< 0.1
	5/29/2013	MAX	8	560	270	330	3.8	0.011	< 1	72	3.6	36	1	< 0.1	< 0.002	< 0.05	29	< 0.01	< 0.1
	5/13/2014	MAX	8.06	580	290	330	3.4	< 0.01	< 1	72	3.6	36	1.1	< 0.1	0.0021	< 0.05	27	< 0.01	< 0.1
	5/11/2015	MAX	8.02	580	290	320	2.9	0.011	< 1	70	3.2	35	1	< 0.1	< 0.002	< 0.05	26	< 0.01	< 0.1
	5/4/2016	MAX	8.14	570	290	300	1.7	0.011	< 1	67	3.8	33	0.92	< 0.1	< 0.002	< 0.05	26	< 0.01	< 0.1
	5/2/2017	MAX	8.1	590	300	320	1.5	< 0.01	< 1	69	3.4	35	0.96	< 0.1	< 0.002	< 0.05	27	< 0.01	< 0.1

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C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 17-IV Outwash 0.54 - 4.2 m	5/10/2012	Maxx	8.18	550	310	350	3.4	< 0.01	< 1	81	2.2	37	< 0.2	0.47	0.33	< 0.05	2.9	< 0.01	0.14
	11/21/2012	Dry																	
	5/29/2013	MAX	7.97	570	310	320	1.5	< 0.01	< 1	75	1.9	31	0.21	< 0.1	0.089	0.057	3.7	< 0.01	< 0.1
	5/13/2014	MAX	8	550	300	300	1.6	< 0.01	< 1	73	1.5	30	< 0.2	0.39	0.025	< 0.05	4	< 0.01	0.45
	11/25/2014	MAX	7.84	670	370	360	1	< 0.01	< 1	90	2.1	33	0.22	2.4	0.038	< 0.05	5.6	< 0.01	0.17
	5/11/2015	MAX	7.91	650	350	360	2.1	< 0.01	< 1	88	1.6	35	< 0.2	< 0.1	0.0043	< 0.05	3.5	< 0.01	< 0.1
	11/25/2015	MAX	8.01	730	390	410	2.2	< 0.01	< 1	99	2.4	39	0.78	4.4	0.17	< 0.05	12	0.031	< 0.1
	5/4/2016	MAX	8.06	500	270	270	< 1	< 0.01	< 1	65	1.5	26	< 0.2	< 0.1	< 0.002	< 0.05	2.2	< 0.01	< 0.1
	11/1/2016	Dry																	
	5/2/2017	MAX	8.17	490	260	250	< 1	< 0.01	< 1	58	1.5	26	< 0.2	< 0.1	< 0.002	< 0.05	2.4	< 0.01	0.16
	11/13/2017	INSV																	
Monitor 18-III Outwash 0.13 - 2.88 m	5/10/2012	Maxx	8.02	2200	310	1500	7.1	0.082	< 1	470	6.4	69	< 0.2	< 0.1	0.025	< 0.05	1300	< 0.01	0.89
	11/28/2012	Maxx	7.45	3200	450	2100	25	0.11	< 1	590	22	150	< 0.2	0.79	0.61	0.16	1700	< 0.01	< 0.1
	5/30/2013	MAX	7.58	1900	320	1300	6.3	0.07	< 1	420	5.1	56	0.2	0.16	0.083	0.15	870	< 0.01	0.1
	11/25/2013	MAX	7.26	1600	400	1100	6.8	0.13	2.8	340	6.5	50	< 0.2	0.14	0.31	0.089	570	0.01	< 0.1
	5/13/2014	MAX	7.59	1100	310	660	5.9	0.063	< 1	210	3.9	33	< 0.2	< 0.1	0.037	0.13	300	< 0.05	1.67
	11/25/2014	MAX	7.33	2000	360	1300	10	0.069	4.8	410	8.1	64	0.22	2	0.89	0.12	840	< 0.01	3.08
	5/11/2015	MAX	7.51	1900	310	1200	8.3	0.069	< 1	380	5.1	51	0.26	0.15	0.13	0.21	840	< 0.01	1.23
	11/24/2015	MAX	7.39	2600	360	1800	16	0.071	< 1	580	12	90	< 0.2	0.46	0.62	0.08	1400	< 0.02	< 0.2
	5/3/2016	MAX	7.8	960	280	600	4.1	0.06	< 1	190	4	29	< 0.2	0.26	0.062	0.079	260	< 0.01	0.62
	11/7/2016	MAX	7.41	2800	370	2100	31	0.081	< 1	630	20	120	< 1	< 0.5	0.055	0.09	1600	0.064	3.95
	5/2/2017	MAX	7.91	890	300	490	3.9	0.052	< 1	150	4.4	26	< 0.2	0.14	0.025	< 0.05	170	< 0.05	1.27
	11/13/2017	MAX	7.34	3100	360	2100	26	0.066	17	670	16	110	0.26	< 0.1	0.24	0.15	1800	< 0.05	0.66
Monitor 19-I Bedrock 24.63 - 25.84 m	5/9/2012	Maxx	8.19	440	220	210	3.3	0.033	< 1	34	11	29	0.92	0.16	0.0053	0.13	18	< 0.01	< 0.1
	5/24/2013	MAX	8.14	440	210	220	4.4	0.033	< 1	37	11	31	0.91	< 0.1	0.0065	0.28	19	< 0.01	< 0.1
	5/6/2014	MAX	8.27	440	220	220	2.8	0.036	< 1	37	11	30	0.93	0.13	0.0059	0.25	16	< 0.01	< 0.1
	5/11/2015	MAX	8.14	440	220	220	3.4	0.033	< 1	37	11	31	0.97	0.15	0.0059	0.25	16	< 0.01	< 0.1
	4/26/2016	MAX	8.16	440	220	220	2.7	0.036	< 1	36	12	30	0.94	0.12	0.0058	0.22	16	< 0.01	< 0.1
	4/26/2017	MAX	8.19	410	210	200	1.9	0.035	< 1	32	13	28	0.97	< 0.1	0.0047	0.1	14	0.076	0.13
Monitor 19-II Lower Till 19.82 - 21.04 m	5/9/2012	Maxx	8.21	390	200	170	2.3	0.048	< 1	28	17	25	0.9	< 0.1	0.0083	0.12	13	0.015	0.21
	5/24/2013	MAX	8.21	390	200	180	2	0.05	< 1	31	17	26	0.91	< 0.1	0.0065	0.22	11	< 0.01	0.22
	5/6/2014	MAX	8.27	390	200	180	2.8	0.051	< 1	30	16	25	0.9	< 0.1	0.0088	0.25	11	0.024	0.18
	5/11/2015	MAX	8.21	380	200	190	2.3	0.045	< 1	30	17	28	0.99	< 0.1	0.0077	0.3	13	0.052	0.13
	4/26/2016	MAX	8.16	370	210	180	2.1	0.051	< 1	30	17	26	0.96	< 0.1	0.011	0.28	12	0.067	0.25
	4/26/2017	MAX	8.27	400	200	180	1.4	0.044	< 1	29	16	25	0.95	< 0.1	0.0088	0.23	11	0.056	0.27

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 19-IV Upper Till 6.11 - 8.85 m	5/9/2012	Maxx	7.84	840	410	440	26	< 0.01	< 1	110	8.9	43	0.32	< 0.1	< 0.002	< 0.05	23	< 0.01	< 0.1
	5/24/2013	MAX	7.92	830	390	460	29	< 0.01	< 1	110	11	44	0.38	< 0.1	0.0021	0.1	22	< 0.01	< 0.1
	5/6/2014	MAX	7.94	750	350	390	27	< 0.01	< 1	97	13	37	0.35	< 0.1	< 0.002	< 0.05	18	< 0.01	< 0.1
	5/11/2015	MAX	7.86	850	410	500	29	< 0.01	< 1	120	13	51	0.45	< 0.1	< 0.002	< 0.05	21	0.013	< 0.1
	4/26/2016	MAX	7.92	820	370	430	38	< 0.01	< 1	100	16	42	0.37	< 0.1	< 0.002	< 0.05	22	< 0.01	< 0.1
	4/26/2017	MAX	7.87	780	350	380	31	< 0.01	< 1	90	15	37	0.33	< 0.1	0.0055	< 0.05	21	< 0.01	< 0.1
Monitor 20-IR Bedrock 20.57 - 22.09 m	5/15/2012	Maxx	8.06	680	230	300	62	0.03	< 1	59	22	37	1.3	< 0.1	0.019	0.062	34	< 0.01	0.16
	5/22/2013	N/A																	
	5/8/2014	MAX	7.91	720	230	300	79	0.075	< 1	60	26	36	1.2	< 0.1	0.023	0.13	33	< 0.01	< 0.1
	5/7/2015	MAX	8.03	460	230	230	3.8	0.076	< 1	46	11	27	1	< 0.1	0.027	0.14	12	0.051	2.07
	6/1/2016	MAX	8.17	430	220	210	2.2	0.088	< 1	36	11	29	1	0.14	0.05	0.18	12	0.029	0.58
	4/26/2017	MAX	8.03	490	220	230	6.1	0.067	< 1	56	9.7	23	2.4	< 0.1	0.015	< 0.05	11	0.012	3.99
Monitor 21-IR Upper Till 11 - 12.5 m	5/16/2012	Maxx	8.03	420	220	200	1.4	0.15	< 1	31	11	30	0.92	0.23	0.0062	< 0.05	9.9	< 0.01	< 0.1
	11/28/2012	Maxx	7.81	670	220	350	62	0.015	< 1	96	22	27	1.7	< 0.1	< 0.002	0.11	33	< 0.01	0.12
	5/29/2013	MAX	8.11	720	220	320	73	0.045	< 1	62	26	39	1.3	< 0.1	0.029	0.18	35	0.015	< 0.1
	11/19/2013	MAX	7.96	680	230	290	67	0.037	< 1	57	18	37	1.2	< 0.1	0.021	0.13	31	< 0.01	< 0.1
	5/14/2014	MAX	8.16	470	220	230	6.3	0.11	< 1	44	11	30	0.97	0.32	0.057	0.22	13	0.045	2.74
	11/24/2014	MAX	8.1	710	230	310	77	0.043	< 1	61	22	39	1.1	< 0.1	0.012	0.099	32	0.014	< 0.1
	5/12/2015	MAX	8.1	750	230	320	88	0.084	< 1	63	29	40	1.3	< 0.1	0.014	0.067	32	< 0.01	< 0.1
	11/20/2015	MAX	8.02	720	210	320	80	0.068	< 1	63	26	39	1.3	0.13	0.024	0.16	32	0.053	< 0.1
	5/2/2016	MAX	8.03	720	220	320	80	0.056	< 1	63	23	39	1.2	< 0.1	0.0092	< 0.05	31	< 0.01	0.14
	11/3/2016	MAX	8.05	720	220	320	78	0.057	< 1	61	22	39	1.2	0.35	0.021	0.17	30	0.069	< 0.1
	5/2/2017	MAX	8.15	760	220	320	88	0.039	< 1	61	23	40	1.2	< 0.1	0.011	< 0.05	31	< 0.01	0.14
	11/9/2017	MAX	8.1	760	220	310	90	0.039	< 1	59	21	39	1.1	0.32	0.02	0.16	30	0.012	< 0.1
Monitor 26-I Outwash 0.8 - 2.3 m	6/3/2013	N/A																	
	5/14/2014	MAX	8.14	1100	260	430	190	0.014	77	100	87	41	0.89	0.2	0.03	0.36	39	< 0.01	< 0.1
	11/20/2014	froze																	
	5/12/2015	MAX	7.99	830	370	430	49	0.011	< 1	120	20	29	0.92	< 0.1	0.9	0.07	14	< 0.01	< 0.1
	5/5/2016	MAX	8.13	660	280	330	33	0.015	< 1	99	19	21	0.68	< 0.1	0.89	< 0.05	26	< 0.01	< 0.1
	5/8/2017	MAX	8.15	880	340	420	55	< 0.01	< 1	130	30	25	1	2.5	0.32	< 0.05	53	< 0.01	< 0.1
Monitor 28-I Outwash 0.79 - 2.3 m	5/17/2012	Maxx	7.69	440	200	170	12	0.018	< 1	46	28	13	0.51	0.3	0.022	0.11	13	< 0.01	0.23
	6/3/2013	MAX	7.59	430	170	200	22	0.036	< 1	58	18	14	0.95	0.3	0.034	0.26	20	< 0.1	< 1
	5/14/2014	MAX	7.45	520	160	180	62	0.012	< 1	49	32	14	1.4	0.14	0.0087	0.14	10	< 0.02	< 0.2
	11/20/2014	froze																	
	5/12/2015	MAX	7.33	730	150	270	130	0.018	< 1	71	42	21	2.2	1	0.015	0.09	15	0.046	< 0.1
	5/5/2016	MAX	7.86	540	130	180	74	0.015	< 1	49	40	14	2.5	0.21	0.0086	0.1	14	< 0.01	< 0.1
	5/9/2017	MAX	7.96	430	140	200	30	0.016	< 1	57	45	15	3.2	0.89	0.0068	0.12	20	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Conductivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor **30-I** **Outwash** **0.6 - 2.3 m**	5/17/2012	Maxx	7.65	1100	250	410	150	0.017	34	95	72	43	0.95	1.6	0.034	0.63	75	0.021	< 0.1
	11/29/2012	Maxx	7.39	1000	200	390	140	0.023	17	99	52	36	0.58	4.2	0.097	1	88	0.01	< 0.1
	6/3/2013	MAX	7.94	1100	240	390	180	0.019	160	89	69	40	0.8	1	0.058	1.1	47	< 0.01	< 0.1
	11/14/2013	N/A																	
	5/14/2014	MAX	7.95	710	350	180	22	< 0.01	3.2	57	5.4	10	0.72	11	0.41	0.1	9.4	< 0.01	< 0.1
	11/20/2014	froze																	
	5/12/2015	MAX	8.14	1200	330	460	180	0.011	33	110	71	44	0.93	1.5	0.062	1	16	0.025	< 0.1
	5/5/2016	MAX	8.08	1300	320	500	180	< 0.01	7.7	130	88	42	0.94	1.6	0.094	0.41	38	0.011	< 0.1
	5/9/2017	MAX	8.04	1200	320	460	160	0.013	< 1	120	89	39	0.98	4.8	0.14	0.74	30	< 0.01	< 0.1
Monitor **35-I** **Outwash** **5.6 - 5.9 m**	5/15/2012	Maxx	8.05	540	280	280	7.9	0.024	7.8	49	5	37	1.9	< 0.1	0.01	< 0.05	6.1	< 0.01	0.1
	5/22/2013	N/A																	
	5/14/2014	MAX	8.16	330	170	180	4		19							0.1	5.5	< 0.01	< 0.1
	5/13/2015	MAX	7.86	470	240	240	3.9	0.014	2.4	51	3.3	28	1.5	< 0.1	0.014	< 0.05	7.2	< 0.01	0.42
	5/4/2016	MAX	8.17	470	240	220	5.3	0.015	1.3	47	2.6	26	1.2	2.1	0.091	< 0.05	6	0.014	0.25
	5/8/2017	MAX	8.27	470	250	340	6.9	0.024	3.2	62	5.8	45	2.5	3.3	0.097	< 0.05	5.4	< 0.01	0.11
Monitor **37-IR** **Bedrock** **23.7 - 27.28 m**	2/14/2012	Maxx	7.99	625	248	290	24	0.025	< 1	65	28	31	3	< 0.1	0.035	0.39	61	0.02	0.1
	5/9/2012	Maxx	8.1	510	230	250	13	0.028	< 1	54	15	27	1.4	< 0.1	0.015	0.14	34	< 0.01	< 0.1
	8/15/2012	Maxx	8.04	510	220	250	16	0.028	< 1	55	13	28	1.1	0.15	0.01	0.17	30	< 0.01	< 0.1
	10/4/2012	Maxx	8.06	520	220	250	17	0.022	< 1	54	13	29	1.1	0.16	0.011	0.21	28	< 0.01	< 0.1
	11/22/2012	Maxx	7.85	750	290	260	31	0.041	< 1	60	55	26	4.6	< 0.1	0.013	0.11	56	< 0.01	0.32
	5/23/2013	MAX	7.97	610	240	290	29	0.038	< 1	71	18	28	1.6	< 0.1	0.023	0.12	33	< 0.01	< 0.1
	7/30/2013	MAX	7.97	570	230	270	29	0.034	< 1	63	18	28	1.3	< 0.1	0.018	0.11	31	0.017	< 0.1
	9/26/2013	MAX	8.2	560	220	280	29	0.031	< 1	62	16	30	1.3	< 0.1	0.017	0.14	29	< 0.01	< 0.1
	11/13/2013	MAX	8.05	560	230	270	29	0.027	< 1	59	16	29	1.2	< 0.1	0.015	0.12	29	< 0.01	< 0.1
	5/7/2014	MAX	8.03	600	240	270	28	0.033	< 1	66	18	27	1.5	< 0.1	0.015	0.16	29	< 0.01	< 0.1
	8/2/2014	MAX	7.98	580	230	260	32	0.03	< 1	57	17	28	1.1	< 0.1	0.02	0.18	26	0.013	< 0.1
	10/1/2014	MAX	7.87	590	240	270	32	0.043	< 1	62	20	28	1.4	0.21	0.025	0.25	26	0.028	< 0.1
	11/20/2014	MAX	8.06	580	240	250	31	0.031	< 1	56	16	26	1.1	0.18	0.019	0.17	28	0.03	< 0.1
	5/5/2015	MAX	7.97	550	220	250	33	0.032	< 1	55	15	28	0.97	< 0.1	0.014	0.13	26	0.039	< 0.1
	7/30/2015	MAX	7.98	560	220	260	41	0.025	< 1	57	15	28	1	< 0.1	0.011	0.12	29	0.04	< 0.1
	10/23/2015	MAX	8	570	210	270	39	0.037	< 1	59	15	29	1	0.19	0.012	0.2	28	0.102	< 0.1
	11/18/2015	MAX	8.09	580	220	280	41	0.03	< 1	60	15	31	1	0.14	0.011	0.16	27	0.023	< 0.1
	4/27/2016	MAX	8.18	560	220	270	36	0.032	< 1	57	16	31	0.93	< 0.1	0.009	0.16	27	< 0.01	< 0.1
	8/10/2016	MAX	8.07	560	220	250	30	0.03	< 1	57	15	27	1	0.2	0.0083	0.15	26	0.026	< 0.1
	9/1/2016	MAX	8.09	570	220	250	35	0.029	< 1	54	15	27	0.98	0.27	0.0088	0.16	27	0.131	< 0.1
	10/31/2016	MAX	8.04	590	220	280	41	0.034	< 1	60	17	31	1.1	0.26	0.0087	0.17	27	0.071	< 0.1
	4/25/2017	MAX	8.17	550	220	260	24	0.028	< 1	56	14	28	1	0.37	0.0092	0.14	26	< 0.01	< 0.1
	8/10/2017	MAX	8.02	600	230	290	41	0.018	< 1	66	13	31	1.1	0.44	0.016	0.091	37	< 0.01	< 0.1
	9/28/2017	MAX	8.14	580	220	260	42	0.031	< 1	55	16	29	0.9	0.35	0.0085	0.17	27	0.019	< 0.1
	11/6/2017	MAX	8.16	610	220	280	44	0.03	< 1	61	17	32	1.1	0.33	0.0087	0.17	26	0.017	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

Monitor

37-IIR
Bedrock
31.08 - 32.6 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
2/14/2012	Maxx	7.93	796	259	350	48	0.018	< 1	92	41	30	2.1	< 0.1	0.095	0.05	93	< 0.01	1.5
5/7/2012	NA																	
8/15/2012	Maxx	8.04	700	240	280	32	0.02	< 1	69	40	25	2.1	< 0.1	0.069	0.061	75	< 0.01	0.66
10/4/2012	Maxx	8.03	630	230	250	24	0.013	< 1	60	37	26	1.6	< 0.1	0.05	0.17	61	0.068	0.18
11/22/2012	Maxx	7.92	580	230	230	18	0.02	< 1	56	35	23	1.4	0.33	0.063	0.12	35	0.033	< 0.1
5/23/2013	MAX	8.07	520	220	240	13	0.022	< 1	56	22	24	1.2	0.21	0.029	0.23	30	< 0.01	< 0.1
7/30/2013	MAX	8.03	510	220	240	14	0.019	< 1	55	24	24	1.3	< 0.1	0.011	< 0.05	30	< 0.01	0.12
9/26/2013	MAX	8.23	520	220	240	15	0.017	< 1	55	22	25	1.4	< 0.1	0.02	< 0.05	27	< 0.01	< 0.1
11/13/2013	MAX	8.09	530	230	220	22	0.019	< 1	50	29	23	1.4	0.21	0.034	< 0.05	27	< 0.05	< 0.5
5/14/2014	MAX	8.08	580	210	240	42	< 0.01	< 1	55	23	26	1.5	0.48	0.029	0.23	22	0.03	< 0.1
8/2/2014	MAX	8.02	550	220	230	32	0.019	< 1	52	24	25	1.5	0.39	0.029	0.25	23	0.012	< 0.1
10/1/2014	MAX	7.96	540	230	240	26	0.023	< 1	54	23	25	1.6	0.43	0.032	0.22	24	< 0.01	< 0.1
11/20/2014	MAX	8.11	550	220	230	31	0.016	< 1	55	21	23	1.4	0.4	0.03	0.17	26	< 0.01	< 0.1
5/5/2015	MAX	8.03	550	220	240	31	0.019	< 1	54	22	26	1.6	0.38	0.028	0.18	25	0.037	< 0.1
7/30/2015	MAX	7.9	570	210	250	44	0.013	< 1	58	20	27	1.5	0.26	0.021	0.1	22	0.011	< 0.1
10/23/2015	MAX	7.97	560	220	250	31	0.018	< 1	57	20	26	1.5	0.35	0.027	0.22	25	0.031	< 0.1
11/18/2015	MAX	8.12	550	220	260	29	0.02	< 1	58	19	28	1.5	0.25	0.022	0.14	24	0.043	< 0.1
4/27/2016	MAX	8.17	550	210	260	41	0.016	< 1	58	19	29	1.4	0.36	0.024	0.13	21	< 0.01	< 0.1
8/10/2016	MAX	8.03	600	220	270	40	0.016	< 1	63	15	27	1.1	0.42	0.019	0.14	29	< 0.01	< 0.1
9/1/2016	MAX	8.07	600	220	260	42	0.015	< 1	60	15	28	1.1	0.39	0.017	0.08	29	0.058	< 0.1
10/31/2016	MAX	7.98	610	220	280	40	0.016	< 1	64	15	29	1.1	0.42	0.016	0.11	32	0.017	< 0.1
4/25/2017	MAX	8.16	610	220	280	38	0.018	< 1	64	14	30	1.1	0.43	0.017	0.086	32	< 0.01	< 0.1
8/10/2017	MAX	8.02	530	220	260	31	0.033	< 1	55	16	29	1	0.32	0.0085	0.15	25	0.074	< 0.1
9/28/2017	MAX	8.15	600	230	280	41	0.017	< 1	62	14	30	1	0.41	0.015	0.088	36	< 0.01	< 0.1
11/6/2017	MAX	8.21	610	230	290	39	0.016	< 1	65	14	30	1.1	0.47	0.016	0.091	33	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

Monitor

50-I
Bedrock
39.8 - 41.2 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
5/7/2012	Maxx	8.07	690	200	300	84	0.051	< 1	61	23	35	1.1	0.55	0.037	0.26	23	< 0.01	< 0.1
8/15/2012	Maxx	8.03	620	190	270	68	0.054	< 1	54	22	32	1	0.51	0.031	0.35	22	< 0.01	< 0.1
10/3/2012	Maxx	8.06	590	200	250	61	0.052	1	50	24	30	0.99	0.45	0.031	0.4	19	< 0.01	< 0.1
11/20/2012	Maxx	8.03	640	200	280	73	0.055	< 1	57	23	33	1.1	0.52	0.033	0.42	20	< 0.01	< 0.1
5/21/2013	MAX	8.01	750	190	320	100	0.057	< 1	66	24	37	1.1	0.56	0.04	0.43	27	< 0.01	< 0.1
7/30/2013	MAX	8.07	740	190	330	110	0.053	< 1	69	24	38	1.1	0.57	0.041	0.43	25	< 0.01	< 0.1
9/26/2013	MAX	8.31	750	190	320	100	0.052	< 1	66	24	38	1.1	0.55	0.04	0.39	24	< 0.01	< 0.1
11/13/2013	MAX	8.06	780	200	330	110	0.047	< 1	69	23	39	1.1	0.53	0.042	0.37	24	< 0.01	< 0.1
5/5/2014	MAX	7.96	750	190	320	100	0.047	< 1	66	23	37	1.1	0.58	0.039	0.35	24	< 0.01	< 0.1
8/1/2014	MAX	7.96	800	200	330	120	0.042	< 1	67	23	40	1	0.53	0.037	0.43	24	0.012	< 0.1
10/1/2014	MAX	8	780	200	340	120	0.058	< 1	68	24	40	1.1	0.56	0.039	0.43	23	< 0.01	< 0.1
11/17/2014	MAX	7.98	800	190	340	120	0.061	< 1	71	25	40	1.2	0.58	0.038	0.4	24	< 0.01	< 0.1
5/4/2015	MAX	7.84	820	190	360	120	0.043	< 1	73	26	42	1.1	0.53	0.04	0.45	26	< 0.01	< 0.1
7/30/2015	MAX	8.17	790	190	330	130	0.047	< 1	69	25	39	1.1	0.55	0.039	0.42	28	< 0.01	< 0.1
10/15/2015	MAX	8.04	760	190	310	110	0.049	< 1	67	24	36	1.1	0.53	0.035	0.39	23	< 0.01	< 0.1
11/17/2015	MAX	8.19	750	190	330	110	0.068	< 1	68	25	38	1.1	0.54	0.036	0.42	23	< 0.01	< 0.1
4/25/2016	MAX	8.06	820	200	330	120	0.048	< 1	67	23	39	1.1	0.58	0.039	0.4	24	< 0.01	< 0.1
8/10/2016	MAX	7.93	790	180	320	110	0.05	< 1	68	25	37	1.1	0.54	0.037	0.41	30	0.054	< 0.1
8/31/2016	MAX	8.2	780	200	310	110	0.049	< 1	64	25	36	1.1	0.54	0.035	0.38	22	0.011	< 0.1
10/31/2016	MAX	8.09	730	190	310	100	0.059	< 1	62	27	36	1.1	0.54	0.033	0.41	20	< 0.01	< 0.1
4/24/2017	MAX	8.13	860	200	360	130	0.05	< 1	74	25	42	1.2	0.64	0.042	0.39	25	< 0.01	< 0.1
8/10/2017	MAX	8.1	790	190	300	120	0.066	< 1	61	31	35	1	0.55	0.038	0.36	21	0.045	< 0.1
9/28/2017	MAX	8.15	670	180	230	97	0.071	< 1	47	33	26	0.83	0.38	0.031	0.35	17	0.011	< 0.1
11/6/2017	MAX	8.16	800	190	300	120	0.048	< 1	63	25	35	1.1	0.56	0.035	0.4	22	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond- uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor **53-I** **Bedrock** **21 - 22.6 m**	5/9/2012	Maxx	8.11	420	220	190	2.9	0.044	< 1	36	14	25	0.95	0.48	0.004	0.36	7.2	< 0.01	< 0.1
	8/16/2012	Maxx	8.01	410	210	200	2.7	0.047	< 1	37	14	26	1	0.52	0.0035	0.45	7.6	< 0.01	< 0.1
	10/4/2012	Maxx	8.1	410	210	190	2.8	0.042	< 1	35	14	26	0.97	0.46	0.0039	0.51	6.6	< 0.01	< 0.1
	11/23/2012	Maxx	7.88	410	210	190	2.5	0.046	< 1	36	14	24	0.95	0.47	0.0039	0.51	6.3	< 0.01	< 0.1
	5/27/2013	MAX	8.12	420	210	200		0.042	< 1	37	14	26	0.99	0.54	0.0036	0.58			
	7/30/2013	MAX	8.11	410	210	200	3	0.047	< 1	37	14	25	0.96	0.54	0.0033	0.51	7.3	< 0.01	< 0.1
	9/26/2013	MAX	8.3	410	210	200	3.6	0.045	< 1	37	14	26	1	0.54	0.0034	0.51	7	< 0.01	< 0.1
	11/18/2013	MAX	8	410	210	190	2.7	0.045	< 1	35	14	24	0.94	0.49	0.0038	0.49	5.5	< 0.01	< 0.1
	5/6/2014	MAX	8.25	410	210	190	3	0.051	< 1	36	15	25	0.96	0.46	0.004	0.47	6.4	< 0.01	< 0.1
	8/1/2014	MAX	8.1	410	210	190	2.9	0.044	< 1	34	14	25	0.87	0.46	0.0033	0.51	6.2	0.011	< 0.1
	10/2/2014	MAX	8.05	400	210	190	2.6	0.05	< 1	34	14	24	0.98	0.48	0.0031	0.51	6.1	< 0.01	< 0.1
	11/20/2014	MAX	8.15	410	210	180	4.1	0.046	< 1	33	14	23	0.84	0.44	0.0034	0.47	6	< 0.01	< 0.1
	5/6/2015	MAX	8	410	220	190	3.8	0.043	< 1	36	14	25	0.93	0.54	0.0028	0.5	6.7	< 0.01	< 0.1
	7/30/2015	MAX	8.05	410	220	200	8	0.038	< 1	39	14	26	1	0.55	0.0034	0.53	12	< 0.01	< 0.1
	10/15/2015	MAX	8.16	420	210	200	3.4	0.039	< 1	38	13	25	0.98	0.56	0.0034	0.5	7.2	< 0.01	< 0.1
	11/18/2015	MAX	8.2	420	210	210	4.2	0.044	< 1	39	14	27	0.98	0.54	0.0035	0.49	7.1	< 0.01	< 0.1
	4/27/2016	MAX	8.21	390	220	220	3.4	0.042	< 1	39	17	29	0.93	0.51	0.0044	0.51	7.3	< 0.01	< 0.1
	8/10/2016	MAX	8.23	420	220	200	3.1	0.054	< 1	37	12	25	0.95	0.56	0.0035	0.5	8.2	< 0.01	< 0.1
	9/1/2016	MAX	8.13	420	220	190	2.9	0.044	< 1	36	12	25	0.93	0.59	0.0034	0.47	8.5	< 0.01	< 0.1
	11/1/2016	MAX	8.18	420	220	190	2.5	0.042	< 1	36	12	25	0.92	0.55	0.0032	0.53	7.8	< 0.01	< 0.1
	4/26/2017	MAX	8.17	420	220	190	2.2	0.038	< 1	36	12	25	0.95	0.62	0.003	0.48	9.2	< 0.01	< 0.1
	8/10/2017	MAX	8.07	420	220	200	2.7	0.041	< 1	37	12	26	0.92	0.61	0.003	0.48	8.4	0.053	< 0.1
	9/28/2017	MAX	8.28	420	220	200	2.9	0.041	< 1	37	12	26	0.89	0.59	0.0031	0.48	8.5	< 0.01	< 0.1
	11/7/2017	MAX	8.25	420	220	190	2.7	0.035	< 1	35	11	24	0.91	0.54	0.0031	0.49	8.6	< 0.01	< 0.1
Monitor **53-IIR** **Lower Till** **13.7 - 15.2 m**	5/9/2012	Maxx	8.06	430	170	130	23	0.11	< 1	32	44	11	1.1	< 0.1	0.019	< 0.05	14	< 0.01	0.21
	11/23/2012	Maxx	7.83	410	170	120	23	0.1	< 1	31	42	11	1.1	0.57	0.068	0.47	9.8	0.012	< 0.1
	5/27/2013	MAX	8.08	420	160	120		0.1		31	42	11	1.1	< 0.1	0.021	0.16			
	11/18/2013	MAX	8.01	410	170	120	23	0.11	< 1	29	41	11	1	0.69	0.058	0.54	8.1	< 0.01	< 0.1
	5/6/2014	MAX	8.18	400	170	120	22	0.12	< 1	30	42	11	1.1	0.34	0.072	0.31	9.9	< 0.01	< 0.1
	11/20/2014	MAX	8.17	410	170	110	22	0.12	< 1	28	41	11	0.94	0.65	0.047	0.41	9.8	< 0.01	< 0.1
	5/6/2015	MAX	7.9	390	170	120	22	0.11	< 1	28	44	11	1	0.2	0.021	0.15	7.7	0.024	0.14
	11/24/2015	MAX	8	460	160	140	37	0.11	< 1	36	41	13	1.1	< 0.1	0.029	0.46	11	0.123	0.27
	4/27/2016	MAX	8.13	450	170	140	30	0.11	< 1	35	47	13	1.2	< 0.1	0.046	0.18	11	0.017	0.16
	11/1/2016	MAX	8.09	440	180	120	27	0.11	< 1	31	43	11	1	0.59	0.077	0.54	9.1	0.019	< 0.1
	4/26/2017	MAX	8.16	490	180	140	36	0.11	< 1	34	45	13	1.5	< 0.1	0.014	< 0.05	15	< 0.01	0.36
	11/7/2017	MAX	8.21	480	180	140	31	0.12	< 1	35	49	13	1.3	0.51	0.069	0.55	12	0.016	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

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C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 54-I Bedrock 25.9 - 27.4 m	5/8/2012	Maxx	8.13	440	210	200	6.8	0.056	< 1	37	9	26	1	< 0.1	0.0076	0.093	20	< 0.01	< 0.1
	11/29/2012	Maxx	7.97	460	220	230	13	0.059	< 1	41	12	32	1.1	< 0.1	0.0097	0.29	20	< 0.01	< 0.1
	5/27/2013	MAX	8.05	590	220	270		0.074		51	14	34	1.2	< 0.1	0.011	0.25			
	11/19/2013	MAX	7.95	450	220	210	7.8	0.045	< 1	37	9.8	28	0.97	< 0.1	0.0061	0.14	18	0.067	< 0.1
	5/7/2014	MAX	8.11	610	230	270	42	0.08	< 1	52	17	33	1.2	< 0.1	0.011	0.21	30	< 0.01	< 0.1
	11/24/2014	MAX	8.07	510	220	230	23	0.033	< 1	45	13	29	0.98	< 0.1	0.0087	0.19	22	< 0.01	< 0.1
	5/12/2015	MAX	8.06	430	210	220	5.4	0.052	< 1	36	10	31	1	< 0.1	0.0071	0.15	16	0.062	< 0.1
	11/20/2015	MAX	8.13	440	200	210	6.4	0.046	< 1	38	11	29	0.96	< 0.1	0.0066	0.19	15	0.021	< 0.1
	5/2/2016	MAX	8.1	440	210	210	6.7	0.049	< 1	37	11	29	0.89	< 0.1	0.0067	0.19	16	< 0.01	< 0.1
	11/3/2016	MAX	8.22	430	210	210	3.8	0.046	< 1	36	10	28	0.91	< 0.1	0.0071	0.2	15	0.058	< 0.1
	5/1/2017	MAX	8.21	450	210	220	8.5	0.044	< 1	38	12	29	0.95	< 0.1	0.007	0.14	17	< 0.01	< 0.1
	11/9/2017	MAX	8.13	430	210	220	5.8	0.047	< 1	39.5	11	29	0.955	< 0.1	0.0071	0.16	16	< 0.01	< 0.1
Monitor 60-I Lower Till 13.31 - 14.83 m	5/7/2012	N/A																	
	10/4/2012	Maxx	7.72	440	190	200	8.9	0.022	13	56	7.6	15	2.7	3.8	0.66	2	30	< 0.01	< 0.1
	11/22/2012	Maxx	7.65	510	230	210	10	0.035	3.3	52	18	20	2.5	3.2	0.94	3.2	26	< 0.01	< 0.1
	5/22/2013	MAX	7.99	520	240	200	12	0.054	< 1	46	29	22	2	1.6	0.61	3.1	25	0.018	< 0.1
	11/18/2013	MAX	7.87	500	230	180	8.3	0.062	< 1	36	30	23	1.6	0.58	0.32	1.7	28	0.034	< 0.1
	5/5/2014	MAX	7.99	460	220	180	6.9	0.068	< 1	32	31	23	1.5	0.3	0.094	0.63	19	< 0.01	0.19
	11/20/2014	MAX	8.09	440	220	170	7.7	0.084	< 1	31	35	22	1.5	0.4	0.17	0.75	9.9	0.02	< 0.1
	5/7/2015	MAX	8.07	430	220	160	5.4	0.073	< 1	29	31	22	1.3	0.11	0.07	0.24	12	0.074	0.11
	11/19/2015	MAX	8.14	420	210	160	5.3	0.081	< 1	28	32	23	1.3	< 0.1	0.073	0.16	10	0.067	< 0.1
	6/1/2016	MAX	8.16	410	210	160	3.7	0.073	< 1	27	26	23	1.1	< 0.1	0.02	0.095	13	0.011	0.28
	11/2/2016	MAX	8.14	410	210	170	2.7	0.079	< 1	29	26	25	1.3	< 0.1	0.033	0.11	9.4	< 0.01	0.2
	4/26/2017	MAX	8.24	450	210	190	4	0.075	< 1	30	24	27	1.2	< 0.1	0.028	< 0.05	21	0.026	0.17
	11/7/2017	MAX	8.13	430	210	170	4	0.082	< 1	27	27	24	1.1	< 0.1	0.027	0.06	17	0.014	0.28
Monitor 60-II Upper Till 10.67 - 12.19 m	5/16/2012	Maxx	7.84	270	120	110	5.6	0.021	< 1	33	7.3	7.8	1.4	< 0.1	0.023	0.11	14	< 0.01	0.27
	11/22/2012	Maxx	7.93	800	260	340	19	0.19	< 1	70	49	40	1.8	< 0.1	< 0.002	< 0.05	140	< 0.01	0.39
	5/22/2013	MAX	8.15	660	270	260	11	0.27	< 1	52	52	31	1.6	0.2	0.091	< 0.05	63	< 0.01	< 0.1
	11/18/2013	MAX	7.99	790	360	350	11	0.22	< 1	76	42	40	1.6	< 0.1	0.0041	< 0.05	61	< 0.01	0.15
	5/5/2014	MAX	7.89	800	360	380	12	0.2	< 1	86	37	42	1.6	< 0.1	0.16	0.061	61	< 0.01	0.19
	11/20/2014	MAX	8	810	390	400	10	0.18	< 1	90	32	43	1.6	< 0.1	0.003	< 0.05	59	< 0.01	0.19
	5/7/2015	MAX	8.1	560	270	220	9.2	0.28	< 1	44	43	26	1.4	< 0.1	< 0.002	< 0.05	27	< 0.01	< 0.1
	11/19/2015	MAX	8.07	740	330	360	8.1	0.25	< 1	79	32	39	1.6	< 0.1	< 0.002	< 0.05	59	< 0.01	0.24
	4/26/2016	MAX	7.99	820	390	440	8	0.14	< 1	100	20	44	1.6	< 0.1	< 0.002	< 0.05	65	< 0.01	0.17
	11/2/2016	MAX	8.24	470	230	180	9.4	0.33	< 1	31	35	26	1.4	< 0.1	< 0.002	< 0.05	18	< 0.01	< 0.1
	4/26/2017	MAX	7.75	600	300	280	5.3	0.14	< 1	72	15	26	1.5	< 0.1	< 0.002	< 0.05	20	< 0.01	< 0.1
	11/7/2017	MAX	8.08	500	240	190	8.9	0.33	< 1	37	32	25	1.3	< 0.1	< 0.002	< 0.05	20	< 0.01	0.12

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C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 60-III Upper Till 0.61 - 5.18 m	5/16/2012	Maxx	7.77	1200	460	560	84	0.043	19	140	43	55	2.9	4.5	0.77	0.52	51	0.019	< 0.1
	11/22/2012	Maxx	7.57	1400	610	710	55	0.049	2.2	170	45	68	2.8	6.4	1.3	0.41	81	< 0.01	< 0.1
	5/22/2013	MAX	7.6	1800	820	1000	88	0.053	1.5	270	35	78	3.9	23	6.3	2.9	85	< 0.01	< 0.1
	11/18/2013	MAX	7.38	1700	910	930	59	0.036	2.7	250	28	75	2.7	23	2.8	3.2	24	< 0.01	< 0.1
	5/5/2014	MAX	7.28	1600	810	880	53	0.028	< 1	230	27	76	2.2	22	2.1	2.7	28	< 0.01	< 0.1
	11/20/2014	MAX	7.39	1500	780	840	47	0.035	< 2	220	27	72	2.6	20	1.4	2.8	20	< 0.01	< 0.1
	5/7/2015	MAX	7.39	1600	740	870	61	0.038	< 1	230	31	74	2.8	14	2.7	3.1	81	< 0.01	< 0.1
	11/19/2015	MAX	7.49	1500	760	830	38	0.04	< 1	210	28	73	2.4	15	1.4	2	31	< 0.01	< 0.1
	4/26/2016	MAX	7.53	1600	950	950	26	0.024	< 1	260	23	75	3	24	3.4	15	7.7	< 0.01	< 0.1
	11/2/2016	MAX	7.77	1500	710	770	78	0.069	< 1	190	42	72	3.7	12	0.55	3	35	< 0.01	< 0.1
	4/26/2017	MAX	7.35	1600	830	840	17	0.025	< 1	210	22	75	2.8	24	1.8	4.5	70	< 0.01	< 0.1
	11/7/2017	MAX	7.42	1500	770	750	40	0.043	5	190	34	68	3	11	0.62	2.4	30	< 0.01	< 0.1
Monitor 90-I Deep bedrock 51.2 - 67.1 m	11/24/2015	MAX	10.9	460	120	6.2	4.3	0.025	< 1	2.3	35	0.12	42	< 0.1	< 0.002	1.3	15	< 0.01	< 0.1
	5/2/2016	MAX	11.1	530	120	5	3.8	0.032	< 1	1.9	36	0.051	43	< 0.1	0.0022	1.3	14	< 0.01	< 0.1
	9/1/2016	MAX	10.8	390	120	18	4.2	0.024	< 1	7.2	33	0.12	40	2	0.044	1.3	14	< 0.01	< 0.1
	11/2/2016	MAX	10.6	350	120	8.9	3.7	0.03	< 1	3.2	33	0.25	40	0.93	0.022	1.3	13	< 0.01	< 0.1
	8/10/2017	MAX	10.9	420	120	3.7	3.5	0.029	< 1	1.4	34	0.066	40	< 0.1	< 0.002	1.3	13	< 0.01	< 0.1
	9/28/2017	MAX	10.8	390	120	4.5	3.5	0.029	< 1	1.6	33	0.12	39	0.2	0.0048	1.3	13	< 0.01	< 0.1
	11/9/2017	MAX	10.7	380	120	3.3	3.3	0.027	< 1	1.2	32	0.08	38	< 0.1	< 0.002	1.3	12	< 0.01	< 0.1
Monitor 90-II bedrock 31.42 - 32.94 m	5/8/2012	Maxx	7.89	690	320	320	16	0.017	< 1	84	10	27	0.6	< 0.1	0.0075	< 0.05	30	< 0.01	< 0.1
	11/23/2012	Maxx	7.83	610	270	300	17	0.018	< 1	70	10	30	0.77	< 0.1	0.0095	0.055	29	< 0.01	< 0.1
	5/24/2013	MAX	7.97	640	290	340	15	0.037	< 1	86	12	30	0.67	< 0.1	0.0082	0.11	30	< 0.01	< 0.1
	11/14/2013	MAX	7.73	640	300	310	13	0.018	< 1	78	9.9	29	0.7	< 0.1	0.0065	< 0.05	26	< 0.01	< 0.1
	5/5/2014	MAX	7.73	790	370	420	17	< 0.01	< 1	120	13	32	0.59	< 0.1	0.0079	< 0.05	28	< 0.01	< 0.1
	11/19/2014	MAX	7.92	590	280	300	10	0.02	< 1	71	9.7	30	0.78	0.14	0.0078	0.054	27	< 0.01	< 0.1
	5/7/2015	MAX	8.01	640	310	340	10	0.014	< 1	83	11	32	0.78	< 0.1	0.0067	< 0.05	26	< 0.01	< 0.1
	11/19/2015	MAX	8.06	530	250	280	5.5	0.018	< 1	62	9.2	31	0.78	< 0.1	0.0074	0.072	25	< 0.01	< 0.1
	4/26/2016	MAX	7.97	640	310	330	10	0.019	< 1	80	11	32	0.67	< 0.1	0.0078	0.06	28	< 0.01	< 0.1
	11/2/2016	MAX	8.17	480	230	240	2.4	0.019	< 1	47	6.9	31	0.79	0.15	0.0093	0.2	25	0.091	< 0.1
	4/25/2017	MAX	7.96	530	250	260	4.5	0.018	< 1	54	7.8	31	0.73	0.18	0.0082	0.06	26	< 0.01	0.11
	11/9/2017	MAX	8.13	480	230	230	2.6	0.016	< 1	44	6.5	29	0.77	0.17	0.0063	0.13	27	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

Monitor

91-I
Bedrock
25.47 - 26.99 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
5/8/2012	NA																	
5/14/2012	Maxx	8.09	470	200	170	27	0.039	< 1	30	26	24	0.73	< 0.1	0.0047	0.096	13	< 0.01	< 0.1
11/29/2012	Maxx	8.21	420	200	180	12	0.044	< 1	28	21	26	0.78	< 0.1	0.0047	0.29	12	< 0.01	< 0.1
5/27/2013	MAX	8.14	480	190	190		0.034		32	28	26	0.81	< 0.1	0.0052	0.36			
11/19/2013	MAX	7.96	410	200	180	8.5	0.039	< 1	28	17	26	0.72	< 0.1	0.0059	0.22	13	0.075	< 0.1
5/15/2014	MAX	8.17	400	190	170	7.5	0.046	< 1	28	18	25	0.73	< 0.1	0.0049	0.26	12	< 0.01	< 0.1
8/1/2014	MAX	8.14	400	190	170	7.9	0.041	< 1	26	18	26	0.69	< 0.1	0.0052	0.27	11	0.013	< 0.1
10/2/2014	MAX	8.11	390	190	170	7.5	0.045	< 1	27	18	25	0.78	< 0.1	0.0048	0.26	11	< 0.01	< 0.1
11/24/2014	MAX	8.08	400	190	170	7.3	0.027	< 1	28	18	25	0.71	< 0.1	0.0057	0.24	12	< 0.01	< 0.1
5/12/2015	MAX	8.12	520	200	200	39	0.041	< 1	34	41	29	0.88	< 0.1	0.0062	0.22	12	0.047	< 0.1
7/30/2015	MAX	8.08	440	200	180	18	0.037	< 1	29	25	25	0.75	< 0.1	0.005	0.2	12	0.013	< 0.1
10/15/2015	MAX	8.12	420	190	170	13	0.037	< 1	27	22	25	0.77	< 0.1	0.0049	0.2	12	0.016	< 0.1
11/20/2015	MAX	8.29	420	190	170	11	0.047	< 1	28	21	25	0.77	< 0.1	0.005	0.24	12	< 0.01	< 0.1
5/2/2016	MAX	8.13	400	190	170	8.4	0.046	< 1	27	18	26	0.73	< 0.1	0.0049	0.22	12	< 0.01	< 0.1
8/10/2016	MAX	8.17	400	190	170	5.7	0.041	< 1	27	17	24	0.8	< 0.1	0.004	0.24	12	0.105	< 0.1
9/1/2016	MAX	8.18	390	190	170	6	0.044	< 1	26	17	25	0.75	< 0.1	0.0049	0.21	11	0.069	< 0.1
11/3/2016	MAX	8.21	380	190	170	8.2	0.047	< 1	26	18	25	0.74	< 0.1	0.0055	0.24	10	0.187	< 0.1
5/1/2017	MAX	8.1	440	200	180	17	0.041	< 1	28	21	26	0.74	< 0.1	0.0068	0.17	13	0.039	< 0.1
8/10/2017	MAX	8.11	430	200	180	14	0.042	< 1	29	22	26	0.76	< 0.1	0.0067	0.19	13	0.064	< 0.1
9/28/2017	MAX	8.32	410	200	170	9.9	0.042	< 1	27	20	25	0.71	< 0.1	0.0042	0.22	12	0.034	< 0.1
11/9/2017	MAX	8.2	410	200	170	12	0.04	< 1	26	20	25	0.72	< 0.1	0.0056	0.23	12	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

Monitor

93-I
Bedrock
24.16 - 28.73 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
5/7/2012	Maxx	8.2	340	180	120	2.4	0.062	< 1	27	30	13	0.83	< 0.1	0.0045	0.19	2.7	< 0.01	< 0.1
8/15/2012	Maxx	8.12	340	180	130	3.1	0.065	< 1	28	31	14	0.94	0.11	0.0046	0.3	2.5	< 0.01	< 0.1
10/3/2012	Maxx	8.1	340	180	120	3.6	0.062	< 1	26	30	14	0.85	< 0.1	0.0051	0.34	1.5	< 0.01	< 0.1
11/20/2012	Maxx	8.03	350	190	130	3.9	0.06	< 1	28	29	14	0.9	< 0.1	0.0047	0.35	2.8	< 0.01	< 0.1
5/21/2013	MAX	8.19	350	180	130	2.7	0.072	< 1	28	29	14	0.89	0.11	0.0046	0.34	3.8	< 0.01	< 0.1
7/30/2013	MAX	8.13	350	180	130	3.2	0.066	< 1	29	30	15	0.88	< 0.1	0.005	0.34	4.2	< 0.01	< 0.1
9/26/2013	MAX	8.3	350	180	140	3.9	0.065	< 1	30	29	15	0.91	< 0.1	0.0047	0.31	3.8	< 0.01	< 0.1
11/13/2013	MAX	8.13	350	180	130	3	0.058	< 1	27	29	14	0.84	< 0.1	0.0047	0.29	3.1	< 0.01	< 0.1
5/5/2014	MAX	8.05	340	180	130	2	0.062	< 1	27	28	14	0.9	0.12	0.0047	0.32	3.1	< 0.01	< 0.1
7/31/2014	MAX	8.12	350	180	120	3.1	0.061	< 1	27	29	14	0.79	< 0.1	0.0046	0.35	4.2	< 0.01	< 0.1
10/1/2014	MAX	8.13	350	190	130	3.5	0.072	< 1	27	29	14	0.9	0.1	0.005	0.37	2.9	0.012	< 0.1
11/17/2014	MAX	7.91	360	170	200	4	0.065	< 1	47	29	19	1.2	0.88	0.049	0.3	12	< 0.01	< 0.1
5/4/2015	MAX	7.92	350	180	130	4	0.056	< 1	28	28	14	0.82	< 0.1	0.0047	0.34	4.8	< 0.01	< 0.1
7/30/2015	MAX	8.08	350	180	130	4.2	0.055	< 1	28	29	14	0.85	< 0.1	0.0043	0.3	3.7	0.015	< 0.1
10/15/2015	MAX	8.19	350	180	130	3.6	0.057	< 1	28	27	14	0.88	0.1	0.0043	0.28	4.2	< 0.01	< 0.1
11/17/2015	MAX	8.22	340	180	130	3.4	0.077	< 1	29	29	14	0.94	0.11	0.0047	0.29	3.9	0.047	< 0.1
4/25/2016	MAX	8.2	340	180	120	2.4	0.065	< 1	27	29	14	0.88	< 0.1	0.0045	0.31	2.9	< 0.01	< 0.1
8/10/2016	MAX	8.15	350	180	120	3.2	0.06	< 1	28	28	13	0.89	< 0.1	0.0041	0.33	3.1	< 0.01	< 0.1
8/31/2016	MAX	8.2	350	190	120	3.4	0.058	< 1	27	28	13	0.84	< 0.1	0.004	0.3	2.9	0.232	< 0.1
10/31/2016	MAX	8.16	350	180	130	2.5	0.065	< 1	28	32	14	0.92	< 0.1	0.0038	0.31	1.9	0.033	< 0.1
4/24/2017	MAX	8.2	340	180	120	2	0.067	< 1	27	30	13	0.88	0.1	0.0041	0.31	2.5	< 0.01	< 0.1
8/10/2017	MAX	8.19	330	190	120	3.1	0.067	< 1	27	29	14	0.83	< 0.1	0.0046	0.35	2.8	0.022	< 0.1
9/28/2017	MAX	8.24	350	190	120	3.8	0.062	< 1	27	29	14	0.81	0.11	0.0043	0.29	3.6	0.01	< 0.1
11/6/2017	MAX	8.08	350	190	130	3.7	0.064	< 1	28	30	14	0.92	0.12	0.0044	0.3	3.2	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

Monitor

94-I
Bedrock
20.86 - 25.2 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
5/9/2012	Maxx	8.17	300	160	86	< 1	0.078	< 1	17	36	10	0.7	< 0.1	0.004	< 0.05	4.8	0.023	< 0.1
8/15/2012	Maxx	8.07	310	160	96	< 1	0.07	< 1	20	34	11	0.78	0.14	0.005	0.12	4.2	< 0.01	< 0.1
10/3/2012	Maxx	7.95	310	170	100	< 1	0.068	< 1	20	34	12	0.77	0.12	0.0074	0.21	3.6	0.011	< 0.1
11/22/2012	Maxx	7.87	310	170	96	1.3	0.075	< 1	19	35	12	0.72	< 0.1	0.0078	0.12	4.5	< 0.01	< 0.1
5/27/2013	MAX	8.2	310	160	98		0.058		20	34	12	0.73	0.1	0.0047	0.2			
7/30/2013	MAX	8.19	300	160	98	< 1	0.069	< 1	20	33	12	0.72	0.13	0.0051	0.28	3.9	< 0.01	< 0.1
9/26/2013	MAX	8.3	310	160	110	1	0.072	< 1	21	34	13	0.79	0.15	0.0065	0.14	3.5	< 0.01	< 0.1
11/13/2013	MAX	8.18	310	170	100	< 1	0.062	< 1	20	31	12	0.7	0.11	0.0068	0.15	2.7	< 0.01	< 0.1
5/6/2014	MAX	8.27	300	160	100	< 1	0.071	< 1	21	32	12	0.84	0.12	0.0049	0.19	3	< 0.01	< 0.1
8/1/2014	MAX	8.13	310	160	90	1.1	0.066	< 1	18	33	11	0.63	< 0.1	0.0046	0.16	3	0.021	< 0.1
10/2/2014	MAX	8.11	300	160	99	1.3	0.075	< 1	20	31	12	0.76	0.14	0.007	0.19	2.6	< 0.01	< 0.1
11/19/2014	MAX	8.17	310	160	94	< 1	0.076	< 1	19	30	11	0.67	0.16	0.0077	0.21	1.9	< 0.01	< 0.1
5/6/2015	MAX	8.02	300	160	95	1.3	0.071	< 1	19	34	11	0.72	0.12	0.0044	0.13	2.9	0.02	< 0.1
7/30/2015	MAX	8.04	300	160	97	< 1	0.063	< 1	19	32	12	0.68	< 0.1	0.0044	0.13	2.6	0.019	< 0.1
10/15/2015	MAX	8.19	300	160	95	< 1	0.061	< 1	19	30	12	0.7	0.13	0.0065	0.14	2.6	0.019	< 0.1
11/17/2015	MAX	8.18	300	160	100	1.1	0.079	< 1	20	31	12	0.72	0.15	0.0065	0.21	2.7	0.083	< 0.1
4/27/2016	MAX	8.23	290	160	98	< 1	0.067	< 1	20	34	12	0.66	< 0.1	0.0044	0.14	2.6	< 0.01	< 0.1
8/10/2016	MAX	8.18	300	160	89	< 1	0.069	< 1	18	31	11	0.68	0.11	0.0041	0.15	2.2	0.028	< 0.1
8/31/2016	MAX	8.18	300	160	92	< 1	0.068	< 1	18	30	11	0.68	0.12	0.0059	0.15	2.1	0.104	< 0.1
10/31/2016	MAX	8.19	300	160	100	1.6	0.07	< 1	20	33	12	0.74	0.14	0.005	0.23	2.7	0.038	< 0.1
4/25/2017	MAX	8.12	300	160	96	3.3	0.072	< 1	19	32	12	0.68	0.13	0.0043	0.17	2.5	< 0.01	< 0.1
8/10/2017	MAX	8.15	290	170	92	< 1	0.076	< 1	18	32	11	0.64	0.12	0.0043	0.15	1.9	0.097	< 0.1
9/28/2017	MAX	8.24	300	160	94	< 1	0.068	< 1	19	31	12	0.61	0.13	0.0061	0.19	2.1	0.034	< 0.1
11/7/2017	MAX	8.28	310	170	97	< 1	0.07	< 1	19	32	12	0.72	0.14	0.0051	0.19	1.6	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

Monitor
95-I
Bedrock
36.47 - 41.4 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond-uctivity	Alk.	Hard.	Cl	B	Phenol	Ca	Na	Mg	K	Fe	Mn	NH3-N	SO4	NO2-N	NO3-N
				as CaCO3 mg/L		mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
5/16/2012	Maxx	8.01	570	240	280	22	0.022	< 1	60	14	33	1.5	< 0.1	0.0069	0.16	33	< 0.01	< 0.1
8/15/2012	Maxx	8.03	570	230	290	25	0.025	< 1	61	9.4	34	1.1	0.11	0.0056	0.18	35	< 0.01	< 0.1
10/3/2012	Maxx	8.1	580	230	300	28	0.017	< 1	63	9	35	1	0.62	0.03	0.23	33	< 0.01	< 0.1
11/20/2012	Maxx	8.05	580	230	290	30	0.023	< 1	62	9.4	34	1.1	0.11	0.0049	0.2	33	< 0.01	< 0.1
5/21/2013	MAX	8.07	600	230	300	35	0.03	< 1	63	9.5	34	1	0.1	0.0039	0.24	35	< 0.01	< 0.1
7/30/2013	MAX	8.07	600	220	310	38	0.023	< 1	65	9.6	35	0.99	< 0.1	0.0043	0.21	35	< 0.01	< 0.1
9/26/2013	MAX	8.23	600	230	320	38	0.023	< 1	67	9.7	36	1.1	< 0.1	0.004	0.18	34	< 0.01	< 0.1
11/13/2013	MAX	8.12	610	230	300	38	0.024	< 1	63	10	34	0.96	< 0.1	0.0074	0.16	35	< 0.01	< 0.1
5/5/2014	MAX	7.96	610	230	300	38	0.022	< 1	63	9.4	35	1.1	< 0.1	0.004	0.23	33	< 0.01	< 0.1
7/31/2014	MAX	8.05	610	220	290	40	0.022	< 1	59	9.4	34	0.9	0.12	0.0071	0.25	34	0.017	< 0.1
10/1/2014	MAX	8.03	600	230	300	39	0.028	< 1	62	8.8	34	1	< 0.1	0.0036	0.21	33	< 0.01	< 0.1
11/19/2014	MAX	8.06	610	230	300	41	0.028	< 1	63	9.5	35	1	< 0.1	0.0038	0.18	36	0.01	< 0.1
5/4/2015	MAX	7.95	620	230	300	41	0.02	< 1	65	9.9	34	0.99	< 0.1	0.0041	0.18	37	0.011	< 0.1
7/30/2015	MAX	7.93	620	230	310	43	0.018	< 1	65	9.7	35	0.99	< 0.1	0.0036	0.15	37	< 0.01	< 0.1
10/15/2015	MAX	8.15	620	220	300	45	0.018	< 1	64	9.1	33	0.98	0.1	0.0036	0.16	36	< 0.01	< 0.1
11/17/2015	MAX	8.11	620	220	310	44	0.035	< 1	65	9.9	36	1.1	0.1	0.0034	0.19	34	0.034	< 0.1
4/25/2016	MAX	8	640	230	300	49	0.025	< 1	64	9.8	35	0.99	0.11	0.0036	0.17	34	< 0.01	< 0.1
8/10/2016	MAX	8.05	660	220	310	52	0.022	< 1	67	9.6	34	1.1	0.12	0.0029	0.19	34	0.015	< 0.1
9/2/2016	MAX	7.96	640	230	310	47	0.023	< 1	66	9.3	34	0.98	0.12	0.0031	0.15	34	< 0.01	< 0.1
10/31/2016	MAX	8.06	660	220	330	53	0.025	< 1	71	11	37	1.1	0.14	0.0031	0.2	35	0.02	< 0.1
4/24/2017	MAX	8.06	670	220	320	53	0.024	< 1	67	10	36	1	0.12	0.0031	0.16	35	< 0.01	< 0.1
8/10/2017	MAX	8.06	650	230	320	58	0.024	< 1	67	10	37	1	0.13	0.0033	0.16	35	0.041	< 0.1
9/28/2017	MAX	8.14	670	230	310	61	0.021	< 1	64	9.8	36	0.95	0.13	0.0035	0.17	36	< 0.01	< 0.1
11/6/2017	MAX	8.15	680	230	330	57	0.024	< 1	69	11	39	1.1	0.15	0.0034	0.17	35	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

Monitor

96-I
Bedrock
36.3 - 36.56 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond- uctivity	Alk. as CaCO3	Hard. mg/L	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS	Lab	6.5- 8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
5/16/2012	Maxx	8.01	430	220	210	2.9	0.043	< 1	47	12	21	1.5	< 0.1	0.0037	0.17	15	< 0.01	< 0.1
10/4/2012	Maxx	8.02	460	220	220	4.2	0.035	< 1	51	11	23	1.5	< 0.1	0.0044	0.35	17	< 0.01	< 0.1
11/29/2012	Maxx	7.74	460	220	230	5.6	0.042	< 1	54	15	23	1.8	< 0.1	0.006	0.25	18	0.034	0.21
6/3/2013	MAX	7.92	460	220	220	4.3	0.046	< 1	51	11	23	1.4	< 0.1	0.0038	0.41	18	< 0.01	< 0.1
7/31/2013	MAX	8.04	450	220	230	3.3	0.04	< 1	54	10	23	1.5	< 0.1	0.0028	0.33	19	< 0.01	< 0.1
9/26/2013	MAX	8.24	460	220	240	4	0.035	< 1	55	10	25	1.5	< 0.1	0.0028	0.31	17	< 0.01	< 0.1
11/20/2013	MAX	8.09	460	230	220	4.6	0.034	< 1	50	9	22	1.3	< 0.1	0.0033	0.29	19	< 0.01	< 0.1
5/15/2014	MAX	8.08	460	220	230	3.4	0.038	1.1	53	9.4	23	1.3	< 0.1	0.0035	0.35	18	< 0.01	< 0.1
8/1/2014	MAX	8.04	440	220	220	4.2	0.034	1.1	49	9.7	23	1.3	< 0.1	0.0026	0.34	18	< 0.01	< 0.1
10/2/2014	MAX	7.99	450	220	220	3.4	0.039	< 1	51	9.2	23	1.4	< 0.1	0.0022	0.33	18	< 0.01	< 0.1
11/20/2014	MAX	8.11	460	220	230	5.3	0.042	< 1	53	10	24	1.5	< 0.1	0.0027	0.34	17	< 0.01	< 0.1
5/20/2015	MAX	7.81	450	220	230	5.1	0.06	< 1	53	11	23	1.5	< 0.1	0.004	0.32	16	0.015	< 0.1
7/30/2015	MAX	7.94	450	220	220	3.3	0.031	2.8	51	10	23	1.4	< 0.1	0.003	0.29	16	< 0.01	< 0.1
10/15/2015	MAX	8.03	450	220	210	3.9	0.033	< 1	49	9.9	22	1.4	< 0.1	0.0034	0.31	16	< 0.01	< 0.1
11/25/2015	MAX	8.07	450	220	230	4.4	0.027	< 1	52	11	23	1.5	< 0.1	0.0036	0.28	15	0.015	< 0.1
5/4/2016	MAX	8.12	450	220	230	4.3	0.036	< 1	52	11	24	1.4	< 0.1	0.0057	0.27	15	< 0.01	< 0.1
8/11/2016	MAX	8.03	460	220	220	3.4	0.035	< 5	51	10	22	1.4	< 0.1	0.0028	0.3	15	< 0.01	< 0.1
9/1/2016	MAX	8.1	450	220	210	4.2	0.036	< 1	49	10	21	1.3	< 0.1	0.0028	0.26	14	< 0.01	< 0.1
11/8/2016	MAX	7.98	440	220	210	4.1	0.037	< 1	47	10	22	1.3	< 0.1	0.003	0.28	14	< 0.01	< 0.1
5/8/2017	MAX	8.08	460	220	220	4	0.043	< 1	52	11	23	1.4	< 0.1	0.003	0.28	15	< 0.01	< 0.1
8/10/2017	MAX	8.07	430	230	210	3.6	0.037	< 1	48	11	22	1.4	< 0.1	0.0028	0.28	13	< 0.01	< 0.1
9/28/2017	MAX	8.2	450	220	210	4.5	0.036	< 1	49	10	22	1.3	< 0.1	0.0032	0.27	14	< 0.01	< 0.1
11/14/2017	MAX	8.37	440	220	220	4.9	0.044	< 2	51	11	23	1.4	< 0.1	0.0034	0.31	14	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard. as CaCO3 mg/L	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 96-II Bedrock 29.41 - 33.98 m	5/16/2012	Maxx	7.79	1100	280	390	100	0.022	< 1	98	81	37	2.1	< 0.1	0.053	0.073	110	0.024	0.63
	10/4/2012	Maxx	7.9	1100	280	400	140	0.013	< 1	95	71	39	1.5	< 0.1	0.038	0.12	67	0.012	0.35
	11/29/2012	Maxx	7.72	1000	270	380	130	0.021	< 1	93	59	36	1.4	< 0.1	0.028	0.17	65	0.026	0.19
	6/3/2013	MAX	7.86	1000	260	395	130	0.022	< 1	94	67	36	1.3	< 0.1	0.028	0.1	63	< 0.01	0.16
	7/31/2013	MAX	7.86	1000	270	380	130	0.02	< 1	94	62	35	1.4	< 0.1	0.038	0.085	65	< 0.01	0.15
	9/26/2013	MAX	8.12	1000	270	400	130	0.02	< 1	97	64	38	1.4	< 0.1	0.036	0.22	62	< 0.01	0.14
	11/20/2013	MAX	7.96	990	270	350	120	0.018	< 1	85	55	33	1.3	< 0.1	0.025	< 0.05	59	< 0.01	0.11
	5/15/2014	MAX	7.86	960	260	360	120	0.024	< 1	90	56	34	1.2	< 0.1	0.024	0.078	58	< 0.01	< 0.1
	8/1/2014	MAX	7.92	910	260	330	99	0.019	< 1	79	50	32	1.2	< 0.1	0.031	0.1	55	0.011	< 0.1
	10/2/2014	MAX	7.84	830	260	330	86	0.023	< 1	79	43	32	1.3	< 0.1	0.022	0.12	51	< 0.01	< 0.1
	11/20/2014	MAX	7.99	830	250	340	82	0.025	< 1	81	44	33	1.4	< 0.1	0.02	0.22	50	< 0.01	< 0.1
	5/20/2015	MAX	7.75	960	260	370	120	0.038	< 1	89	57	35	1.5	< 0.1	0.024	0.13	60	< 0.01	< 0.1
	7/30/2015	MAX	7.82	900	260	360	97	0.017	< 1	85	53	35	1.3	< 0.1	0.016	< 0.05	54	< 0.01	< 0.1
	10/15/2015	MAX	7.88	860	250	330	94	0.019	< 1	82	44	31	1.3	< 0.1	0.018	0.066	54	< 0.01	< 0.1
	11/25/2015	MAX	8.03	760	240	280	65	0.014	< 1	65	22	29	1.1	< 0.1	0.015	0.087	45	0.019	< 0.1
	5/4/2016	MAX	8.06	890	250	340	100	0.02	< 1	80	50	33	1.2	< 0.1	0.022	0.06	57	< 0.01	< 0.1
	8/11/2016	MAX	7.95	870	260	340	89	0.02	< 1	83	46	31	1.3	< 0.1	0.019	0.11	54	< 0.01	< 0.1
	9/1/2016	MAX	8.01	770	250	300	66	0.019	< 1	72	36	30	1.2	< 0.1	0.018	0.069	48	< 0.01	< 0.1
	11/8/2016	MAX	7.92	740	250	300	64	0.022	< 1	72	34	30	1.1	< 0.1	0.016	0.096	49	0.01	< 0.1
	5/8/2017	MAX	8.1	920	260	360	99	0.018	< 1	88	52	34	1.3	< 0.1	0.021	< 0.05	59	< 0.01	< 0.1
	8/10/2017	MAX	7.93	750	260	310	68	0.023	< 1	72	36	31	1.2	< 0.1	0.017	0.076	48	< 0.01	< 0.1
	9/28/2017	MAX	8.23	800	260	320	80	0.022	< 1	75	41	32	1.2	< 0.1	0.017	0.072	52	< 0.01	< 0.1
	11/14/2017	MAX	8.3	730	250	310	63	0.027	< 2	73	33	31	1.2	< 0.1	0.015	0.11	47	< 0.01	< 0.1
Monitor C2-I Outwash 7.47 - 8.99 m	5/9/2012	Maxx	7.97	1100	290	430	160	0.022	< 1	110	60	40	1.3	1.8	0.036	0.29	69	< 0.01	< 0.1
	11/23/2012	Maxx	7.72	1100	290	440	150	0.023	< 1	110	57	38	1.4	2.3	0.039	0.47	58	< 0.01	< 0.1
	5/27/2013	MAX	7.9	1200	300	460		0.015		120	63	40	1.4	2.1	0.039	0.48			
	11/18/2013	MAX	7.81	1200	300	450	150	0.02	< 1	120	62	38	1.4	2.3	0.04	0.45	67	< 0.01	< 0.1
	5/6/2014	MAX	8	1200	290	470	150	0.024	< 1	120	67	40	1.5	2.1	0.043	0.47	78	< 0.01	< 0.1
	11/19/2014	MAX	7.94	1200	290	440	160	0.024	< 1	110	66	39	1.3	2.5	0.043	0.47	82	< 0.01	< 0.1
	5/6/2015	MAX	7.93	1200	290	460	160	0.021	< 1	120	71	39	1.5	1.8	0.039	0.43	65	0.032	< 0.1
	11/18/2015	MAX	8.06	1200	300	450	160	0.023	< 1	120	72	39	1.5	2.4	0.04	0.48	52	0.018	< 0.1
	4/27/2016	MAX	8.05	1200	310	460	160	0.022	< 1	120	81	42	1.6	2	0.04	0.45	42	< 0.01	< 0.1
	11/1/2016	MAX	8.03	1200	320	430	170	0.023	< 1	110	78	38	1.5	2.5	0.039	0.53	38	< 0.01	< 0.1
	4/26/2017	MAX	7.85	1100	330	400	150	0.018	< 1	110	68	33	1.4	2.5	0.039	0.47	26	< 0.01	< 0.1
	11/7/2017	MAX	8.05	1100	340	390	150	0.016	< 1	100	65	32	1.4	2.3	0.036	0.55	25	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond- uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5- 8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor C6-I Outwash 10 - 11.48 m	5/7/2012	Maxx	7.92	3700	380	550	1000	0.14	< 1	150	590	44	2.2	0.44	0.73	< 0.05	39	< 0.01	< 0.1
	11/21/2012	Maxx	7.9	3800	380	590	1000	0.14	< 1	160	600	47	2.4	0.71	0.8	0.18	37	< 0.01	< 0.1
	5/21/2013	MAX	7.87	4000	380	560	1000	0.14	< 1	150	560	43	2.1	0.53	0.75	0.16	42	< 0.01	< 0.1
	11/14/2013	MAX	7.58	3400	420	570	830	0.26	< 1	150	480	47	2.1	0.79	0.81	0.18	34	< 0.01	< 0.1
	5/5/2014	MAX	7.59	3200	450	600	780	0.29	< 1	160	470	49	2.4	0.98	0.81	0.29	33	< 0.01	< 0.1
	11/17/2014	MAX	7.78	4400	380	610	1200	0.097	< 1	170	700	46	2.3	< 0.1	0.76	0.061	44	< 0.01	< 0.1
	5/4/2015	MAX	7.71	4100	400	610	1100	0.16	< 1	160	600	48	2.2	0.78	0.74	0.16	55	< 0.01	< 0.1
	11/17/2015	MAX	7.84	4800	360	670	1400	0.094	< 1	180	770	51	2.4	0.63	0.86	0.068	41	< 0.01	< 0.1
	4/25/2016	MAX	7.85	2900	510	600	630	0.36	< 1	150	430	54	2.3	1.2	0.77	0.31	30	< 0.01	< 0.1
	10/31/2016	MAX	7.71	4700	400	680	1200	0.15	< 1	180	690	54	2.4	0.77	0.77	0.096	40	< 0.01	< 0.1
	4/24/2017	MAX	7.81	2900	540	610	550	0.39	< 1	160	350	53	2.3	1.3	0.78	0.38	26	< 0.01	< 0.1
	11/6/2017	MAX	7.95	4700	420	630	1200	0.15	< 1	170	680	51	2.4	1.1	0.76	0.15	40	< 0.01	< 0.1
Monitor C9-I Outwash 5.79 - 7.32 m	5/8/2012	Maxx	7.77	1100	490	540	58	0.67	3	150	38	41	1.2	5.2	0.11	2.5	69	0.028	< 0.1
	11/21/2012	Maxx	7.94	1100	470	580	62	0.68	< 1	160	35	43	1.4	4.1	0.084	2	64	0.015	0.61
	5/21/2013	MAX	7.86	1100	500	580	34	0.67	< 1	160	26	42	1.3	5.3	0.11	3	84	0.05	< 0.1
	11/18/2013	MAX	7.7	1100	500	570	38	0.58	< 1	160	26	40	1.4	4.7	0.099	2.8	87	0.089	0.25
	5/5/2014	MAX	7.61	1100	480	610	32	0.58	< 1	170	25	43	1.5	6.1	0.12	3	92	< 0.01	< 0.1
	11/19/2014	MAX	7.8	1100	470	580	36	0.57	1.8	170	26	40	1.8	5.4	0.1	3.2	94	0.013	< 0.1
	5/6/2015	MAX	7.92	1000	470	570	27	0.48	< 1	160	21	39	1.4	5.5	0.11	3.2	79	0.022	< 0.1
	11/19/2015	MAX	7.9	1100	450	550	36	0.54	< 1	160	25	38	1.5	5	0.098	3.3	76	0.022	< 0.1
	4/25/2016	MAX	7.91	1100	490	560	30	0.5	< 1	160	22	40	1.6	5	0.11	3.4	72	< 0.01	< 0.1
	11/2/2016	MAX	7.95	1100	480	520	37	0.46	< 1	140	22	37	1.4	5.4	0.098	3.4	66	< 0.01	< 0.1
	5/1/2017	MAX	7.87	1200	520	600	36	0.45	< 1	170	20	42	1.6	5.7	0.11	3.6	72	< 0.01	< 0.1
	11/7/2017	MAX	7.68	1200	540	590	33	0.39	< 1	170	18	40	1.6	6.1	0.1	3.8	61	< 0.01	< 0.1
Monitor C10-I Outwash 6.94 - 8.46 m	5/8/2012	Maxx	7.81	1200	340	510	130	0.5	< 1	120	61	49	1.3	2.8	0.073	1.5	120	0.01	< 0.1
	11/21/2012	Maxx	7.93	1100	340	520	110	0.56	< 1	130	49	48	1.5	3.3	0.073	1.7	110	< 0.01	< 0.1
	5/21/2013	MAX	7.88	1200	340	510	120	0.55	< 1	130	55	48	1.4	2.9	0.075	1.7	110	< 0.01	< 0.1
	11/18/2013	MAX	7.72	1100	350	490	110	0.5	< 1	120	50	46	1.4	2.9	0.07	1.7	97	< 0.01	< 0.1
	5/5/2014	MAX	7.74	1100	350	500	100	0.47	< 1	120	51	47	1.5	2.7	0.072	1.6	91	< 0.01	< 0.1
	11/19/2014	MAX	7.83	1100	360	510	110	0.49	1.4	120	54	49	1.5	3.1	0.071	1.7	93	< 0.01	< 0.1
	5/6/2015	MAX	7.97	1100	360	470	91	0.42	< 1	120	42	43	1.3	2.4	0.072	1.6	84	0.013	< 0.1
	11/19/2015	MAX	7.83	1100	350	490	93	0.47	< 1	120	45	44	1.5	2.9	0.067	1.8	81	< 0.01	< 0.1
	4/25/2016	MAX	7.96	1100	370	470	91	0.44	< 1	120	44	44	1.4	2.7	0.069	1.9	77	< 0.01	< 0.1
	11/2/2016	MAX	7.99	1000	380	440	73	0.44	< 1	110	35	40	1.4	2.8	0.064	1.9	64	< 0.01	< 0.1
	5/1/2017	MAX	7.94	1100	390	470	78	0.43	< 1	120	36	42	1.5	2.7	0.07	1.8	61	< 0.01	< 0.1
	11/7/2017	MAX	7.78	1000	420	470	63	0.39	< 2	120	30	40	1.4	3	0.068	2	45	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

Monitor

C11-I
Outwash
5.87 - 7.4 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
5/8/2012	Maxx	7.68	1900	330	600	390	0.048	1.6	180	130	38	1.5	4	0.41	0.55	120	< 0.01	< 0.1
11/21/2012	Maxx	7.77	1800	350	630	340	0.061	< 1	180	150	42	1.8	3.8	0.42	0.74	80	< 0.01	< 0.1
5/21/2013	MAX	7.7	2200	360	660	410	0.047	< 1	190	200	43	1.8	4.2	0.41	0.63	110	< 0.01	< 0.1
11/18/2013	MAX	7.52	2200	430	610	420	0.044	1	180	210	40	1.8	3.9	0.34	0.56	58	< 0.01	< 0.1
5/5/2014	MAX	7.42	2400	560	650	440	0.039	< 1	190	240	43	1.9	4.6	0.29	0.58	35	< 0.01	< 0.1
11/19/2014	MAX	7.58	2100	530	630	350	0.048	2.2	180	220	42	1.9	4.7	0.25	0.55	33	< 0.01	< 0.1
5/6/2015	MAX	7.76	2400	560	730	470	0.038	< 1	210	220	49	1.9	6.7	0.27	0.57	23	< 0.01	< 0.1
11/19/2015	MAX	7.69	2300	570	740	390	0.052	< 1	210	190	49	1.9	9.3	0.21	0.67	12	< 0.01	< 0.1
4/25/2016	MAX	7.77	2400	600	780	500	0.035	< 1	220	240	55	1.8	13	0.17	0.57	11	< 0.01	< 0.1
11/2/2016	MAX	7.88	1800	580	680	280	0.056	< 1	200	130	48	1.6	15	0.17	0.84	10	< 0.01	< 0.1
5/1/2017	MAX	7.83	2200	550	680	360	0.036	< 1	200	200	47	1.7	17	0.15	0.64	43	< 0.01	< 0.1
11/8/2017	MAX	7.67	1800	580	640	290	0.047	< 5	180	140	44	1.7	19	0.15	0.8	15	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Reletaed Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - General Analysis - Closed Eastview Road Landfill Site

AECOM

Monitor

P10

Deep Bedrock

37.2 - 74.7 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
6/11/1992		7.62	422	207	212.4	5.75	0.06	< 0.5	43.8	18.4	21.7	< 1	0.09	< 0.01	< 0.17	17.6		0.04
11/10/1992		7.5	482	215	237.5	10.3	0.09	< 0.5	54.1	18.1	24.8	2	0.11	< 0.01	0.2	31.4		< 0.07
6/10/1993		7.53	487	223	223.8	12	0.1	< 0.5	49.7	18	24.1	2	0.15	< 0.01	0.25	29.8		< 0.02
11/5/1993		7.92	393	203	186.6	5.5	0.07	< 0.5	41.6	19	20	< 1	0.17	< 0.01	0.17	20.7		< 0.1
6/29/1994		8.3	423	215	225	10.9	0.4	< 0.5	50.4	19.5	24.1	1.77	0.33	< 0.01	0.26	23.8		0.8
10/27/1994		7.64	424	201.7	186	4.5	0.05	< 0.5	41.4	16.6	20	< 1	0.1	< 0.01	0.1	16.1		< 0.1
6/15/1995		8.2	341	199	206	6.4	0.55	< 0.5	45.7	19.71	22.17	1.65	< 0.01	< 0.01	0.1	14.6		< 0.5
11/15/1995		8.44	408	214.3	229	8.6	0.135	< 0.5	51.3	18.4	24.6	1.48	0.09	< 0.01	0.175	26.9	< 0.1	< 0.1
6/19/1996		7.92	357	208	196	4.7	0.092	< 0.5	43.3	19.3	21.3	1.54	< 0.01	< 0.01	0.204	12.7	< 0.06	< 0.05
11/14/1996		8.27	381	192	197	4.1	0.08	< 0.5	44.2	17.7	21.2	1.5	0.17	< 0.01	0.16	12.1	< 0.06	0.07
6/18/1997	WBL	7.97	395	209	190	2.97	0.092	< 0.72	42.6	16.3	20.4	1.28	0.18	#######	0.16	12	< 0.014	< 0.014
11/19/1997	WBL	7.75	407	206	216	3.28	0.049	< 0.72	53	14.5	20.2	1.15	0.172	#######	0.07	13.2	< 0.014	< 0.014
6/24/1998	WBL	7.48	514	231	237	9.4	0.14	< 0.72	54.7	17.4	24.5	1.57	0.166	#######	0.234	37.9	< 0.014	< 0.014
11/19/1998	CAN	7.8	420	220	190	2.9	< 0.05	< 0.2	43	16	20	< 1	0.15	< 0.01	0.25	12	< 0.1	< 0.1
8/18/1999	Barr	7.83	414	208	188	3.8	0.05	< 1	41.4	16.6	20.5	1.3	0.13	< 0.005	0.11	13	< 0.2	< 0.2
12/14/1999	Barr	7.85	418	206	187	2.8	0.05	< 1	41	16.4	20.6	< 1	0.23	< 0.005	0.11	9.4	< 0.2	< 0.2
7/19/2000	Phili	7.93	376	213	194	2.9	0.06	< 1	42.7	17.4	21.3	1	0.39	< 0.005	0.12	12.8	< 0.2	< 0.2
12/6/2000	Phili	7.82	333	222	187	2.9	0.06	< 1	41.5	16.2	20.1	1	0.09	< 0.005	0.12	10.7	< 0.2	< 0.2
7/10/2001	Phili	7.8	370	229	201	4.7	0.06	< 1	44.9	17.1	21.7	2	0.38	< 0.005	0.13	23	< 0.2	< 0.2
11/6/2001	Phili	7.84	396	217	199	2.3	0.049	< 1	40.7	16.7	21.4	1.4	0.13	< 0.005	0.08	10.7	< 0.2	< 0.2
6/12/2002	Phili	7.78	381	205	200	3.1	0.05	< 1	44.7	15.8	21.6	1	0.2	< 0.005	0.13	11.1	< 0.2	< 0.2
11/4/2002	Phili	7.85	381	211	189	2.9	0.05	< 1	42	16.3	20.5	2	0.33	< 0.005	0.07	10.8	< 0.2	< 0.2
6/18/2003	Phili	8.03	415	210	188.6	3	0.04	< 1	42.4	16.6	20	1	0.31	< 0.005	0.08	13	< 0.01	< 0.05
10/23/2003	Phili	8.05	380	206	191	3.1	0.05	< 1	42.5	16.6	20.5	1	0.06	0.006		12.8	< 0.2	< 0.2
6/29/2004	Phili	7.77	380	203	186.8	3.4	0.05	< 1	40.6	17	20.7	3	0.85	0.032	0.08	9.9	< 0.2	< 0.2
10/28/2004	Phili	7.87	392	198	190.3	2.2	0.04	< 1	43.4	16.3	19.8	2	0.84	0.026	0.13	8.8	< 0.2	< 0.2
7/12/2005	MAX	8.27	411	216	196	3	0.06	< 1	41.2	17.6	21.7	< 1	3.09	0.01	0.29	1	< 0.3	< 0.2
11/17/2005	MAX	8.13	354	202	180	3	0.05	< 1	37.1	16.1	20.4	1	1.02	0.02	0.19	4	0.24	< 0.1
6/27/2006	MAX	8.2	446	234	210	6	0.072	1	45	17	23	1.4	1.5	0.015	0.26	15	< 0.01	< 0.1
11/20/2006	MAX	8.3	404	221	190	2	0.05	< 1	40	17	21	1.4	1.6	0.013	0.24	8	< 0.01	< 0.1
6/22/2007	Maxx	8.1	501	240	250	10	0.1	< 1	56	11	27	1.6	1.2	0.009	0.42	26	< 0.01	< 0.1
11/2/2007	Maxx	8.3	400	210	190	2	0.49	< 1	42	17	21	1.4	1.8	0.014	0.14	9	< 0.01	< 0.1
6/24/2008	Maxx	8.2	389	206	160		0.048	< 1	33	14	18	1.1	1.1	0.01	0.1		< 0.01	< 0.1
12/12/2008	Maxx	8.1	401	216	180	1	0.044	< 1	39	16	20	1.3	1.5	0.021	0.15	5	< 0.01	< 0.1
7/14/2009	Maxx	7.7	394	209	170	2	0.049	< 1	36	15	19	1.3	1.8	0.019	0.31	2	< 0.01	< 0.1
11/30/2009	Maxx	7.9	400	209	190	2	0.063	< 1	41	16	21	1.4	2.8	0.019	0.2	6	< 0.01	< 0.1
11/17/2015	MAX	8.08	390	200	190	1.9	0.06	1.7	41	16	20	1.3	2.5	0.01	0.15	9.7	< 0.01	< 0.1
4/25/2016	MAX	8.12	380	210	190	1.9	0.053	< 1	42	17	20	1.3	< 0.1	0.0047	0.095	8.6	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 2-I Outwash 9.75 - 10.36 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	0.0021	0.029
	11/27/2012	Maxx	< 0.1	< 1	< 0.005	0.0028	0.011
	5/23/2013	MAX	< 0.1	< 1	< 0.005	0.0027	0.023
	11/14/2013	MAX	< 0.1	< 1	< 0.005	0.0017	0.013
	5/7/2014	MAX	< 0.1	< 1	< 0.005	0.0031	0.024
	11/21/2014	MAX	< 0.1	< 1	< 0.005	0.0027	0.019
	5/5/2015	MAX	< 0.1	< 1	< 0.005	0.0027	0.029
	11/17/2015	MAX	< 0.1	< 1	< 0.005	0.0029	0.02
	4/28/2016	MAX	< 0.1	< 1	< 0.005	0.0016	0.019
	11/1/2016	MAX	< 0.1	< 1	< 0.005	0.001	0.019
	5/2/2017	MAX	0.11	< 1	< 0.005	0.0023	0.02
	11/8/2017	MAX	< 0.1	< 1	< 0.005	0.0027	0.03
Monitor 2-II Outwash 0.2 - 4.57 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	0.001	0.048
	5/23/2013	MAX	0.15	< 1	< 0.005	0.0016	0.18
	5/7/2014	MAX	< 0.1	< 1	< 0.005	0.0023	0.073
	5/5/2015	MAX	< 0.1	< 1	< 0.005	0.0029	0.1
	4/28/2016	MAX	< 0.1	< 1	< 0.005	0.002	0.06
	5/2/2017	MAX	< 0.1	< 1	< 0.005	0.0022	0.048
Monitor 4-IR Bedrock 19.4 - 20.9 m	5/8/2012	Maxx		< 1	< 0.005	< 0.001	0.016
	8/15/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/3/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/21/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/24/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	7/30/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/27/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/13/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0063
	5/6/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/1/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0095
	10/2/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/18/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	7/30/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/15/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/19/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/26/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/10/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/25/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/10/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.005
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/8/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 4-IIR Lower Till 11.9 - 13.7 m	5/8/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0099
	11/21/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/24/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0067
	11/13/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0055
	5/6/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.013
	11/18/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/26/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/25/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.015
	11/7/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005

NOTE: ODWS - Ontario Drinking Water Standards

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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

	Date		Trace Metals				
			I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor **4-IIIR** **Upper Till** **1.06 - 4.11 m**	5/8/2012	Maxx	< 0.1	< 10	< 0.005	< 0.001	0.0086
	11/21/2012	Maxx	< 0.1	< 10	< 0.005	< 0.001	0.0058
	5/24/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/13/2013	MAX	< 0.1	1.1	< 0.005	< 0.001	0.0068
	5/6/2014	MAX	< 0.1	< 5	< 0.005	< 0.001	< 0.005
	11/24/2014	MAX	< 0.1	< 5	< 0.005	< 0.001	0.0079
	5/6/2015	MAX	< 0.1	< 10	< 0.005	< 0.001	< 0.005
	4/26/2016	MAX	< 0.1	< 5	< 0.005	< 0.001	0.008
	11/1/2016	MAX	< 0.1	< 10	< 0.005	< 0.001	0.0065
	4/25/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0069
	11/8/2017	MAX	< 0.1	< 10	< 0.005	0.0027	< 0.005
Monitor **5-II** **Upper Till** **1.71 - 7.81 m**	5/8/2012	Maxx	< 0.1	< 10	< 0.005	< 0.001	0.014
	11/28/2012	Maxx	< 0.1	< 5	< 0.005	< 0.001	0.0071
	5/24/2013	MAX	< 0.1	< 5	< 0.005	< 0.001	0.013
	11/19/2013	MAX	< 0.1	< 10	< 0.005	< 0.001	0.014
	5/7/2014	MAX	< 0.1	< 10	< 0.005	< 0.001	0.016
	11/24/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0099
	5/12/2015	MAX	< 0.1	< 10	< 0.005	< 0.001	0.013
	11/20/2015	MAX	< 0.1	< 10	< 0.005	< 0.001	0.017
	5/2/2016	MAX	< 0.1	< 5	< 0.005	< 0.001	< 0.005
	11/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.014
	5/1/2017	MAX	< 0.1	< 5	< 0.005	< 0.001	0.0056
	11/9/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.011
Monitor **9A-I** **Bedrock** **25.1 - 25.9 m**	5/10/2012	Maxx		< 1	< 0.005	< 0.001	< 0.005
	5/30/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/13/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/11/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/4/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/2/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor **9-I** **Outwash** **5.53 - 6.75 m**	5/10/2012	Maxx	< 0.1	< 1	< 0.005	0.0059	0.44
	5/31/2013	MAX	< 0.1	< 1	< 0.005	0.006	0.45
	5/13/2014	MAX	< 0.1	< 1	< 0.005	0.0043	0.23
	5/11/2015	MAX	< 0.1	< 1	< 0.005	0.0038	0.34
	5/4/2016	MAX	< 0.1	< 1	< 0.005	0.0039	0.33
	5/2/2017	MAX	< 0.1	< 1	< 0.005	0.0037	0.35
Monitor **10-II** **Outwash** **2.95 - 3.56 m**	5/10/2012	Maxx	< 0.1	< 10	< 0.005	< 0.001	0.011
	11/26/2012	Maxx	< 0.1	< 1	< 0.01	0.0013	0.0078
	5/30/2013	MAX	< 0.1	< 5	< 0.005	< 0.001	0.0081
	11/19/2013	MAX	< 0.1	< 10	< 0.005	< 0.001	0.012
	5/12/2014	MAX	< 0.1	< 5	< 0.005	< 0.001	0.02
	11/24/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.011
	5/12/2015	MAX	< 0.1	< 5	< 0.005	0.0013	0.017
	11/24/2015	MAX	< 0.1	< 5	< 0.005	< 0.001	0.01
	5/3/2016	MAX	< 0.1	< 5	< 0.005	< 0.001	0.021
	11/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.017
	5/3/2017	MAX	< 0.1	< 10	< 0.005	< 0.001	0.015
	11/13/2017	Deco					
Monitor **10-III** **Outwash/Peat** **0.27 - 1.49 m**	5/10/2012	Maxx	< 0.1	< 10	< 0.005	< 0.001	0.0052
	11/21/2012	INSV					
	5/30/2013	MAX	< 0.1	< 10	< 0.025	< 0.005	< 0.025
	11/19/2013	MAX	< 0.5	< 10	< 0.005	< 0.001	0.0097
	5/12/2014	MAX	< 0.1	< 10	< 0.025	< 0.005	< 0.025
	11/24/2014	MAX	< 0.1	< 1	< 0.005	0.0013	0.01
	5/12/2015	MAX	< 0.1	< 10	< 0.005	0.0013	0.0064
	11/24/2015	MAX	< 0.1	< 10	< 0.005	0.0012	< 0.005
	5/3/2016	MAX	< 0.1	< 5	< 0.005	0.0011	0.015
	11/3/2016	MAX	< 0.1	< 1	< 0.005	0.0013	0.04
	5/3/2017	MAX	< 0.1	< 5	< 0.005	< 0.001	0.017
	11/13/2017	Deco					

NOTE: ODWS - Ontario Drinking Water Standards

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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 11-I Upper Till 4.58 - 5.8 m	5/9/2012	Maxx	< 0.2	< 1	< 0.005	< 0.001	0.0059
	11/22/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/23/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0089
	11/14/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/8/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/25/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0053
	5/5/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0066
	4/27/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.011
	10/31/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0061
	4/25/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0065
	11/7/2017	MAX	< 0.1	< 1	< 0.005	0.001	< 0.005
Monitor 11-II Outwash 0.18 - 2.93 m	5/9/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0084
	5/23/2013	MAX	< 0.1	< 1	< 0.005	0.0022	0.018
	5/8/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.028
	5/5/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.023
	4/27/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.019
	4/25/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.029
Monitor 11-III Lower Till 17 - 18.52 m	5/9/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/23/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/8/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.017
	5/5/2015	MAX	< 0.1	< 1	< 0.005	0.001	0.0064
	4/27/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0069
	4/25/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 13-I Bedrock 24.4 - 25.62 m	5/14/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/29/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/13/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/8/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/3/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 13-II Lower Till 19.48 - 20.09 m	5/14/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0069
	5/29/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/13/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/8/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/3/2016	MAX	< 0.1	< 1	< 0.005	0.0055	0.0087
	5/3/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 13-III Upper Till 7.58 - 8.8 m	5/10/2012	Maxx	< 0.1	< 1	< 0.005	0.0014	0.011
	11/26/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/29/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/19/2013	MAX	< 0.1	< 1	< 0.005	0.0012	0.007
	5/13/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/27/2014	MAX	< 0.1	< 1	< 0.005	0.0012	0.0059
	5/8/2015	MAX	< 0.1	< 1	< 0.005	0.0011	0.0058
	11/25/2015	MAX		< 1	< 0.005	< 0.001	< 0.005
	5/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/4/2016	MAX	< 0.1	< 1	< 0.005	0.0011	< 0.005
	5/3/2017	MAX	< 0.1	< 1	< 0.005	0.001	< 0.005
	11/13/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 13-IV Outwash 4.08 - 5.3 m	5/10/2012	Maxx		< 10	< 0.005	< 0.001	0.015
	11/26/2012	Maxx	0.42	< 1	< 0.01	< 0.001	< 0.005
	5/29/2013	MAX	0.39	< 1	< 0.005	< 0.001	< 0.005
	11/19/2013	MAX	0.36	< 10	< 0.005	< 0.001	0.021
	5/13/2014	MAX	0.36	< 10	< 0.025	< 0.005	< 0.025
	11/27/2014	MAX	0.31	< 10	< -0.001	< 0.001	0.0066
	5/8/2015	MAX	< 0.1	< 10	< 0.025	< 0.005	< 0.025
	11/25/2015	MAX	0.2	< 10	< 0.005	< 0.001	< 0.005
	5/3/2016	MAX	0.25	< 10	< 0.005	< 0.001	0.0084
	11/4/2016	MAX	0.25	< 10	< 0.005	< 0.001	0.0058
	5/3/2017	MAX	0.16	< 5	< 0.005	< 0.001	0.0073
	11/13/2017	MAX	< 0.1	< 5	< 0.005	0.001	0.011

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Related Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

AECOM

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 13-V Outwash 0.1 - 2.24 m	5/10/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.028
	11/26/2012	Maxx	< 0.1	< 1	0.0095	< 0.001	0.014
	5/29/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.029
	11/19/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.04
	5/13/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.049
	11/27/2014	MAX	< 0.1	< 1	0.0059	< 0.001	0.063
	5/8/2015	MAX	0.32	< 1	< 0.005	< 0.001	0.026
	11/25/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.06
	5/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.053
	11/4/2016	MAX	< 0.1	< 1	< 0.005	0.0016	0.016
	5/3/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.039
	11/13/2017	MAX	< 0.1	< 1	< 0.005	0.0013	0.01
Monitor 14-II Outwash 4.52 - 5.13 m	5/14/2012	Maxx	< 0.1	< 5	< 0.005	0.001	0.012
	11/26/2012	Maxx	< 0.1	< 1	0.0085	0.0012	0.0061
	6/3/2013	MAX	< 0.1	< 2	< 0.005	< 0.001	0.0093
	11/20/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0074
	5/15/2014	MAX	< 0.1	< 1	< 0.005	0.0011	0.012
	11/21/2014	MAX	< 0.1	< 1	< 0.005	0.0012	0.0081
	5/19/2015	MAX	0.1	< 1	< 0.005	0.0017	0.011
	11/25/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0074
	5/3/2016	MAX	< 0.1	< 1	< 0.005	0.0014	0.011
	11/7/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.012
	5/8/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.01
	11/13/2017	MAX	< 0.1	< 1	< 0.005	0.0011	0.016
Monitor 14-III Outwash 0.15 - 2.29 m	5/14/2012	Maxx	< 0.1	< 1	< 0.005	0.0025	0.0089
	11/26/2012	Maxx	< 0.1	< 1	0.0073	0.002	0.013
	6/3/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0086
	11/20/2013	MAX	< 0.1	< 1	< 0.005	0.0012	0.0087
	5/15/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.014
	11/25/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.018
	5/19/2015	MAX	0.1	< 1	< 0.005	0.0027	0.014
	11/25/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0089
	5/3/2016	MAX	< 0.1	< 1	< 0.005	0.0013	0.017
	11/7/2016	MAX	< 0.1	< 1	< 0.005	0.0045	0.044
	5/8/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.013
	11/13/2017	MAX	< 0.1	< 1	< 0.005	0.0022	0.019
Monitor 14-IV Bedrock 25.63 - 27.15 m	5/14/2012	Maxx		< 1	< 0.005	< 0.001	< 0.005
	11/26/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	6/3/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/20/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/15/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0098
	11/21/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/19/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/25/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0056
	5/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/7/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/8/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0062
	11/13/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 15-I Bedrock 25.92 - 27.14 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.011
	5/27/2013	MAX	< 0.1		< 0.005	< 0.001	< 0.005
	5/8/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/7/2015	MAX	0.51	< 1	< 0.005	< 0.001	< 0.005
	5/3/2016	MAX	0.16	< 1	< 0.005	< 0.001	< 0.005
	4/27/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005

NOTE: ODWS - Ontario Drinking Water Standards
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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 15-II Lower Till 19.82 - 21.04 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/27/2013	MAX	< 0.1		< 0.005	0.0012	< 0.005
	5/8/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/7/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/27/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 15-III Upper Till 9.03 - 10.24 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	0.0015	0.011
	11/23/2012	Maxx	< 0.1	< 1	< 0.005	0.0011	< 0.005
	5/27/2013	MAX	< 0.1		< 0.005	0.0013	< 0.005
	11/19/2013	MAX	< 0.1	< 1	< 0.005	0.0012	0.0056
	5/8/2014	MAX	< 0.1	< 1	< 0.005	0.0014	< 0.005
	11/21/2014	MAX	< 0.1	< 1	< 0.005	0.0013	0.0058
	5/7/2015	MAX	< 0.1	< 1	< 0.005	0.0014	0.01
	11/24/2015	MAX	< 0.1	< 1	< 0.005	0.0011	0.0053
	5/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0077
	11/10/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.03
	4/27/2017	MAX	0.15	< 1	< 0.005	< 0.001	< 0.005
	11/8/2017	MAX	< 0.1	< 1	< 0.005	0.0012	< 0.005
Monitor 15-IV Outwash 5.6 - 6.82 m	5/7/2012	Maxx		< 1	< 0.005	0.0013	0.016
	11/23/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0083
	5/27/2013	MAX	< 0.1		< 0.005	< 0.001	0.0073
	11/19/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/8/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.013
	11/21/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.023
	5/7/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.015
	11/24/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.018
	4/29/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.02
	11/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.012
	4/27/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.013
	11/8/2017	MAX	< 0.1	< 1	< 0.005	0.0012	0.011
Monitor 15-V Fill 0.13 - 2.26 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	0.0012	0.018
	11/23/2012	Maxx	< 0.1	< 1	< 0.005	0.0014	0.02
	5/27/2013	MAX	< 0.1		< 0.005	0.0024	0.0059
	11/19/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/8/2014	MAX	< 0.1	< 1	< 0.005	0.0036	0.0073
	11/21/2014	MAX	< 0.1	< 1	< 0.005	0.0028	0.018
	5/7/2015	MAX	< 0.1	< 1	< 0.005	0.0018	0.03
	11/24/2015	MAX	< 0.1	< 1	< 0.005	0.0012	0.013
	4/29/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.023
	11/2/2016	MAX	< 0.1	< 1	< 0.005	0.0053	0.049
	4/27/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.015
	11/8/2017	MAX	< 0.1	< 1	< 0.005	0.0048	0.046
Monitor 16-I Lower Till 12.98 - 15.11 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0089
	5/22/2013	MAX	< 0.1	< 1	< 0.005	0.0014	< 0.005
	5/7/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0097
	5/5/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/28/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.006
	4/24/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0051

NOTE: ODWS - Ontario Drinking Water Standards
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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 16-IV Upper Till 3.81 - 4.42 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	0.0019	0.026
	11/21/2012	Maxx	< 0.1	< 1	< 0.005	0.0028	0.015
	5/23/2013	MAX	< 0.1	< 1	< 0.005	0.002	0.015
	11/14/2013	MAX	< 0.1	< 1	< 0.005	0.002	0.013
	5/7/2014	MAX	< 0.1	< 1	< 0.005	0.0028	0.021
	11/21/2014	MAX	< 0.1	< 1	< 0.005	0.0034	0.025
	5/5/2015	MAX	< 0.1	< 1	< 0.005	0.0032	0.016
	11/17/2015	MAX	< 0.1	< 1	< 0.005	0.0031	0.015
	4/28/2016	MAX	< 0.1	< 1	< 0.005	0.0029	0.018
	11/1/2016	MAX	< 0.1	< 1	< 0.005	0.0022	0.021
	4/24/2017	MAX	< 0.1	< 1	< 0.005	0.0037	0.017
	11/8/2017	MAX	< 0.1	< 1	< 0.005	0.0037	0.017
Monitor 16-V Fill 0.3 - 2.44 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.031
	5/22/2013	MAX	< 0.1	< 1	< 0.005	0.0013	0.025
	5/7/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.02
	5/5/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.021
	4/28/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.019
	4/24/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.026
Monitor 16-VI Lower Till 17.63 - 19.15 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0068
	5/22/2013	MAX	< 0.1	< 1	< 0.005	0.0072	0.0061
	5/7/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/5/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/28/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/24/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 16-VII Bedrock 25.48 - 27 m	5/14/2012	Maxx		< 1	< 0.005	< 0.001	0.0057
	11/21/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/22/2013	MAX	< 0.1	< 1	< 0.005	0.0047	0.005
	11/14/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/7/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/19/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/4/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.007
	11/17/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/28/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0074
	4/24/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/8/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 16-VIII Deep bedrock 40 - 54.9 m	11/24/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/10/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/9/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 17-I Bedrock 24.39 - 25.61 m	5/10/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.012
	5/29/2013	MAX	< 0.1	< 1	< 0.005	0.0011	0.014
	5/13/2014	MAX	< 0.1	< 1	< 0.005	0.001	0.018
	5/11/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.009
	5/4/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.018
	5/2/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.012
Monitor 17-II Lower Till 18.59 - 19.2 m	5/10/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/29/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.013
	5/13/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0064
	5/11/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/4/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/2/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Related Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 17-III Upper Till 5.91 - 7.12 m	5/10/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0066
	5/29/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0062
	5/13/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.015
	5/11/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0091
	5/4/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.013
	5/2/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0066
Monitor 17-IV Outwash 0.54 - 4.2 m	5/10/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.045
	11/21/2012	Dry					
	5/29/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.027
	5/13/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.032
	11/25/2014	MAX	< 0.1	< 1	< 0.005	0.0023	0.026
	5/11/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.042
	11/25/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.054
	5/4/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.034
	11/1/2016	Dry					
	5/2/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.018
	11/13/2017	INSV					
Monitor 18-III Outwash 0.13 - 2.88 m	5/10/2012	Maxx	< 0.1	< 5	< 0.005	0.0038	0.089
	11/28/2012	Maxx	< 0.1	< 10	< 0.005	0.0094	0.14
	5/30/2013	MAX	< 0.1	< 2	< 0.005	0.0052	0.11
	11/25/2013	MAX	< 0.5	< 1	< 0.005	0.0055	0.15
	5/13/2014	MAX	< 0.1	< 1	< 0.005	0.0045	0.09
	11/25/2014	MAX	< 1	< 1	< 0.005	0.0051	0.082
	5/11/2015	MAX	< 0.1	< 5	< 0.005	0.0032	0.12
	11/24/2015	MAX	< 0.1	< 5	< 0.005	0.0046	0.11
	5/3/2016	MAX	< 0.1	< 1	< 0.005	0.004	0.072
	11/7/2016	MAX	< 0.1	< 5	< 0.025	0.01	0.16
	5/2/2017	MAX	< 0.1	< 1	< 0.005	0.0041	0.064
	11/13/2017	MAX	< 0.1	< 5	< 0.005	0.0078	0.13
Monitor 19-I Bedrock 24.63 - 25.84 m	5/9/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/24/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0095
	5/6/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/11/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/26/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/26/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.02
Monitor 19-II Lower Till 19.82 - 21.04 m	5/9/2012	Maxx		< 1	< 0.005	< 0.001	< 0.005
	5/24/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0053
	5/11/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/26/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0058
	4/26/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 19-IV Upper Till 6.11 - 8.85 m	5/9/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/24/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0058
	5/6/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/11/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0097
	4/26/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0088
	4/26/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0097
Monitor 20-IR Bedrock 20.57 - 22.09 m	5/15/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0068
	5/22/2013	N/A					
	5/8/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/7/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	6/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/26/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.008

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Related Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor **21-IR** **Upper Till** **11 - 12.5 m**	5/16/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/28/2012	Maxx	< 0.1	< 1	< 0.005	0.0028	0.17
	5/29/2013	MAX	< 0.1	< 1	< 0.005	0.022	0.031
	11/19/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.005
	5/14/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/24/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/12/2015	MAX		< 1	< 0.005	< 0.001	< 0.005
	11/20/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.014
	11/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/2/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/9/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor **26-I** **Outwash** **0.8 - 2.3 m**	6/3/2013	N/A					
	5/14/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0057
	11/20/2014	froze					
	5/12/2015	MAX	< 0.1	< 1	< 0.005	0.0055	3.5
	5/5/2016	MAX	< 0.1	< 1	< 0.005	0.0061	3
	5/8/2017	MAX	< 0.1	< 1	< 0.005	0.0048	14
Monitor **28-I** **Outwash** **0.79 - 2.3 m**	5/17/2012	Maxx	< 0.1	< 1	< 0.005	0.0021	0.31
	6/3/2013	MAX	< 0.1	< 1	< 0.005	0.0013	2
	5/14/2014	MAX	< 0.1	< 1	< 0.005	0.0014	0.71
	11/20/2014	froze					
	5/12/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.57
	5/5/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.21
	5/9/2017	MAX	< 0.1	< 1	< 0.005	0.0012	0.91
Monitor **30-I** **Outwash** **0.6 - 2.3 m**	5/17/2012	Maxx	< 0.1	< 1	< 0.005	0.0014	0.011
	11/29/2012	Maxx	< 0.1	< 1	< 0.005	0.0018	0.58
	6/3/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.14
	11/14/2013	N/A					
	5/14/2014	MAX	< 0.1	< 1	< 0.005	0.0084	54
	11/20/2014	froze					
	5/12/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0085
	5/5/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.012
	5/9/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.016
Monitor **35-I** **Outwash** **5.6 - 5.9 m**	5/15/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.52
	5/22/2013	N/A					
	5/14/2014	MAX	< 0.1	< 1			
	5/13/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.66
	5/4/2016	MAX	< 0.1	< 1	< 0.005	0.0029	11
	5/8/2017	MAX	< 0.1	< 1	< 0.005	0.0046	9.3

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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

	Date		Trace Metals				
			I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 37-IR Bedrock 23.7 - 27.28 m	2/14/2012	Maxx	< 5	< 1	< 0.005	0.0029	0.025
	5/9/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.022
	8/15/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0081
	10/4/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.015
	11/22/2012	Maxx	< 0.1	< 1	< 0.005	0.0015	0.026
	5/23/2013	MAX	< 0.1	< 1	< 0.005	0.0012	0.061
	7/30/2013	MAX	< 0.1	< 1	< 0.005	0.001	0.036
	9/26/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.037
	11/13/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.028
	5/7/2014	MAX	< 0.1	< 1	< 0.005	0.0014	0.04
	8/2/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.025
	10/1/2014	MAX	< 0.1	< 1	< 0.005	0.0014	0.015
	11/20/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.019
	5/5/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0094
	7/30/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.017
	10/23/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.015
	11/18/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.018
	4/27/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.014
	8/10/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.012
	9/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.014
	10/31/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.011
	4/25/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0098
	8/10/2017	MAX	< 0.1	< 1	< 0.005	0.0011	< 0.005
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.012
	11/6/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.01
Monitor 37-IIR Bedrock 31.08 - 32.6 m	2/14/2012	Maxx	< 5	< 1	< 0.005	0.0032	0.078
	5/7/2012	NA					
	8/15/2012	Maxx	< 0.1	< 1	< 0.005	0.0015	0.033
	10/4/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.017
	11/22/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0074
	5/23/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	7/30/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/26/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0082
	11/13/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/14/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0097
	8/2/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0057
	10/1/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.011
	11/20/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/5/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	7/30/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0052
	10/23/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/18/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/27/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0081
	8/10/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0051
	9/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/31/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0056
	4/25/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0065
	8/10/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.011
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/6/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005

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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 50-I Bedrock 39.8 - 41.2 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/15/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/3/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/20/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0096
	5/21/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	7/30/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/26/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/13/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/5/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/1/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/1/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/17/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/4/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	7/30/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/15/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0056
	11/17/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/25/2016	MAX	< 0.1	< 5	< 0.005	< 0.001	< 0.005
	8/10/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/31/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/31/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/24/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0053
	8/10/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/6/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 53-I Bedrock 21 - 22.6 m	5/9/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0054
	8/16/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/4/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0054
	11/23/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/27/2013	MAX	< 0.1		< 0.005	< 0.001	< 0.005
	7/30/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/26/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/18/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/1/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/2/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/20/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	7/30/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/15/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/18/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/27/2016	MAX	0.16	< 1	< 0.005	< 0.001	< 0.005
	8/10/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/26/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/10/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/7/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005

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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor **53-IIR** **Lower Till** **13.7 - 15.2 m**	5/9/2012	Maxx	< 0.1	< 1	< 0.005	0.0016	0.0063
	11/23/2012	Maxx	< 0.1	< 1	< 0.005	0.001	< 0.005
	5/27/2013	MAX	< 0.1		< 0.005	0.001	< 0.005
	11/18/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/20/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0063
	5/6/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/24/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.005
	4/27/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0093
	11/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0065
	4/26/2017	MAX	< 0.1	< 1	< 0.005	0.0011	0.0077
	11/7/2017	MAX	< 0.1	< 1	< 0.005	0.0013	0.0076
Monitor **54-I** **Bedrock** **25.9 - 27.4 m**	5/8/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.074
	11/29/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.05
	5/27/2013	MAX	< 0.1		< 0.005	< 0.001	0.059
	11/19/2013	MAX	< 0.1	< 10	< 0.005	< 0.001	0.047
	5/7/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.066
	11/24/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.051
	5/12/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.045
	11/20/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.047
	5/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.047
	11/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.044
	5/1/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.046
	11/9/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.041
Monitor **60-I** **Lower Till** **13.31 - 14.83 m**	5/7/2012	N/A					
	10/4/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/22/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/22/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/18/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/5/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/20/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/7/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0063
	11/19/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	6/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/26/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/7/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor **60-II** **Upper Till** **10.67 - 12.19 m**	5/16/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/22/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/22/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/18/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0051
	5/5/2014	MAX	< 0.1	< 1	< 0.005	0.0011	< 0.005
	11/20/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.019
	5/7/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0071
	11/19/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/26/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.006
	11/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/26/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/7/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005

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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 60-III Upper Till 0.61 - 5.18 m	5/16/2012	Maxx	0.11	< 1	< 0.005	0.0013	0.0082
	11/22/2012	Maxx	< 0.1	1.7	< 0.005	< 0.001	< 0.005
	5/22/2013	MAX	1.1	1.4	< 0.005	0.0039	< 0.005
	11/18/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0064
	5/5/2014	MAX	0.61	< 1	< 0.005	0.0036	< 0.005
	11/20/2014	MAX	0.27	< 1	< 0.005	0.0038	< 0.005
	5/7/2015	MAX	< 0.1	< 1	< 0.005	0.0076	0.007
	11/19/2015	MAX	0.68	< 1	< 0.005	0.0052	0.0076
	4/26/2016	MAX	0.85	< 1	< 0.005	0.0051	0.0065
	11/2/2016	MAX	1.2	< 1	< 0.005	0.0015	< 0.005
	4/26/2017	MAX	0.6	< 1	< 0.005	0.0033	0.0061
	11/7/2017	MAX	< 0.1	1.5	< 0.005	0.0021	< 0.005
Monitor 90-I Deep bedrock 51.2 - 67.1 m	11/24/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/10/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/9/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor 90-II bedrock 31.42 - 32.94 m	5/8/2012	Maxx	< 0.1	< 1	< 0.005	0.0034	0.14
	11/23/2012	Maxx	< 0.1	< 1	< 0.005	0.003	0.095
	5/24/2013	MAX	< 0.1	< 1	< 0.005	0.0027	0.12
	11/14/2013	MAX	< 0.1	< 1	< 0.005	0.0021	0.11
	5/5/2014	MAX	< 0.1	< 1	< 0.005	0.0036	0.15
	11/19/2014	MAX	< 0.1	< 1	< 0.005	0.0026	0.096
	5/7/2015	MAX	< 0.1	< 1	< 0.005	0.0026	0.1
	11/19/2015	MAX	< 0.1	< 1	< 0.005	0.0014	0.079
	4/26/2016	MAX	< 0.1	< 1	< 0.005	0.0033	0.11
	11/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.025
	4/25/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.017
	11/9/2017	MAX	< 0.5	< 1	< 0.005	< 0.001	0.021
Monitor 91-I Bedrock 25.47 - 26.99 m	5/8/2012	NA					
	5/14/2012	Maxx		< 1	< 0.005	< 0.001	< 0.005
	11/29/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0088
	5/27/2013	MAX			< 0.005	< 0.001	0.012
	11/19/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/15/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/1/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/2/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/24/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/12/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.009
	7/30/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0069
	10/15/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/20/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0059
	5/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0055
	8/10/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/3/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/1/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/10/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/9/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Related Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 93-I Bedrock 24.16 - 28.73 m	5/7/2012	Maxx		< 1	< 0.005	< 0.001	0.0081
	8/15/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0095
	10/3/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0073
	11/20/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0096
	5/21/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0092
	7/30/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0092
	9/26/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.011
	11/13/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.046
	5/5/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0089
	7/31/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0082
	10/1/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0094
	11/17/2014	MAX	< 0.1	< 1	< 0.005	0.0013	0.042
	5/4/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0086
	7/30/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0086
	10/15/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0088
	11/17/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0078
	4/25/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0083
	8/10/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0076
	8/31/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0085
	10/31/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0076
	4/24/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0083
	8/10/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0077
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0082
	11/6/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0093
Monitor 94-I Bedrock 20.86 - 25.2 m	5/9/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/15/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/3/2012	Maxx	< 0.1	< 1	< 0.005	0.0011	< 0.005
	11/22/2012	Maxx	< 0.1	< 1	< 0.005	0.0011	0.0077
	5/27/2013	MAX	< 0.1		< 0.005	0.001	0.0072
	7/30/2013	MAX	< 0.1	< 1	< 0.005	0.001	0.0067
	9/26/2013	MAX	< 0.1	< 1	< 0.005	0.001	0.008
	11/13/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2014	MAX	< 0.1	< 1	< 0.005	0.0023	0.015
	8/1/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.014
	10/2/2014	MAX	< 0.1	< 1	< 0.005	0.0011	0.011
	11/19/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.01
	5/6/2015	MAX	< 0.1	< 1	< 0.005	0.0012	0.0083
	7/30/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/15/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.007
	11/17/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0074
	4/27/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/10/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/31/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0068
	10/31/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/25/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0051
	8/10/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/7/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.005

NOTE: ODWS - Ontario Drinking Water Standards
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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 95-I Bedrock 36.47 - 41.4 m	5/16/2012	Maxx	< 0.1	< 1	< 0.005	0.0014	0.049
	8/15/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.048
	10/3/2012	Maxx	< 0.1	< 1	< 0.005	0.0017	0.11
	11/20/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.058
	5/21/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.062
	7/30/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.06
	9/26/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.064
	11/13/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	0.058
	5/5/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.062
	7/31/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.044
	10/1/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.059
	11/19/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.058
	5/4/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.063
	7/30/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.06
	10/15/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.059
	11/17/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	0.061
	4/25/2016	MAX	< 0.1	< 5	< 0.005	< 0.001	0.063
	8/10/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.058
	9/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.061
	10/31/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.061
	4/24/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.064
	8/10/2017	MAX	< 0.1	< 1	< 0.005	0.001	0.063
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.066
	11/6/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	0.067
Monitor 96-I Bedrock 36.3 - 36.56 m	5/16/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/4/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/29/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0054
	6/3/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	7/31/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/26/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/20/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/15/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/1/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/2/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/20/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/20/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	7/30/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	10/15/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/25/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/4/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/11/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/8/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/8/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	8/10/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	9/28/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/14/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Related Objective, h - Heath Related Objective

C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor 96-II Bedrock 29.41 - 33.98 m	5/16/2012	Maxx	< 0.1	< 1	< 0.005	0.0087	0.47
	10/4/2012	Maxx	< 0.1	< 1	< 0.005	0.014	0.9
	11/29/2012	Maxx	< 0.1	< 1	< 0.005	0.014	0.9
	6/3/2013	MAX	< 0.1	< 1	< 0.005	0.021	1.2
	7/31/2013	MAX	< 0.1	< 1	< 0.005	0.018	1.1
	9/26/2013	MAX	< 0.1	< 1	< 0.005	0.02	1.2
	11/20/2013	MAX	< 0.1	< 1	< 0.005	0.018	1.1
	5/15/2014	MAX	< 0.1	< 1	< 0.005	0.018	1.1
	8/1/2014	MAX	< 0.1	< 1	< 0.005	0.015	0.89
	10/2/2014	MAX	< 0.1	< 1	< 0.005	0.013	0.77
	11/20/2014	MAX	< 0.1	< 1	< 0.005	0.014	0.76
	5/20/2015	MAX	< 0.1	< 1	< 0.005	0.02	1
	7/30/2015	MAX	< 0.1	< 1	< 0.005	0.016	0.91
	10/15/2015	MAX	< 0.1	< 1	< 0.005	0.015	0.86
	11/25/2015	MAX	< 0.1	< 1	< 0.005	0.0067	0.41
	5/4/2016	MAX	< 0.1	< 1	< 0.005	0.016	0.93
	8/11/2016	MAX	< 0.1	< 1	< 0.005	0.015	0.93
	9/1/2016	MAX	< 0.1	< 1	< 0.005	0.013	0.78
	11/8/2016	MAX	< 0.1	< 1	< 0.005	0.012	0.7
	5/8/2017	MAX	< 0.1	< 1	< 0.005	0.019	1.1
	8/10/2017	MAX	< 0.1	< 1	< 0.005	0.013	0.78
	9/28/2017	MAX	< 0.1	< 1	< 0.005	0.014	0.85
	11/14/2017	MAX	< 0.1	< 1	< 0.005	0.012	0.71
Monitor C2-I Outwash 7.47 - 8.99 m	5/9/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0067
	11/23/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0058
	5/27/2013	MAX	< 0.1		< 0.005	< 0.001	< 0.005
	11/18/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0084
	11/19/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/18/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/27/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.006
	11/1/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0061
	4/26/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/7/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor C6-I Outwash 10 - 11.48 m	5/7/2012	Maxx	< 0.1	< 1	< 0.005	0.0095	0.039
	11/21/2012	Maxx	< 0.1	< 1	< 0.01	0.0089	0.038
	5/21/2013	MAX	< 0.1	< 1	< 0.005	0.0064	0.045
	11/14/2013	MAX	< 0.1	< 5	< 0.01	0.018	0.045
	5/5/2014	MAX	< 0.1	< 1	< 0.005	0.017	0.043
	11/17/2014	MAX	< 0.1	< 10	< 0.005	0.0043	0.033
	5/4/2015	MAX	< 0.1	< 10	< 0.005	0.0074	0.044
	11/17/2015	MAX	< 0.1	< 1	< 0.005	0.004	0.051
	4/25/2016	MAX	< 0.1	< 5	< 0.005	0.019	0.043
	10/31/2016	MAX	< 0.1	< 10	< 0.005	0.0071	0.049
	4/24/2017	MAX	< 0.1	< 10	< 0.005	0.014	0.041
	11/6/2017	MAX	< 0.1	< 1	< 0.005	0.0072	0.035
Monitor C9-I Outwash 5.79 - 7.32 m	5/8/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0054
	11/21/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.0058
	5/21/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/18/2013	MAX	< 0.1	< 2	< 0.005	< 0.001	0.014
	5/5/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/19/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/19/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/25/2016	MAX	< 0.1	< 5	< 0.005	< 0.001	0.011
	11/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.007
	5/1/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/7/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005

NOTE: ODWS - Ontario Drinking Water Standards

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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

			Trace Metals				
	Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
	ODWS	Lab			0.05 h		5.0 a
Monitor C10-I Outwash 6.94 - 8.46 m	5/8/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.015
	11/21/2012	Maxx	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/21/2013	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/18/2013	MAX		< 1	< 0.005	< 0.001	0.0051
	5/5/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/19/2014	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	5/6/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/19/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	4/25/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/2/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.0055
	5/1/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
	11/7/2017	MAX	< 0.1	< 1	< 0.005	< 0.001	< 0.005
Monitor C11-I Outwash 5.87 - 7.4 m	5/8/2012	Maxx	< 0.1	< 5	< 0.005	0.0026	0.11
	11/21/2012	Maxx	< 0.1	< 1	< 0.005	0.0026	0.094
	5/21/2013	MAX	< 0.1	< 1	< 0.005	0.0012	0.1
	11/18/2013	MAX	< 0.1	< 2	< 0.005	< 0.001	0.099
	5/5/2014	MAX	< 0.1	< 1	< 0.005	0.0023	0.1
	11/19/2014	MAX	< 0.1	< 1	< 0.005	0.003	0.099
	5/6/2015	MAX	0.51	< 5	< 0.005	0.0031	0.13
	11/19/2015	MAX	< 0.1	< 5	< 0.005	0.0041	0.12
	4/25/2016	MAX	< 0.1	< 5	< 0.005	0.0036	0.12
	11/2/2016	MAX	< 0.1	< 1	< 0.005	0.0043	0.12
	5/1/2017	MAX	< 0.1	< 5	< 0.005	0.0042	0.1
	11/8/2017	MAX	< 0.1	< 1	< 0.005	0.0044	0.11

NOTE: ODWS - Ontario Drinking Water Standards
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C2: Routine Groundwater Quality - Trace Metels Analysis -Closed Eastview Road Landfill Site

Monitor

P10
Deep Bedrock
37.2 - 74.7 m

		Trace Metals				
Date		I mg/L	Br mg/L	Cr mg/L	Ni mg/L	Zn mg/L
ODWS	Lab			0.05 h		5.0 a
6/11/1992				< 0.01	< 0.05	0.05
11/10/1992				< 0.01	< 0.05	0.06
6/10/1993				< 0.01	< 0.05	0.04
11/5/1993				< 0.01	< 0.05	0.84
6/29/1994				< 0.01	< 0.025	< 0.01
10/27/1994				< 0.01	< 0.05	0.04
6/15/1995				< 0.01	< 0.05	0.06
11/15/1995				< 0.01	< 0.05	0.02
6/19/1996				< 0.01	< 0.05	0.02
11/14/1996				0.01	< 0.05	0.12
6/18/1997	WBL			0.0013	< 0.0062	0.0626
11/19/1997	WBL			0.0031	< 0.0062	0.0504
6/24/1998	WBL			0.0022	< 0.0062	0.329
11/19/1998	CAN			< 0.02	< 0.01	0.08
8/18/1999	Barr			< 0.005	< 0.02	0.061
12/14/1999	Barr			< 0.005	< 0.02	0.178
7/19/2000	Philip			< 0.005	< 0.02	0.128
12/6/2000	Philip			< 0.005	< 0.02	0.177
7/10/2001	Philip			< 0.005	< 0.02	0.113
11/6/2001	Philip			< 0.005	< 0.001	0.171
6/12/2002	Philip			< 0.005	< 0.02	0.09
11/4/2002	Philip			< 0.005	< 0.02	< 0.005
6/18/2003	Philip			< 0.005	< 0.02	0.225
10/23/2003	Philip			< 0.005	< 0.02	0.593
6/29/2004	Philip			< 0.005	< 0.02	0.316
10/28/2004	Philip			< 0.005	< 0.02	0.988
7/12/2005	MAX			< 0.01	< 0.05	0.2
11/17/2005	MAX			< 0.01	< 0.05	0.12
6/27/2006	MAX		< 1	< 0.005	< 0.001	0.05
11/20/2006	MAX	< 0.1	< 1	< 0.005	< 0.001	0.028
6/22/2007	Maxx	< 0.1	< 1	< 0.005	< 0.001	0.19
11/2/2007	Maxx		< 1	< 0.005	< 0.001	0.1
6/24/2008	Maxx	< 0.1		< 0.005	0.01	0.11
12/12/2008	Maxx		< 1	< 0.005	< 0.001	0.3
7/14/2009	Maxx		< 1	< 0.005	< 0.001	0.047
11/30/2009	Maxx		< 1	< 0.005	< 0.001	0.54
11/17/2015	MAX	< 0.1	< 1	< 0.005	< 0.001	8.5
4/25/2016	MAX	< 0.1	< 1	< 0.005	< 0.001	0.14

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Related Objective, h - Heath Related Objective

C3: Routine Surface Water Quality - General Analysis - Closed Eastview Road Landfill Site

SW 1 **Drainage Discharge**

Date	Lab.	Field pH	Cond-uctivity	Alk. CaCO3	Chloride mg/L	Boron mg/L	Phenol mg/L	NH3-N mg/L	Iron mg/L	Manganese mg/L	Chromium mg/L	Nickel mg/L	Zinc mg/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	TSS mg/L	Hard. CaCO3	Un-ion. NH3-N
PWQO		6.5-8.5				0.2	0.001		0.30		0.1	0.025	0.02							0.02
5/4/2012	Maxx	7.78	830	200	120	0.017	< 0.001	< 0.05	0.39	0.048	< 0.005	< 0.001	0.05	82	70	20	1.4	6	260	0.0007
6/6/2012	Maxx	6.97	840	250	88	< 0.01	< 0.001	< 0.05	0.19	0.1	< 0.005	0.0015	0.13	95	46	26	0.83	4	350	0.0001
8/13/2012	Maxx	7.30	670	190	67	0.021	< 0.001	< 0.05	0.34	0.051	< 0.005	0.0013	0.04	79	37	18	2.2	6	260	0.0005
9/25/2012	Maxx	7.40	790	240	85	0.02	< 0.001	0.12	0.24	0.095	< 0.005	0.0013	0.11	92	46	24	1.3	7	310	0.0006
12/4/2012	Maxx	7.24	790	200	89	0.032	< 0.001	< 0.05	0.1	0.019	< 0.005	< 0.001	0.044	89	60	22	1.9	< 1	290	0.0001
4/5/2013	MAX	7.61	760	190	110	0.013	< 0.001	< 0.05	< 0.1	0.016	< 0.005	< 0.001	0.036	71	53	18	0.58	2	280	0.0002
7/17/2013	MAX	7.58	850	290	89	0.021	< 0.001	0.17	0.59	0.14	< 0.005	0.0016	0.061	96	57	24	1	5	350	0.0022
9/12/2013	MAX	7.61	690	230	77	0.025	< 0.001	0.11	0.72	0.15	< 0.005	0.0015	0.081	78	50	18	1.9	21	260	0.0016
12/2/2013	MAX	7.71	890	310	100	0.022	0.003	0.13	0.53	0.36	< 0.005	0.0012	0.11	110	68	28	1.4	6	330	0.0008
3/31/2014	MAX	7.28	800	230	110	< 0.01	< 0.001	0.15	0.13	0.04	< 0.005	< 0.001	0.031	82	54	22	2.2	2	280	0.0003
7/16/2014	MAX	7.64	910	330	97	0.013	0.003	0.17	1.5	0.33	< 0.005	< 0.001	0.036	110	64	27	1.9	2	370	0.0024
8/6/2014	MAX	8.02	870	320	94	0.014	0.002	0.16	1.6	0.37	< 0.005	0.0011	0.032	100	60	23	1.8	3	330	0.0046
9/22/2014	MAX	7.53	680	250	68	0.02	0.005	0.31	0.42	0.043	< 0.005	< 0.001	0.021	76	47	18	1.8	< 1	280	0.0024
12/1/2014	MAX	7.94	790	280	87	0.02	0.001	0.12	0.43	0.081	< 0.005	0.0014	0.048	87	57	23	1.6	1	300	0.0013
4/14/2015	MAX	7.32	820	240	110	0.016	0.002	< 0.05	0.19	0.027	< 0.005	0.0011	0.018	77	62	19	1.8	< 1	290	0.0002
7/29/2015	MAX	6.84	910	290	110	0.02	< 0.001	< 0.05	0.35	0.16	< 0.005	0.0026	0.14	96	58	27	1.2	2	380	0.0001
9/10/2015	MAX	7.44	960	290	130	0.021	< 0.001	0.10	0.56	0.16	< 0.005	0.0022	0.088	100	60	27	1.4	8	350	0.0009
12/30/2015	MAX	7.81	690	220	70	0.024	< 0.001	< 0.05	0.31	0.054	< 0.005	< 0.001	0.035	77	44	19	2.6	3	260	0.0003
3/10/2016	MAX	7.40	720	200	96	0.014	< 0.001	< 0.05	0.16	0.026	< 0.005	< 0.001	0.027	70	57	18	1.3	3	230	0.0001
7/26/2016	MAX	7.46	990	280	130	0.018	< 0.001	0.09	0.67	0.13	< 0.005	0.0023	0.14	100	67	29	1.3	12	380	0.0007
10/6/2016	MAX	7.01	1100	300	130	0.021	< 0.001	0.09	0.45	0.14	< 0.005	0.0023	0.17	100	73	27	1.5	32	380	0.0002
10/28/2016	MAX	7.13	1000	310	130	0.021	< 0.001	0.08	0.75	0.14	< 0.005	0.0027	0.18	97	68	26	1.6	26	350	0.0001
11/24/2016	MAX	7.16	1000	280	130	0.021	< 0.001	< 0.05	0.26	0.11	< 0.005	0.0024	0.19	96	72	27	1.7	6	360	0.0001
4/5/2017	MAX	7.96	680	160	91	0.022	< 0.001	< 0.05	< 0.1	0.0088	< 0.005	< 0.001	0.024	62	53	15	1	< 1	230	0.0007
8/23/2017	MAX	7.01	960	290	120	0.025	< 0.005	< 0.05	0.16	0.051	< 0.005	0.0027	0.17	100	71	29	1.6	4	370	0.0001
10/26/2017	MAX	7.91	960	300	120	0.022	< 0.005	0.09	0.29	0.088	< 0.005	0.0032	0.17	97	70	27	1.8	3	340	0.0014
11/28/2017	MAX	7.87	960	260	120	0.022	< 0.002	< 0.05	0.17	0.064	< 0.005	0.0019	0.14	94	72	25	1.6	2	330	0.0006

C3: Routine Surface Water Quality - General Analysis - Closed Eastview Road Landfill Site

SW 2 **Ditch**

Date	Lab.	Field pH	Cond-uctivity	Alk. CaCO3	Chloride mg/L	Boron mg/L	Phenol mg/L	NH3-N mg/L	Iron mg/L	Manganese mg/L	Chromium mg/L	Nickel mg/L	Zinc mg/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	TSS mg/L	Hard. CaCO3	Un-ion. NH3-N
PWQO		6.5-8.5				0.2	0.001		0.30		0.1	0.025	0.02							0.02
5/4/2012	Maxx	7.68	690	160	100	0.033	0.001	< 0.05	1.2	0.075	< 0.005	0.0012	0.032	57	61	18	3.7	16	200	0.0007
6/6/2012	Maxx	7.21	1500	330	230	0.067	0.001	0.10	2.5	2.1	< 0.005	0.0026	0.018	120	160	27	1.4	11	410	0.0005
8/13/2012	Maxx	7.65	540	140	42	0.042	< 0.001	< 0.05	0.95	0.033	< 0.005	0.0012	0.031	65	30	12	3.2	8	210	0.0010
9/25/2012	Maxx	7.90	540	200	35	0.04	< 0.001	0.07	0.21	0.018	< 0.005	< 0.001	0.0081	69	27	15	2.6	< 1	230	0.0011
12/4/2012	Maxx	7.44	580	190	42	0.038	< 0.001	0.09	0.55	0.048	< 0.005	0.0011	0.027	73	30	20	3.5	5	240	0.0003
4/5/2013	MAX	7.88	870	210	120	0.033	< 0.001	0.07	0.47	0.077	0.0075	0.0023	0.074	76	65	18	2.3	2	300	0.0005
7/17/2013	MAX	7.38	1100	290	130	0.069	< 0.001	0.29	1.8	2.1	< 0.005	0.0045	0.057	100	110	23	2.5	5	340	0.0025
9/12/2013	MAX	7.83	300	99	23	0.033	< 0.001	0.05	1.8	0.067	< 0.005	0.002	0.05	38	15	7.8	3.5	17	120	0.0014
12/2/2013	MAX	7.39	970	290	120	0.06	0.002	0.43	1.5	0.24	< 0.005	0.0026	0.1	100	82	27	3.6	2	360	0.0011
3/31/2014	MAX	7.64	650	180	88	< 0.01	< 0.001	0.39	0.75	0.17	< 0.005	< 0.001	0.03	64	48	14	3.9	5	210	0.0018
7/16/2014	MAX	7.73	600	180	76	0.026	0.002	0.05	1.2	0.12	< 0.005	0.0011	0.014	57	48	14	2.7	3	200	0.0009
8/6/2014	MAX	######	590	170	79	0.035	0.001	0.11	1.3	0.17	< 0.005	< 0.001	0.021	59	47	12	2.9	3	190	0.1100
9/22/2014	MAX	7.74	360	120	28	0.023	< 0.001	0.08	1.4	0.087	< 0.005	0.0014	0.031	45	18	9.4	4.6	17	160	0.0010
12/1/2014	MAX	7.78	930	330	99	0.023	< 0.001	0.07	0.28	0.093	< 0.005	< 0.001	0.0095	110	65	27	2.5	4	360	0.0005
4/14/2015	MAX	7.19	1000	210	160	0.029	0.002	0.12	0.56	0.057	< 0.005	0.0012	0.036	76	98	18	4	2	280	0.0003
7/29/2015	MAX	6.67	1700	380	300	0.079	0.003	0.63	13	1.7	< 0.005	0.0025	0.015	130	230	29	2.7	45	440	0.0010
9/10/2015	MAX	7.87	770	190	120	0.047	< 0.001	0.06	0.85	0.12	< 0.005	< 0.001	<0.005	64	66	15	2.9	3	210	0.0015
12/30/2015	MAX	8.38	580	170	57	0.023	< 0.001	0.08	0.51	0.074	< 0.005	< 0.001	0.011	62	32	17	5.7	4	220	0.0018
3/10/2016	MAX	8.13	760	180	110	0.024	< 0.001	< 0.05	0.39	0.039	< 0.005	0.0013	0.033	61	65	16	8.4	1	200	0.0007
7/26/2016	MAX	7.83	1200	270	160	0.076	< 0.001	1.30	2.1	0.92	< 0.005	0.002	0.0095	100	110	23	6.1	14	360	0.0300
10/6/2016	MAX	7.09	970	290	130	0.052	< 0.001	0.14	0.92	0.25	< 0.005	0.0012	<0.005	85	79	17	7.1	4	310	0.0004
10/28/2016	MAX	7.69	720	190	95	0.034	< 0.001	< 0.05	0.4	0.04	< 0.005	< 0.001	0.01	61	57	13	5.3	6	230	0.0002
11/24/2016	MAX	7.92	800	200	120	0.035	< 0.001	0.11	0.3	0.033	< 0.005	< 0.001	0.028	62	70	14	5.7	17	220	0.0010
4/5/2017	MAX	7.43	630	190	69	0.024	< 0.001	< 0.05	0.25	0.025	< 0.005	< 0.001	0.018	61	41	15	3.3	2	230	0.0003
8/23/2017	MAX	7.53	1600	400	270	0.094	< 0.005	0.86	8.4	0.32	< 0.005	0.0016	0.025	120	160	30	13	49	470	0.0098
10/26/2017	MAX	7.38	740	230	92	0.031	< 0.002	0.06	0.66	0.079	< 0.005	0.0014	0.062	69	54	18	4.9	3	250	0.0002
11/29/2017	MAX	7.78	790	230	100	0.036	0.002	0.09	0.48	0.16	< 0.005	0.0014	0.048	73	63	18	4.5	1	270	0.0006

C3: Routine Surface Water Quality - General Analysis - Closed Eastview Road Landfill Site

SW 3A **Hadati Creek**

Date	Lab.	Field pH	Cond-uctivity	Alk. CaCO3	Chloride mg/L	Boron mg/L	Phenol mg/L	NH3-N mg/L	Iron mg/L	Manganese mg/L	Chromium mg/L	Nickel mg/L	Zinc mg/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	TSS mg/L	Hard. CaCO3	Un-ion. NH3-N
PWQO		6.5-8.5				0.2	0.001		0.30		0.1	0.025	0.02							0.02
5/4/2012	Maxx	7.89	820	200	130	0.026	0.001	< 0.05	0.69	0.083	< 0.005	0.0013	0.038	78	77	21	2.3	7	260	0.0011
6/6/2012	Maxx	7.61	960	270	110	0.029	< 0.001	< 0.05	1.4	0.21	< 0.005	0.0021	0.089	100	65	27	1.3	33	360	0.0005
8/13/2012	Maxx	7.80	630	180	56	0.041	< 0.001	0.07	0.69	0.064	< 0.005	0.0013	0.033	75	35	16	2.8	8	240	0.0016
9/25/2012	Maxx	7.97	660	220	49	0.043	< 0.001	0.09	0.41	0.058	< 0.005	0.0011	0.031	80	39	19	2.3	3	260	0.0018
12/4/2012	Maxx	7.39	710	200	66	0.032	< 0.001	0.09	0.32	0.044	< 0.005	< 0.001	0.038	82	46	21	2.6	3	270	0.0002
4/5/2013	MAX	7.76	800	200	110	0.021	< 0.001	< 0.05	0.26	0.045	< 0.005	0.0012	0.056	80	60	20	1	4	290	0.0003
7/17/2013	MAX	7.83	900	290	100	0.037	< 0.001	0.19	1.3	0.46	< 0.005	0.0023	0.064	100	70	25	1.5	7	360	0.0044
9/12/2013	MAX	7.75	530	170	48	0.033	< 0.001	0.05	1.3	0.085	< 0.005	0.0015	0.044	64	39	15	2.9	11	210	0.0010
12/2/2013	MAX	7.58	950	320	110	0.039	0.002	0.23	0.73	0.37	< 0.005	0.0015	0.092	110	77	29	2	4	360	0.0010
3/31/2014	MAX	7.32	750	210	100	< 0.01	< 0.001	0.26	0.41	0.1	< 0.005	0.0015	0.033	73	51	18	2.9	4	250	0.0006
7/16/2014	MAX	7.75	800	270	91	0.02	0.002	0.13	1.2	0.21	< 0.005	< 0.001	0.042	92	60	23	2.1	2	320	0.0021
8/6/2014	MAX	7.80	360	110	34	0.025	0.002	0.15	1.4	0.27	< 0.005	0.0013	0.05	95	59	21	2.1	7	140	0.0026
9/22/2014	MAX	7.22	540	190	44	0.025	< 0.001	0.09	1.5	0.1	< 0.005	0.0016	0.045	67	33	15	3.4	11	230	0.0003
12/1/2014	MAX	7.81	830	280	95	0.027	0.002	0.13	0.64	0.13	< 0.005	0.0017	0.052	89	62	23	2.4	4	310	0.0009
4/14/2015	MAX	7.35	890	230	130	0.02	0.002	0.07	0.3	0.04	< 0.005	< 0.001	0.026	77	69	19	2.3	1	290	0.0002
7/29/2015	MAX	7.16	1000	310	130	0.044	< 0.001	0.08	0.84	0.14	< 0.005	0.0022	0.051	100	75	28	1.5	45	400	0.0004
9/10/2015	MAX	7.76	910	270	120	0.039	< 0.001	0.09	0.67	0.11	< 0.005	0.0014	0.054	91	65	23	1.9	3	310	0.0015
12/30/2015	No Fl																			
3/10/2016	MAX	7.83	700	200	100	0.017	< 0.001	< 0.05	0.24	0.035	< 0.005	0.0012	0.028	69	61	18	3.5	1	220	0.0004
7/26/2016	Dry																			
10/6/2016	MAX	7.17	1100	320	140	0.041	< 0.001	0.09	0.48	0.11	< 0.005	0.0023	0.11	98	68	27	1.7	6	390	0.0003
10/28/2016	MAX	7.50	960	280	120	0.04	< 0.001	0.11	0.33	0.079	< 0.005	0.002	0.088	91	69	23	3	2	310	0.0004
11/24/2016	MAX	7.50	990	280	140	0.038	< 0.001	0.05	0.27	0.059	< 0.005	0.0021	0.11	92	77	24	2.9	1	340	0.0002
4/5/2017	MAX	7.64	690	170	74	0.025	< 0.001	< 0.05	0.16	0.018	< 0.005	< 0.001	0.022	63	52	16	1.9	2	230	0.0004
8/23/2017	MAX	7.27	950	310	110	0.04	< 0.002	< 0.05	0.52	0.12	< 0.005	0.0025	0.11	110	71	29	2	6	380	0.0003
10/26/2017	MAX	7.79	820	260	99	0.035	< 0.005	0.05	0.58	0.084	< 0.005	0.002	0.071	84	62	22	4.4	2	290	0.0005
11/29/2017	MAX	7.92	910	260	120	0.032	0.001	0.08	0.35	0.1	< 0.005	0.0016	0.068	83	64	21	2.8	17	320	0.0008

C3: Routine Surface Water Quality - General Analysis - Closed Eastview Road Landfill Site

SW 4 **Wetland Discharge**

Date	Lab.	Field pH	Cond-uctivity	Alk. CaCO3	Chloride mg/L	Boron mg/L	Phenol mg/L	NH3-N mg/L	Iron mg/L	Manganese mg/L	Chromium mg/L	Nickel mg/L	Zinc mg/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	TSS mg/L	Hard. CaCO3	Un-ion. NH3-N
PWQO		6.5-8.5				0.2	0.001		0.30		0.1	0.025	0.02							0.02
5/4/2012	Maxx	8.35	510	130	61	0.022	< 0.001	< 0.05	2.1	0.11	< 0.005	0.0023	0.048	45	37	18	4.2	50	160	0.0040
6/6/2012	No flo																			
8/13/2012	No flo																			
9/25/2012	No flo																			
12/4/2012	Maxx	7.90	610	180	44	0.029	< 0.001	0.09	0.55	0.033	< 0.005	0.0012	0.036	69	30	22	3.2	8	250	0.0009
4/5/2013	MAX	7.91	570	180	61	0.019	< 0.001	< 0.05	0.45	0.21	< 0.005	0.0012	0.0089	62	22	13	2.4	3	220	0.0004
7/17/2013	No flo																			
9/12/2013	MAX	8.41	240	83	17	0.033	< 0.001	0.17	3.5	0.16	< 0.005	0.0036	0.091	37	10	8.3	4.1	47	100	0.0160
12/2/2013	MAX	8.23	670	230	57	0.039	0.002	0.06	0.25	0.03	< 0.005	< 0.002	0.0083	77	39	22	4.5	5	270	0.0010
3/31/2014	MAX	7.23	630	170	86	< 0.01	< 0.001	0.55	0.83	0.2	< 0.005	< 0.001	0.015	63	48	14	4.2	6	200	0.0010
7/16/2014	MAX	8.10	430	110	48	0.023	0.002	< 0.05	1.1	0.11	< 0.005	0.0013	0.028	43	40	9.7	2.7	11	130	0.0024
8/6/2014	MAX	8.05	800	270	92	0.028	0.001	0.08	0.89	0.078	< 0.005	< 0.001	0.018	41	20	8.4	2.5	9	300	0.0037
9/22/2014	MAX	7.22	330	120	23	0.021	< 0.001	0.10	1.4	0.092	< 0.005	0.0014	0.03	43	13	9.4	5.1	20	150	0.0004
12/1/2014	MAX	7.65	690	220	77	0.029	0.002	0.19	1.3	0.2	< 0.005	0.0012	0.019	68	50	18	4.8	11	250	0.0008
4/14/2015	MAX	7.23	900	200	140	0.021	0.003	0.08	0.31	0.036	< 0.005	< 0.001	0.0057	67	88	18	4.5	2	250	0.0003
7/29/2015	No Fl																			
9/10/2015	MAX	7.84	470	150	45	0.032	< 0.001	< 0.05	0.66	0.18	< 0.005	< 0.001	<0.005	49	27	12	3.2	35	170	0.0014
12/30/2015	MAX	8.45	590	190	48	0.021	< 0.001	0.10	0.34	0.033	< 0.005	< 0.001	0.0097	57	32	16	6.5	3	240	0.0027
3/10/2016	MAX	8.33	1000	190	170	0.025	< 0.001	< 0.05	0.11	0.013	< 0.005	0.0012	<0.005	56	120	19	20	2	200	0.0013
7/26/2016	Dry																			
10/6/2016	MAX	7.31	500	150	44	0.026	< 0.001	< 0.05	2.8	0.26	< 0.005	0.0028	0.057	54	29	13	6.7	200	180	0.0003
10/28/2016	MAX	7.90	510	140	49	0.023	< 0.001	0.44	0.82	0.12	< 0.005	0.0016	0.017	46	32	12	5.8	11	170	0.0039
11/24/2016	MAX	8.40	580	140	87	0.023	< 0.001	0.31	0.44	0.042	< 0.005	0.0011	0.017	46	51	11	5.7	19	170	0.0081
4/5/2017	MAX	7.63	580	180	64	0.018	< 0.001	< 0.05	0.29	0.018	< 0.005	< 0.001	0.0073	59	35	15	3.5	8	210	0.0004
8/23/2017	MAX	7.24	470	130	57	0.03	< 0.001	0.08	2.6	0.3	< 0.005	0.0028	0.065	51	34	16	4.7	24	170	0.0006
10/26/2017	No Fl																			
11/29/2017	MAX	7.71	730	220	100	0.035	< 0.001	0.09	0.52	0.16	< 0.005	0.0011	0.026	63	55	15	4.7	2	240	0.0005

C3: Routine Surface Water Quality - General Analysis - Closed Eastview Road Landfill Site

SW 5 **Discharge to Site**

Date	Lab.	Field pH	Cond-uctivity	Alk. CaCO3	Chloride mg/L	Boron mg/L	Phenol mg/L	NH3-N mg/L	Iron mg/L	Manganese mg/L	Chromium mg/L	Nickel mg/L	Zinc mg/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	TSS mg/L	Hard. CaCO3	Un-ion. NH3-N
PWQO		6.5-8.5				0.2	0.001		0.30		0.1	0.025	0.02							0.02
5/4/2012	Maxx	7.72	930	230	140	0.027	< 0.001	< 0.05	0.67	0.071	< 0.005	< 0.001	0.011	93	76	26	2.5	9	300	0.0006
6/6/2012	No flo																			
8/13/2012	No flo																			
9/25/2012	No flo																			
12/4/2012	Maxx	7.50	560	200	36	0.024	< 0.001	< 0.05	0.35	0.028	< 0.005	< 0.001	1.1	78	25	19	3	6	250	0.0002
4/5/2013	MAX	7.96	1000	270	140	0.016	< 0.001	< 0.05	0.21	0.022	< 0.005	< 0.001	0.012	96	85	22	1.7	2	360	0.0005
7/17/2013	No flo																			
9/12/2013	MAX	7.88	440	160	33	0.031	< 0.001	< 0.05	0.46	0.07	< 0.005	< 0.001	0.0091	55	25	11	3	21	190	0.0015
12/2/2013	MAX	7.13	1000	370	110	0.02	0.003	0.06	0.37	0.15	< 0.005	< 0.002	0.0088	120	76	30	2.3	40	400	0.0001
3/31/2014	MAX	7.52	330	140	18	< 0.01	< 0.001	0.15	0.16	0.018	< 0.005	< 0.001	0.011	45	9.2	11	3.1	4	160	0.0005
7/16/2014	MAX	7.83	1300	340	190	0.024	0.001	0.15	2	0.31	< 0.005	< 0.001	0.015	110	150	27	1.4	5	380	0.0032
8/6/2014	MAX	7.73	1100	320	150	0.026	0.001	0.13	2	0.31	< 0.005	< 0.001	0.022	120	97	25	1.8	9	360	0.0020
9/22/2014	MAX	7.77	430	160	31	0.019	< 0.001	0.07	0.45	0.046	< 0.005	< 0.001	0.01	56	20	12	3.4	8	200	0.0010
12/1/2014	MAX	7.95	820	250	100	0.041	0.002	0.23	1	0.2	< 0.005	0.002	0.064	82	63	21	4.4	5	280	0.0021
4/14/2015	MAX	7.33	810	240	110	0.016	0.003	< 0.05	0.12	0.027	< 0.005	< 0.001	<0.005	79	57	19	3.1	< 1	290	0.0002
7/29/2015	No Fl																			
9/10/2015	MAX	7.81	720	190	110	0.069	< 0.001	0.12	0.9	0.82	< 0.005	< 0.001	0.013	63	73	11	2.2	33	190	0.0042
12/30/2015	MAX	7.96	630	220	44	0.017	< 0.001	< 0.05	0.16	0.019	< 0.005	< 0.001	0.0088	75	30	19	3.4	3	280	0.0004
3/10/2016	MAX	8.10	830	220	110	0.015	< 0.001	< 0.05	< 0.1	0.022	< 0.005	< 0.001	0.0063	76	68	19	2.2	2	270	0.0007
7/26/2016	Dry																			
10/6/2016	Dry																			
10/28/2016	Dry																			
11/24/2016	MAX	7.79	1800	50	510	0.01	0.002	0.12	0.38	0.027	< 0.005	< 0.001	0.034	18	320	2.5	3.5	15	56	0.0011
4/5/2017	MAX	7.63	590	210	41	0.017	< 0.001	< 0.05	< 0.1	0.015	< 0.005	< 0.001	0.0093	66	30	16	2.1	1	250	0.0003
8/23/2017	MAX	7.44	810	210	120	0.045	< 0.001	< 0.05	0.84	0.049	< 0.005	0.0012	<0.005	67	84	24	0.86	7	260	0.0005
10/26/2017	MAX	7.68	200	71	16	0.021	< 0.002	< 0.05	< 0.1	0.0036	< 0.005	< 0.001	0.0051	24	10	2.9	5.9	3	69	0.0004
11/28/2017	MAX	8.01	1000	220	130	0.031	< 0.001	< 0.05	0.11	0.0085	< 0.005	< 0.001	0.015	97	90	22	1.9	1	330	0.0005

C3: Routine Surface Water Quality - General Analysis - Closed Eastview Road Landfill Site

SW 7 **Background**

Date	Lab.	Field pH	Cond-uctivity	Alk. CaCO3	Chloride mg/L	Boron mg/L	Phenol mg/L	NH3-N mg/L	Iron mg/L	Manganese mg/L	Chromium mg/L	Nickel mg/L	Zinc mg/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	TSS mg/L	Hard. CaCO3	Un-ion. NH3-N
PWQO		6.5-8.5				0.2	0.001		0.30		0.1	0.025	0.02							0.02
5/4/2012	Maxx	8.16	650	140	99	0.027	< 0.001	< 0.05	0.51	0.057	< 0.005	< 0.001	0.016	50	63	18	2.9	9	180	0.0024
6/6/2012	Maxx	7.50	580	120	88	0.018	0.001	< 0.05	0.66	0.18	< 0.005	0.0011	0.024	38	54	16	1.8	5	160	0.0005
8/13/2012	Maxx	8.09	290	90	25	0.044	< 0.001	0.11	0.8	0.1	< 0.005	0.0015	0.019	40	18	9.1	4.4	15	110	0.0062
9/25/2012	Maxx	7.81	410	120	38	0.043	< 0.001	0.10	0.66	0.11	< 0.005	0.0011	0.026	43	29	12	3.4	12	140	0.0014
12/4/2012	Maxx	7.55	650	170	81	0.034	< 0.001	0.17	0.31	0.11	< 0.005	< 0.001	0.024	61	53	19	3	4	220	0.0007
4/5/2013	MAX	7.90	910	180	150	0.017	< 0.001	< 0.05	0.26	0.042	< 0.005	< 0.001	0.023	63	87	17	1.6	5	250	0.0005
7/17/2013	MAX	7.64	670	160	100	0.05	< 0.001	0.25	2	0.56	< 0.005	0.0014	0.032	53	65	18	3	18	200	0.0042
9/12/2013	MAX	8.02	330	96	34	0.029	< 0.001	0.11	0.8	0.096	< 0.005	< 0.001	0.021	34	21	9	2.8	17	120	0.0047
12/2/2013	MAX	7.67	850	270	100	0.042	0.003	0.06	0.4	0.76	< 0.005	< 0.002	0.025	93	69	27	3.7	2	310	0.0003
3/31/2014	MAX	7.11	900	210	130	< 0.01	0.004	0.92	2.2	0.64	< 0.005	< 0.001	0.033	68	87	18	3.9	12	220	0.0014
7/16/2014	MAX	7.90	480	140	58	0.023	0.001	< 0.05	0.74	0.16	< 0.005	< 0.001	0.017	44	37	13	1.7	4	160	0.0014
8/6/2014	MAX	7.97	570	160	76	0.037	0.002	0.16	2.7	0.55	< 0.005	< 0.001	0.078	72	57	19	2.4	32	190	0.0058
9/22/2014	MAX	7.84	440	130	57	0.014	< 0.001	< 0.05	0.35	0.035	< 0.005	< 0.001	0.014	42	37	11	2.1	7	150	0.0008
12/1/2014	MAX	7.87	1000	310	110	0.022	0.004	0.07	0.36	0.12	< 0.005	0.0011	0.016	61	69	17	3.2	2	210	0.0005
4/14/2015	MAX	7.25	720	170	120	0.015	0.003	< 0.05	0.29	0.033	< 0.005	< 0.001	0.017	50	66	13	2.5	2	200	0.0002
7/29/2015	MAX	6.96	870	210	130	0.054	< 0.001	0.52	4.3	0.84	< 0.005	0.0013	0.049	64	76	22	2.3	7	270	0.0025
9/10/2015	MAX	8.08	610	160	87	0.042	< 0.001	0.15	5	0.59	< 0.005	0.0018	0.15	58	45	18	2.5	40	190	0.0047
12/30/2015	MAX	8.69	630	170	89	0.021	< 0.001	< 0.05	0.25	0.028	< 0.005	< 0.001	0.014	55	51	15	3.4	4	200	0.0022
3/10/2016	MAX	8.08	830	180	140	0.015	< 0.001	< 0.05	0.67	0.35	< 0.005	0.0021	0.018	62	93	16	2.3	3	200	0.0007
7/26/2016	MAX	7.79	680	170	100	0.041	< 0.001	< 0.05	2.1	0.31	< 0.005	0.0014	0.051	51	60	20	1.8	11	210	0.0013
10/6/2016	MAX	7.35	640	190	84	0.069	< 0.001	0.15	6.4	0.4	< 0.005	0.0025	0.21	62	44	18	2	96	210	0.0010
10/28/2016	MAX	7.92	670	180	95	0.09	< 0.001	0.08	2.1	0.24	< 0.005	0.0018	0.067	57	51	16	3	6	220	0.0007
11/24/2016	MAX	7.81	640	170	93	0.062	< 0.001	< 0.05	0.43	0.062	< 0.005	0.0011	0.012	55	54	15	3.4	6	210	0.0003
4/5/2017	MAX	7.35	630	150	96	0.028	< 0.001	< 0.05	0.27	0.026	< 0.005	< 0.001	0.015	51	56	14	1.9	4	180	0.0002
8/23/2017	MAX	7.03	560	170	59	0.043	< 0.001	0.07	2	0.22	< 0.005	< 0.001	0.041	50	40	15	1.8	7	210	0.0003
10/26/2017	MAX	7.23	590	180	77	0.081	< 0.001	0.05	0.67	0.13	< 0.005	< 0.001	0.057	58	45	14	2.5	10	190	0.0002
11/29/2017	MAX	8.21	660	190	80	0.043	< 0.001	0.05	0.34	0.15	< 0.005	< 0.001	0.022	57	48	15	2.4	2	220	0.0010

C3: Routine Surface Water Quality - General Analysis - Closed Eastview Road Landfill Site

SW 15 **Adjacent Water Course**

Date	Lab.	Field pH	Cond-uctivity	Alk. CaCO3	Chloride mg/L	Boron mg/L	Phenol mg/L	NH3-N mg/L	Iron mg/L	Manganese mg/L	Chromium mg/L	Nickel mg/L	Zinc mg/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	TSS mg/L	Hard. CaCO3	Un-ion. NH3-N
PWQO		6.5-8.5				0.2	0.001		0.30		0.1	0.025	0.02							0.02
5/4/2012	Maxx	7.83	610	270	31	0.011	0.002	< 0.05	0.11	0.017	< 0.005	< 0.001	<0.005	83	16	25	1.1	2	290	0.0011
6/6/2012	Maxx	7.22	710	330	34	< 0.01	0.001	< 0.05	2.9	0.6	< 0.005	< 0.001	<0.005	96	18	29	0.64	14	360	0.0002
8/13/2012	Maxx	7.51	970	180	110	0.036	< 0.001	0.29	2	0.15	< 0.005	< 0.001	0.015	97	98	22	2.5	5	300	0.0042
9/25/2012	Maxx	7.71	1300	120	46	0.067	< 0.001	0.07	0.12	0.21	< 0.005	< 0.001	0.031	210	29	58	0.74	1	670	0.0008
12/4/2012	Maxx	7.51	680	220	42	0.019	< 0.001	< 0.05	< 0.1	0.0054	< 0.005	< 0.001	<0.005	86	20	27	1.8	< 1	320	0.0002
4/5/2013	MAX	8.24	540	210	28	0.01	< 0.001	< 0.05	< 0.1	0.0066	< 0.005	< 0.001	<0.005	75	13	22	1.3	< 1	280	0.0008
7/17/2013	MAX	7.69	740	350	32	0.014	< 0.001	0.11	9	1.2	< 0.005	< 0.001	<0.005	110	17	30	0.85	14	410	0.0021
9/12/2013	MAX	7.84	630	280	35	0.022	< 0.001	< 0.05	0.63	0.16	< 0.005	< 0.001	<0.005	89	18	26	3.2	< 1	320	0.0013
12/2/2013	MAX	7.62	780	360	36	0.011	0.001	< 0.05	< 0.1	0.019	< 0.005	< 0.002	<0.005	120	19	35	1.8	4	400	0.0002
3/31/2014	MAX	7.31	550	240	28	< 0.01	< 0.001	0.13	0.11	0.023	< 0.005	< 0.001	0.0078	78	15	24	2	< 1	270	0.0003
7/16/2014	MAX	7.64	690	320	32	< 0.01	0.001	< 0.05	1.3	0.92	< 0.005	< 0.001	<0.005	93	18	29	0.48	3	350	0.0007
8/6/2014	MAX	7.61	650	300	32	0.012	0.001	0.07	2.5	0.82	< 0.005	< 0.001	0.005	94	18	27	1	6	320	0.0009
9/22/2014	MAX	7.23	560	260	25	0.012	< 0.001	0.10	0.27	0.014	< 0.005	< 0.001	<0.005	75	13	21	2.2	< 1	300	0.0004
12/1/2014	MAX	7.80	640	280	32	0.019	< 0.001	< 0.05	< 0.1	0.0042	< 0.005	< 0.001	<0.005	80	17	26	2.1	< 1	320	0.0003
4/14/2015	MAX	7.92	570	240	32	0.014	0.001	< 0.05	< 0.1	0.0036	< 0.005	< 0.001	<0.005	69	14	20	2.2	< 1	290	0.0006
7/29/2015	MAX	6.99	780	370	36	0.016	< 0.001	0.07	6.3	0.75	< 0.005	< 0.001	<0.005	110	19	33	0.43	19	410	0.0003
9/10/2015	MAX	7.48	760	340	39	0.014	0.001	0.06	8.6	0.74	< 0.005	< 0.001	<0.005	100	19	29	3.6	27	350	0.0008
12/30/2015	MAX	8.03	670	270	39	< 0.01	< 0.001	< 0.05	0.12	0.014	< 0.005	< 0.001	<0.005	83	18	26	2.2	< 1	320	0.0005
3/10/2016	MAX	8.09	520	200	28	< 0.01	< 0.001	< 0.05	< 0.1	0.004	< 0.005	< 0.001	<0.005	65	12	20	1.4	< 1	250	0.0006
7/26/2016	MAX	7.77	840	390	42	< 0.01	0.003	0.24	5.1	0.93	< 0.005	< 0.001	<0.005	100	23	37	5	34	440	0.0061
10/6/2016	MAX	7.25	900	430	42	0.01	0.053	0.21	9.6	0.84	< 0.005	< 0.001	0.007	110	20	36	4.9	20	450	0.0011
10/28/2016	MAX	7.46	1000	310	130	0.04	< 0.001	0.17	0.35	0.13	< 0.005	0.0026	0.12	97	69	25	2.2	3	380	0.0006
11/24/2016	MAX	7.50	830	350	46	< 0.01	0.011	0.09	2.8	0.63	< 0.005	< 0.001	<0.005	100	22	33	3.6	12	420	0.0003
4/5/2017	MAX	7.61	530	200	30	0.016	< 0.001	< 0.05	< 0.1	0.0055	< 0.005	< 0.001	<0.005	66	15	20	1.7	< 1	250	0.0004
8/23/2017	MAX	6.97	790	370	40	0.017	< 0.002	0.48	3.3	0.49	< 0.005	< 0.001	<0.005	100	20	33	0.91	10	420	0.0018
10/26/2017	MAX	7.21	760	330	49	< 0.01	< 0.002	0.06	0.99	0.3	< 0.005	< 0.001	<0.005	94	23	32	1.7	3	350	0.0002
11/29/2017	MAX	7.94	720	290	41	< 0.01	< 0.001	< 0.05	0.21	0.021	< 0.005	< 0.001	<0.005	87	19	29	2.1	< 1	360	0.0005

C3: Routine Surface Water Quality - General Analysis - Closed Eastview Road Landfill Site

SW 16 **Discharge to Hadati Creek**

Date	Lab.	Field pH	Cond-uctivity	Alk. CaCO3	Chloride mg/L	Boron mg/L	Phenol mg/L	NH3-N mg/L	Iron mg/L	Manganese mg/L	Chromium mg/L	Nickel mg/L	Zinc mg/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	TSS mg/L	Hard. CaCO3	Un-ion. NH3-N
PWQO		6.5-8.5				0.2	0.001		0.30		0.1	0.025	0.02							0.02
5/4/2012	Maxx	7.57	910	210	140	0.022	0.003	< 0.05	0.5	0.06	< 0.005	0.001	0.047	81	78	20	1.8	6	270	0.0005
6/6/2012	Maxx	7.53	860	260	90	0.025	0.001	< 0.05	0.39	0.1	< 0.005	0.002	0.11	96	53	26	1.1	4	350	0.0004
8/13/2012	Maxx	7.64	620	170	57	0.046	< 0.001	< 0.05	0.8	0.053	< 0.005	0.0015	0.032	76	37	15	3	5	230	0.0008
9/25/2012	Maxx	7.91	820	260	87	0.043	< 0.001	0.13	0.33	0.067	< 0.005	0.0012	0.064	94	51	24	2	1	320	0.0022
12/4/2012	Maxx	7.29	800	210	89	0.024	< 0.001	0.09	0.18	0.029	< 0.005	0.0011	0.046	91	61	23	1.9	2	290	0.0002
4/5/2013	MAX	7.97	770	200	110	0.016	< 0.001	< 0.05	0.13	0.021	< 0.005	< 0.001	0.039	78	57	19	0.7	2	300	0.0004
7/17/2013	MAX	7.69	840	290	82	0.031	< 0.001	0.18	0.66	0.15	< 0.005	0.0016	0.072	99	57	25	1.2	3	350	0.0029
9/12/2013	MAX	7.73	650	210	71	0.03	< 0.001	0.06	0.9	0.064	< 0.005	0.0015	0.047	69	44	16	2.4	5	250	0.0010
12/2/2013	MAX	7.55	900	310	100	0.031	0.002	0.16	0.57	0.32	< 0.005	0.0013	0.18	110	72	30	1.5	1	360	0.0006
3/31/2014	MAX	7.32	800	230	110	< 0.01	< 0.001	0.15	0.22	0.044	< 0.005	< 0.001	0.034	83	56	22	2.2	4	290	0.0003
7/16/2014	MAX	7.59	610	180	80	0.027	0.002	0.09	1.1	0.12	< 0.005	0.0014	0.033	61	50	14	2.7	1	200	0.0012
8/6/2014	MAX	7.87	590	170	78	0.037	0.002	0.10	1.4	0.22	< 0.005	0.0013	0.022	60	50	13	3	8	190	0.0021
9/22/2014	MAX	7.46	590	220	59	0.02	< 0.001	0.10	0.47	0.05	< 0.005	0.0011	0.028	74	44	18	2.1	3	260	0.0007
12/1/2014	MAX	8.26	860	270	110	0.028	0.001	0.11	0.51	0.1	< 0.005	0.0015	0.054	91	61	24	1.9	1	310	0.0021
4/14/2015	MAX	7.22	1000	230	170	0.019	0.002	0.10	0.33	0.04	< 0.005	0.001	0.028	76	76	19	2.5	3	290	0.0003
7/29/2015	MAX	7.02	920	300	110	0.04	< 0.001	0.08	0.56	0.099	< 0.005	0.0024	0.098	99	59	28	1.4	4	380	0.0002
9/10/2015	MAX	7.41	860	240	130	0.04	< 0.001	0.10	0.92	0.13	< 0.005	0.0012	0.039	76	68	19	2.4	2	260	0.0008
12/30/2015	No Fl																			
3/10/2016	MAX	7.89	730	200	98	0.016	< 0.001	< 0.05	0.17	0.028	< 0.005	< 0.001	0.026	69	57	18	1.4	3	240	0.0004
7/26/2016	MAX	7.80	990	290	130	0.038	< 0.001	0.18	0.34	0.12	< 0.005	0.0023	0.096	100	66	28	1.5	5	380	0.0040
10/6/2016	MAX	7.02	1100	320	140	0.046	< 0.001	0.19	0.45	0.19	< 0.005	0.0024	0.13	110	74	29	1.9	5	380	0.0004
10/28/2016	MAX	7.67	880	410	39	< 0.01	0.036	0.12	4.6	0.74	< 0.005	< 0.001	0.0073	110	22	36	4.3	23	460	0.0006
11/24/2016	MAX	7.61	810	200	120	0.038	< 0.001	0.06	0.23	0.029	< 0.005	0.0016	0.028	66	70	14	5.6	< 1	240	0.0003
4/5/2017	MAX	7.53	680	180	89	0.027	< 0.001	< 0.05	0.27	0.027	< 0.005	< 0.001	0.024	66	53	16	3.1	< 1	230	0.0003
8/23/2017	MAX	7.40	940	300	75	0.035	< 0.005	0.08	0.28	0.11	< 0.005	0.0025	0.12	100	67	27	1.9	2	370	0.0006
10/26/2017	MAX	7.85	780	250	97	0.031	< 0.002	0.09	0.59	0.093	< 0.005	0.002	0.086	80	60	21	4.4	2	270	0.0010
11/29/2017	MAX	7.76	890	250	110	0.031	0.001	0.08	0.33	0.11	< 0.005	0.0017	0.096	83	65	21	2.8	1	320	0.0006

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				**Comments**
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 1							
	10-Apr-1992		N/A	N/A	10		clear, good flow
	11-Jun-1992		800	9.20	18		Numerous water insects, patchy scom on surface
	13-Aug-1992		1000	7.60	13		Yellowish, some sediment, creek bottom reddish
	10-Nov-1992		1000	7.60	7		Slight yellow colour, fast flow
	20-Apr-1993		700	9.10	5		Dirty brown, heavy sediment. silty bottom
	10-Jun-1993		800	9.20	14		Fairly clear, silty bottom
	02-Sep-1993		700	7.60	17	6.79	Clear, little flow, silty bottom, weeds
	05-Nov-1993		1100	7.90	8	11.62	Clear, little flow
	30-Nov-1993		800	8.00	2	10.9	Clear, silty bottom
	13-Apr-1994	Spring Freshet	800	7.40	5	5.62	Yellow/brown colour, weeds, some sediment
	04-May-1994	Spring Dry	800	8.20	14	5.51	Yellowish colour, very clear, reddish brown mud bottom
	26-May-1994	Spring Rain	700	8.10	11	10.17	Brown colour, silty, high level
	17-Jun-1994	June Dry	600	7.10	20	10.95	Clear yellow, biological growth on surface, slow flow
	04-Aug-1994	Summer Rain	800	8.00	15	10.85	Very weedy, silty bottom, 7 cm silt up staff gauge
	17-Aug-1994	August Dry	700	7.10	13	9.36	Silty/muddy/weedy bottom, algea growth in water
	14-Oct-1994	Fall Dry	800	7.90	8	11.35	Yellow coloured, flow through small channels
	21-Nov-1994	Fall Rain	700	8.00	8	10.87	Fairly clear, weedy
	13-Apr-1995	Spring Freshet	900	8.00	5	10.95	Muddy/weedy bottom, clear/yellow coloured, algae noted at banks
	28-Apr-1995	Spring Dry	700	8.10	10	10.15	Muddy/weedy bottom, clear, turtles and bugs present
	17-May-1995	Spring Rain	800	7.30	12	8.21	Weedy growth present, fairly clear, silty sandy bottom, good flow
	30-Jun-1995	June Dry	800	7.80	18	6.34	Clear yellowish colour
	23-Aug-1995	August Dry	800	7.30	17	6.33	Fairly clear, very weedy bottom, algae
	20-Oct-1995	Fall Dry	700	7.80	12	7.42	Clear yellowish colour, very weedy bottom, lots of bugs
	28-Nov-1995	Fall Rain	895	7.50	4.8	10	Fairly clear, some grass and reeds
	16-Apr-1996	Spring Freshet	664	8.10	5.1	5.6	Good Flow
	27-May-1996	Spring Dry	800	7.80	12	6.5	Some Flow, concentrated in centre, lots of weeds
	18-Jun-1996	Spring Rain	850	N/A	15	5.5	Some Flow, Lots of reeds
	06-Aug-1996	June Dry	900	N/A	12		Very little flow, lots of grass growing
	07-Oct-1996	August Dry	N/A	N/A	N/A	N/A	Little flow, Lots of reeds
	30-Oct-1996	Summer Rain	833	7.80	8.8	5.1	Good flow, some weeds
	06-Dec-1996	Fall Rain	991	7.60	4.1	3.9	Good flow
	16-Apr-1997	Spring Freshet	778	7.60	6.9	6.3	Good flow, some algae growing in creek
	23-May-1997	Spring Dry	775	7.30	10.2	6.7	Good flow
	07-Aug-1997	Summer Dry	720	6.60	11.4	3.7	Lots of Reeds, some flow
	18-Nov-1997	Fall Dry	720	7.50	5.8	4.9	Some flow, clear water
	26-Nov-1997	Fall Rain	768	7.40	8	3.2	Flowing, clear
	17-Jun-1998	Spring Rain	789	7.80	17.6	4.2	Water moving slowly
	07-Dec-1998	Fall Rain	576	6.80	9.1	5.3	Beaver dam in culvert, evidence of runoff (with sediments) from bush lot
	23-Apr-1999	Spring Freshet	556	7.70	8.3	5.2	Good flow, silt in bottom of creek
	30-Jun-1999	Summer Rain	N/A	N/A	N/A	N/A	
	06-Dec-1999	Fall Rain	411	7.10	9.2	6.2	Some flow, murky water
	15-Mar-2000	Spring Freshet	416	7.50	4.5	6.5	Some flow; Algae growing in bottom; Bushlot visibly discharging water
	20-Sep-2000	Fall Dry	260	7.90	15.3	3.2	Very little flow - almost still; some surface water sediment
	27-Nov-2000	Fall Rain	514	6.70	7.3	4.7	Very little flow; bits of silt present on bottom of creek bed
	20-Mar-2001	Spring Freshet	381	7.61	6.4	5.3	Visible TSS, Visible discharge from Bushlot, some flow
	10-Oct-2001	Fall Dry	675	7.70	9	1.9	No flow, Lots of suspended solids
	03-Dec-2001	Fall rain	670	7.90	7.9	3.5	
	18-Feb-2002	Spring Freshet					Not enough water to grab samples.
	17-Apr-2002	April Dry					Dry Conditions with warm temperatures - no flows observed
	15-May-2002	Spring Rain					No flow observed
	06-Jun-2002	Summer Rain	848	7.80	11.7	N/A	Very little flow, water is fairly clear

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				**Comments**
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 1							
	17-Jun-2002	June Dry					No dry conditions due to heavy rains, Dry event could not be completed
	12-Aug-2002	August Dry					No rain for 10 days, no surface water to sample
	25-Oct-2002	October Dry					No more than 2 dry days in a row, no samples taken
	23-Dec-2002	Fall Rain					Rains for 2 days, still not enough water to sample
	18-Mar-2003	Spring Freshet	306	7.40	5	8.49	Good flow, visible TSS
	28-Apr-2003	April Dry					No sample taken - Could not get 5 days of no rain
	26-May-2003	Spring Rain					No sample taken - Although there was rain, no water to sample
	18-Jun-2003	June Dry					No sample taken - Could not get 5 days of no rain
	06-Aug-2003	Summer Rain	649	7.90	15	7.09	Water but no flow, clear
	26-Aug-2003	August Dry					No sample taken - Could not get 5 days of no rain
	24-Oct-2003	October Dry					No sample taken - Could not get 5 days of no rain
	19-Nov-2003	Fall Rain	483	7.90	10.8	8.14	Good Flow
	10-Mar-2004	Spring Freshet	649	7.30	5.2	7.77	Low flow
	22-Apr-2004	Spring Rain					No sample taken - Although there was rain, no water to sample
	27-May-2004	April Dry	750	7.80	16.5	3.63	Grate blocked with plastic. Suspect beaver dam inside culvert. Some flow.
	28-Jun-2004	June Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	17-Aug-2004	August Dry	647	7.80	15.2	9.52	Some flow, algae observed on surface, some flooding due to gravel in culvert.
	19-Oct-2004	Summer Rain	981	8.20	6.3	8.83	Very little flow, algae growth, clear. Silt back up is around 0.6m deep.
	28-Oct-2004	October Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	08-Dec-2004	Fall Rain	540	7.85	8		Some flow, clear. Silt accumulation at bottom of culvert (~0.4m).
	04-Apr-2005	Spring Freshet	601	8.27	9.2	6.57	Some flow, Clear. Silt present at mouth of culvert.
	30-Apr-2005	April Dry					No sample taken due to rain
	16-May-2005	Spring Rain					No sample taken, not enough run-off after rain event on May 16. Very little rain during rest of month.
	30-Jun-2005	June Dry					No samples taken, dry
	25-Aug-2005	August Dry					No sample taken, not enough run-off even after rain event earlier in the week of Aug 25.
	28-Sep-2005	Summer Rain					No sample taken, not enough run-off
	14-Oct-2005	October Dry					No sample taken, Dry
	30-Nov-2005	Fall Rain					No sample taken, not enough run-off
	24-Apr-2006	Spring Freshet	553	7.70	8.1	8.74	Good flow, Clear
	30-Apr-2006	April Dry					No Dry Period During Month
	31-May-2006	Spring Rain					Rain event early in month, no run-off occuring later in month.
	09-Jun-2006	June Dry					Low Water
	09-Aug-2006	August Dry					Low Water
	14-Sep-2006	Summer Rain	760	7.50	17.1	4.11	Very low flow
	12-Oct-2006	October Dry	606	7.80	11.4	5.73	Good flow
	13-Dec-2006	Fall Rain	488	7.30	6.5	7.5	Good flow, Clear. Silt build up observed.
	23-Mar-2007	Spring Freshet	471	7.40	3.9	6.35	Good Flow, Clear
	26-Apr-2007	April Dry					Dry
	17-May-2007	Spring Rain	715	7.60	14.4	4.77	Good Flow, Clear
	19-Jun-2007	June Dry					Dry, No water next day after June 9 (9.8mm) and June 19 (22.4mm).
	10-Aug-2007	August Dry					Dry, No water next day after largest rain event on August 7 (18mm).
	26-Sep-2007	Summer Rain					Dry. No water next day after last rain event on Sept 26 (7.8mm).
	10-Oct-2007	Fall Rain					Low Water, 38 mm previous three days.
	31-Oct-2007	October Dry					Dry
	29-Nov-2007	Additional Fall	655	6.90	3.5	6.7	Low Flow, clear.
	09-Apr-2008	Spring Freshet	316	7.10	11.6	6.2	Clear. Good flow, some grass/weeds on grate
	20-Aug-2008	Summer Dry					Dry. Attempts made after 13.7 mm of rain in last 7 days
	16-Sep-2008	Summer Rain	655	7.40	16.2	3.92	Good Flow. Some rock/silt partially blocking creek
	18-Dec-2008	Fall Rain	597	8.10	4.6	6.2	Clear. Slow flow
	28-May-2009	Spring Freshet	643	7.50	14.8	5.19	Dark with sheen

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 1							
	27-Jul-2009	Summer Dry	667	7.60	19.1	7.93	Barely any flow/ lots of weeds
	14-Oct-2009		872	7.50	8.2	6.53	Barely any flow/ lots of weeds
	05-Nov-2009		898	7.40	6.2	6.98	
	26-Nov-2009		973	7.60	8.2	5.98	
	16-Dec-2009		973	7.60	2	8.44	
	25-Mar-2010		5.99	6.80	7.7	671	Brownish with good flow
	20-Aug-2010		7.26	20.90	7.8	699	Cloudy with floating aquatic vegetation
	04-Oct-2010		6.84	8.50	6.9	955	Murky with average flow
	29-Nov-2010		7.7	6.00	6.6	960	Slightly cloudy average flow
	15-Mar-2011		784	7.61	3.3	9.87	Yellowish colour, good flow
	07-Jul-2011		822	7.71		13.08	Low flow, yellowish colour with lots of floating aquatic vegetation
	30-Sep-2011		906	7.26	13.7	5.69	Brownish with very low flow
	19-Oct-2011		987	8.86	9.3	7.47	Lots of duckweed, low flow
	13-Dec-2011		917	8.16	2.8	10.19	Yellowish colour with decent flow
	04-May-2012	Spring Wet	886	7.78	12.1	10.43	Lots of Duckweed slightly yellow with decent flow
	06-Jun-2012	June Trigger	887	6.97	11.7	7.71	Lots of vegetation low flow
	13-Aug-2012	August Dry	693	7.30	22	8.76	Clear with very low flow
	25-Sep-2012	September Dry	831	7.40	11.1	9.76	Lots of duckweed low flow slightly cloudy
	04-Dec-2012	Fall Wet	916	7.24	5.4	8.11	Yellowish with decent flow
	05-Apr-2013	Spring Wet	838	7.61	3.1	9.79	Good flow yellowish colour
	17-Jul-2013	Summer Dry	862	7.58	18.3	6.32	Lots of aquatic veg yellowish low flow
	12-Sep-2013	Sept Wet	637	7.61	18.7	8.3	Low flow yellowish lots of duckweed
	02-Dec-2013	Dec Wet	941	7.71	4.7	8.06	Yellowish with low flow
	31-Mar-2014	Spring Freshet	855	7.28	4.3	6.07	Very slightly yellowish, good flow
	16-Jul-2014	July Dry	905	7.64	17.6	4.08	Brownish with low flow
	06-Aug-2014	August Trigger	853	8.02	15.4	5.65	Yellowish with low flow
	22-Sep-2014	Sept Wet	810	7.53	13	6.25	Yellowish with good flow
	01-Dec-2014	Fall Wet	796	7.94	4.8	7.44	Yellowish with good flow
	14-Apr-2015	Spring Freshet	821	7.32	7.6	8.2	Good flow slightly yellowish
	29-Jul-2015	July Dry	894	6.84	19.1	11.08	Slightly Yellow colour with lots of aquatic plants. Low flow
	10-Sep-2015	Sept Wet	613	7.44	17.9	10.44	Yellowish, low flow, lots of duckweed
	30-Dec-2015	December Wet	640	7.81	1.1	9.26	Yellowish with decent flow
	10-Mar-2016	Spring Freshet	445	7.40	2.4	9.22	Slightly yellow good flow
	26-Jul-2016	Summer Dry	543	7.46	14.9	8.89	Very slightly yellow with very low flow
	06-Oct-2016	Fall Dry	764	7.01	11.1	11.41	Slightly yellow low flow
	28-Oct-2016	Fall Wet	771	7.13	5.9	8.93	Yellowish low flow
	24-Nov-2016	Trigger Event	694	7.16	8.3	10.25	Slightly yellow low flow
	05-Apr-2017	Spring Freshet	475	7.96	7.1	8.19	Yellowish with good flow
	23-Aug-2017	Summer Dry	850	7.01	14.9	6.89	Low flow very slight yellow colour
	26-Oct-2017	October Wet	691	7.91	11.1	8.18	Yellowish with low flow
	28-Nov-2017	Fall Wet	877	7.87	7.6	8.56	Yellowish low flow
SW 2							
	10-Apr-1992		900	8.40	10		Fairly clear, some red staining on creek bottom
	11-Jun-1992		900	7.60	22		Clear, some red staining on creek bottom
	13-Aug-1992		1200	7.80	17		Yellow sediment
	10-Nov-1992		N/A	N/A	8		Yellow, red stain/growth on weeds and grass
	01-Apr-1993		1000	9.30	1		Brown, heavy sediment, gravel bottom
	20-Apr-1993		1000	9.30	5		Clear, gravel bottom, weeds
	10-Jun-1993		N/A	N/A	15		Dry, not sampled
	05-Nov-1993		1100	8.00	7	10.71	Clear, some floating suspended particulate
	30-Nov-1993		1100	8.10	1	10.45	Yellow colour

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				**Comments**
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 2							
	13-Apr-1994	Spring Freshet	1000	7.00	6	5.53	Cloudy, brown green colour, very quick flow
	26-Apr-1994	Spring Rain	1200	8.10	11	10.35	Light yellow, clear, good flow in narrow channel
	04-May-1994	Spring Dry	1000	7.90	16	5.44	Yellow reddish colour, fairly clear
	17-Jun-1994	June Dry	1700	7.50	27	5.8	Yellow colour, heavy growth, snails/minnows, slow flow
	04-Aug-1994	Summer Rain	1000	8.10	14	10.51	Ditch almost dry, trickle, 9 cm silt up staff gauge
	17-Aug-1994	August Dry					Dry, not sampled
	14-Oct-1994	Fall Dry					Dry, not sampled
	21-Nov-1994	Fall Rain	1400	8.10	9	10.6	Cloudy brown, ditch has been re-dug
	13-Apr-1995	Spring Freshet	1600	7.80	5	11.15	Clear/yellowish sample, heavy iron staining on north side of ditch
	28-Apr-1995	Spring Dry	1200	8.20	9	10.4	Weedy/silty bottom, good flow
	17-May-1995	Spring Rain	1300	7.10	11	7.1	Clear/yellowish colour, some silt, heavy weed growth in ditch
	30-Jun-1995	June Dry					Dry, not sampled
	23-Aug-1995	August Dry	1700	7.80	28	13.85	Fairly clear/yellowish, very weedy, lots of snails, some flow
	20-Oct-1995	Fall Dry					Dry, not sampled
	28-Nov-1995	Fall Rain	1171	7.50	6.2	8	Some sediments, grass
	16-Apr-1996	Spring Freshet	680	8.40	5.9	8.6	Ditch fairly clear, some reeds
	27-May-1996	Spring Dry	1000	7.80	11	5	Reeds and grass, Some silt on bottom, water bugs, clear
	18-Jun-1996	Spring Rain	1350	N/A	15	7	Fairly clear, flow
	06-Aug-1996	June Dry	1400	N/A	18	N/A	Very little flow, grass and reeds
	07-Oct-1996	August Dry	N/A	N/A	N/A	N/A	Ditch clear, re-cut twoweeks ago, clear, water level high
	30-Oct-1996	Summer Rain	908	8.00	9.4	4.9	Some flow
	06-Dec-1996	Fall Rain	1015	7.60	4	5.2	Some flow
	16-Apr-1997	Spring Freshet	939	7.80	7.6	7.4	Lots of silt around staff gauge, some litter
	23-May-1997	Spring Dry	933	7.20	7.2	4.8	Lots of weeds, sticks and silt
	07-Aug-1997	Summer Dry	857	6.90	13.1	3.8	Water backed up; Beaver dam about 10 m downstream of SW 16.
	18-Nov-1997	Fall Dry	1249	7.40	4	5.4	Site is iced; sample taken at culvert 8 m downstream at open water
	26-Nov-1997	Fall Rain	973	7.40	5.9	3.7	very little flowing; cloudy
	17-Jun-1998	Spring Rain	2100	7.70	24.2	4.4	Water flowing well, clear
	07-Dec-1998	Fall Rain					No flow
	23-Apr-1999	Spring Freshet	1101	7.80	8.6	5.2	Clear, good flow
	30-Jun-1999	Summer Rain	N/A	N/A	N/A	N/A	
	06-Dec-1999	Fall Rain	672	6.90	7.3	5	Good flow, narrow channel, grass lining ditch bottom
	15-Mar-2000	Spring Freshet	585	7.30	4.3	4.9	Clear; good flow
	20-Sep-2000	Fall Dry					No sample - location was dry; ditch is overgrown with grass
	27-Nov-2000	Fall Rain					No Flow
	20-Mar-2001	Spring Freshet	400	7.40	5.1	4.6	some flow, occasional pieces of litter in ditch
	10-Oct-2001	Fall Dry					Dry
	03-Dec-2001	Fall rain	655	7.80	6	8.4	Flowing, clear
	18-Feb-2002	Spring Freshet					Not enough water to grab samples.
	17-Apr-2002	April Dry					Dry Conditions with warm temperatures - no flows observed
	15-May-2002	Spring Rain					No flow observed
	06-Jun-2002	Summer Rain					Dry
	17-Jun-2002	June Dry					No dry conditions due to heavy rains, Dry event could not be completed
	12-Aug-2002	August Dry					No rain for 10 days, no surface water to sample
	25-Oct-2002	October Dry					No more than 2 dry days in a row, no samples taken
	23-Dec-2002	Fall Rain					Rains for 2 days, still not enough water to sample
	18-Mar-2003	Spring Freshet	493	7.10	3.8	8.55	Good flow, ditch is lined with ice
	28-Apr-2003	April Dry					No sample taken - Could not get 5 days of no rain
	26-May-2003	Spring Rain					No sample taken - Although there was rain, no water to sample
	18-Jun-2003	June Dry					No sample taken - Could not get 5 days of no rain
	06-Aug-2003	Summer Rain					Dry

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 2							
	26-Aug-2003	August Dry					No sample taken - Could not get 5 days of no rain
	24-Oct-2003	October Dry					No sample taken - Could not get 5 days of no rain
	19-Nov-2003	Fall Rain	844	7.50	10.5	5.94	Some Flow
	10-Mar-2004	Spring Freshet	570	7.40	5	5.87	Clear, some flow
	22-Apr-2004	Spring Rain					No sample taken - Although there was rain, no water to sample
	27-May-2004	April Dry	853	7.97	14.7	5.54	Clear, flowing well.
	28-Jun-2004	June Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	17-Aug-2004	August Dry					No sample collected, dry,
	19-Oct-2004	Summer Rain					Dry
	28-Oct-2004	October Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	08-Dec-2004	Fall Rain	657	7.90	8.2		Some flow, clear.
	04-Apr-2005	Spring Freshet	644	8.41	5	7.41	Good flow, clear
	30-Apr-2005	April Dry					No sample taken due to rain
	16-May-2005	Spring Rain					No sample taken, not enough run-off after rain event on May 16. Very little rain during rest of month.
	30-Jun-2005	June Dry					No samples taken, dry
	25-Aug-2005	August Dry					No sample taken, not enough run-off even after rain event earlier in the week of Aug 25.
	28-Sep-2005	Summer Rain					No sample taken, not enough run-off
	14-Oct-2005	October Dry					No sample taken, Dry
	30-Nov-2005	Fall Rain					No sample taken, not enough run-off
	24-Apr-2006	Spring Freshet	741	7.70	8.5	8.03	Good flow
	30-Apr-2006	April Dry					No Dry Period During Month
	31-May-2006	Spring Rain					Rain event early in month, no run-off occuring later in month.
	09-Jun-2006	June Dry					Low Water
	09-Aug-2006	August Dry					Low Water
	14-Sep-2006	Summer Rain					Dry
	12-Oct-2006	October Dry	810	7.40	9.4	3.48	SW2 dry, sample taken 6m downstream. Minimal Flow.
	13-Dec-2006	Fall Rain	488	7.20	5.1	7.67	Clear. Lots of grass in ditch.
	23-Mar-2007	Spring Freshet	432	7.50	4.6	8.55	Slow Flow, Clear.
	26-Apr-2007	April Dry					Dry
	17-May-2007	Spring Rain	715	7.60	14.4	4.77	Slow Flow, Clear.
	19-Jun-2007	June Dry					Dry, No water next day after June 9 (9.8mm) and June 19 (22.4mm).
	10-Aug-2007	August Dry					Dry, No water next day after largest rain event on August 7 (18mm).
	26-Sep-2007	Summer Rain					Dry. No water next day after last rain event on Sept 26 (7.8mm).
	10-Oct-2007	Fall Rain					Dry, 38 mm previous three days.
	31-Oct-2007	October Dry					Dry
	29-Nov-2007	Additional Fall					No Water, ~15cm of snow in ditch.
	09-Apr-2008	Spring Freshet	412	7.10	10.6	8.39	Clear. Some flow
	20-Aug-2008	Summer Dry					Dry. Attempts made after 13.7 mm of rain in last 7 days
	16-Sep-2008	Summer Rain	497	7.40	16.3	4.36	Slow flow. Overgrown with grass
	18-Dec-2008	Fall Rain	574	7.60	6.8	6.4	Very little flow.
	28-May-2009	Spring Freshet	488	7.40	15.4	4.06	Slight sheen
	27-Jul-2009	Summer Dry	288	8.10	20.6	4.71	No flow/ weeds
	14-Oct-2009		567	7.60	6.6	5.82	Slow flow/ weeds/ Sample taken 3 meters from gauge
	05-Nov-2009		732	7.50	5.4	5.3	Slow flow/ weeds
	26-Nov-2009		488	7.80	10.4	7.6	Slow flow/ weeds
	16-Dec-2009		488	7.80	5.2	8.58	Broke ice
	25-Mar-2010		4.98	6.50	7.9	524	Murky with good flow
	20-Aug-2010		8.2	19.60	8	674	Brownish colour with lots of floating aquatic vegetation
	04-Oct-2010		5.85	8.50	7.1	932	Clear with some flow
	29-Nov-2010		8.94	3.30	7	732	Clear very low flow

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 2							
	15-Mar-2011		835	7.99	4.6	8.5	Yellowish colour, good flow
	07-Jul-2011		1237	7.48	17.1	4.43	Low flow, clear
	30-Sep-2011		750	7.59	13.3	5.53	Low flow
	19-Oct-2011		914	9.08	8.7	7.75	Good flow
	13-Dec-2011		812	7.84	2.8	12.19	Clear decent flow
	04-May-2012	Spring Wet	716	7.68	16.8	7.46	Slightly cloudy good flow
	06-Jun-2012	June Trigger	1499	7.21	16.4	5.2	Low flow yellowish color
	13-Aug-2012	August Dry	565	7.65	21.8	5.69	Slightly cloudy low flow
	25-Sep-2012	September Dry	585	7.90	11.6	4.99	Clear low flow
	04-Dec-2012	Fall Wet	648	7.44	3.9	9.21	Good flow slightly cloudy
	05-Apr-2013	Spring Wet	953	7.88	2.5	6.29	Very slight yellow colour good flow
	17-Jul-2013	Summer Dry	1063	7.38	18.6	5.38	Very slight yellowish colour decent flow
	12-Sep-2013	Sept Wet	465	7.83	19.7	8.65	Low flow clear
	02-Dec-2013	Dec Wet	1035	7.39	3	8.49	Very slight yellowish colour with good flow
	31-Mar-2014	Spring Freshet	699	7.64	2.8	9.76	Clear with good flow
	16-Jul-2014	July Dry	590	7.73	18.4	6.26	slightly cloudy with low flow
	06-Aug-2014	August Trigger	17.6	568.00	17.6	5.41	Slightly cloudy low flow
	22-Sep-2014	Sept Wet	582	7.74	13.1	7.01	Slightly cloudy good flow
	01-Dec-2014	Fall Wet	850	7.78	2.7	8.08	Very slightly cloudy with good flow
	14-Apr-2015	Spring Freshet	669	7.19	8.2	7.2	Good flow clear
	29-Jul-2015	July Dry	1809	6.67	18.1	6.09	Yellowish/ brownish colour. Very low flow
	10-Sep-2015	Sept Wet	497	7.87	19.1	8.98	Clear with low flow
	30-Dec-2015	December Wet	433	8.38	1.6	7.49	Clear good flow
	10-Mar-2016	Spring Freshet	495	8.13	3.1	10.6	Clear with good flow
	26-Jul-2016	Summer Dry	637	7.83	18.3	5.76	Yellowish low flow
	06-Oct-2016	Fall Dry	730	7.09	12.1	9.89	Clear very low flow
	28-Oct-2016	Fall Wet	549	7.69	2.6	5.63	Clear low flow
	24-Nov-2016	Trigger Event	629	7.92	2.9	8.81	Clear low flow
	05-Apr-2017	Spring Freshet	479	7.43	11	7.67	clear with good flow
	23-Aug-2017	Summer Dry	1425	7.53	17.9	7.21	Low flow, slightly yellow
	26-Oct-2017	October Wet	196	7.38	8	8.17	Clear with low flow
	29-Nov-2017	Fall Wet	725	7.78	4.6	8.96	Slightly yellowish low flow
SW 3A							
	02-Sep-1993		1200	7.50	22	13.41	Fairly clear, good flow, silty bottom, bugs
	05-Nov-1993		1200	8.00	8	10.59	fairly clear, low flow
	30-Nov-1993		900	8.10	1	10.75	Fairly clear
	13-Apr-1994	Spring Freshet	800	7.30	6	5.55	Fairly clear, yellowish colour, weeds, some debris
	26-Apr-1994	Spring Rain	800	8.00	11	10.42	Yellow colour, clear, mud bottom/weeds, minnows/insects
	04-May-1994	Spring Dry	700	8.00	15	7.19	Silty yellowish brown, muddy bottom weeds/grass
	17-Jun-1994	June Dry	900	7.50	20	9.55	Heavy growth, grass/weeds/reeds, bio growth on surface
	04-Aug-1994	Summer Rain	900	8.20	12	10.73	Very weedy, meandering water course, silty sample
	17-Aug-1994	August Dry	900	7.70	15	9.45	Weedy muddy bottom, meandering water course
	14-Oct-1994	Fall Dry	900	8.00	8	10.63	Yellowish colour, main flow through weed channel
	21-Nov-1994	Fall Rain	700	8.20	9	10.72	Cloudy brown, good flow through channel
	13-Apr-1995	Spring Freshet	900	7.90	5	10.87	Fairly clear/yellowish, good flow, algea noted on banks
	28-Apr-1995	Spring Dry	700	8.10	10	10.52	Very clear sample, muddy/weedy bottom, lots of life, good flow
	17-May-1995	Spring Rain	1000	7.30	11	6.91	Clear/yellowish colour, heavy weed growth, flow is through weeds
	30-Jun-1995	June Dry	1000	7.80	18	7.6	Lots of weeds
	11-Aug-1995	Summer Rain	N/A	N/A	19	N/A	
	23-Aug-1995	August Dry	900	7.90	19	11.71	Brown/green scum, yellowish sample, lots of algae, very weedy
	20-Oct-1995	Fall Dry	800	7.90	12	10.59	Very weedy/grass, yellowish colour, flow through weeds

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 3A							
	28-Nov-1995	Fall Rain	952	7.60	5.9	10	Grass in bed of stream
	16-Apr-1996	Spring Freshet	715	8.60	4.5	8.5	Good flow, clear
	27-May-1996	Spring Dry	950	7.90	11	5.8	Lots of reeds in water, clear
	18-Jun-1996	Spring Rain	1000	N/A	15	6	Lots of weeds, good flow
	06-Aug-1996	June Dry	1050	N/A	17		Very little flow
	07-Oct-1996	August Dry	N/A	N/A	N/A	N/A	
	30-Oct-1996	Summer Rain	812	8.00	8.8	0	Reeds and grass, high water level, good flow
	06-Dec-1996	Fall Rain	1673	7.60	4.2	6.2	Good flow
	16-Apr-1997	Spring Freshet	936	8.00	7.5	7	Bags around staff gauge
	23-May-1997	Spring Dry	810	7.80	8.1	5.2	Some flow and flies; clear water
	07-Aug-1997	Summer Dry	804	7.70	14.2	4.3	
	18-Nov-1997	Fall Dry	1088	7.80	5.1	1.2	1" of ice on creek. Elevated water due to beaver dam downstream 25 m
	26-Nov-1997	Fall Rain	921	7.40	7.2	2.8	Ice on creek; had to break to get sample
	17-Jun-1998	Spring Rain	957	8.00	21.8	7	Brown and silty, flowing slowly, some floating debris
	07-Dec-1998	Fall Rain	771	9.00	9.7	5.4	Flow moderate to slow; slightly turbid
	23-Apr-1999	Spring Freshet	652	8.00	5.9	5.9	Clear, good flow
	30-Jun-1999	Summer Rain	N/A	N/A	N/A	N/A	
	06-Dec-1999	Fall Rain	672	6.70	6.7	7.2	Some flow, clear
	15-Mar-2000	Spring Freshet	463	7.40	5.3	6.7	Creek is clear of debris; good flow
	20-Sep-2000	Fall Dry	130	7.60	13.7	7.7	Very little flow - water level very low; creek bed is silty
	27-Nov-2000	Fall Rain	535	7.10	14.1	4.8	Some flow; clear; silty bottom
	20-Mar-2001	Spring Freshet	372	7.60	6.2	5.1	Some flow, Stream bed clear of debri, Very clear
	10-Oct-2001	Fall Dry	913	7.60	9.5	2.1	Very little flow, trickle
	03-Dec-2001	Fall rain	665	8.00	8.4	3.7	Flowing, clear
	18-Feb-2002	Spring Freshet					Not enough water to grab samples.
	17-Apr-2002	April Dry					Dry Conditions with warm temperatures - no flows observed
	15-May-2002	Spring Rain					No flow observed
	06-Jun-2002	Summer Rain	588	7.80	12.6	N/A	Good flow, clear
	17-Jun-2002	June Dry					No dry conditions due to heavy rains, Dry event could not be completed
	12-Aug-2002	August Dry					No rain for 10 days, no surface water to sample
	25-Oct-2002	October Dry					No more than 2 dry days in a row, no samples taken
	23-Dec-2002	Fall Rain					Rains for 2 days, still not enough water to sample
	18-Mar-2003	Spring Freshet	427	7.40	4.8	9.05	Good flow, creek is lined with ice
	28-Apr-2003	April Dry					No sample taken - Could not get 5 days of no rain
	26-May-2003	Spring Rain					No sample taken - Although there was rain, no water to sample
	18-Jun-2003	June Dry					No sample taken - Could not get 5 days of no rain
	06-Aug-2003	Summer Rain					Wet, no water
	26-Aug-2003	August Dry					No sample taken - Could not get 5 days of no rain
	24-Oct-2003	October Dry					No sample taken - Could not get 5 days of no rain
	19-Nov-2003	Fall Rain	587	7.70	11	7.6	Good flow, silty
	10-Mar-2004	Spring Freshet	650	7.50	1.6	8.87	Clear, some flow
	22-Apr-2004	Spring Rain					No sample taken - Although there was rain, no water to sample
	27-May-2004	April Dry	801	7.89	13.3	8.14	Water faily clear, some flow.
	28-Jun-2004	June Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	17-Aug-2004	August Dry	830	8.02	14.5	8.35	Minor flow, clear.
	19-Oct-2004	Summer Rain	1124	8.30	8.4	8.3	Very little flow, clear.
	28-Oct-2004	October Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	08-Dec-2004	Fall Rain	574	7.89	4.9		Some flow, clear.
	04-Apr-2005	Spring Freshet	642	8.08	5.2	7.98	Moderate flow, clear
	30-Apr-2005	April Dry					No sample taken due to rain

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 3A							
	16-May-2005	Spring Rain					No sample taken, not enough run-off after rain event on May 16. Very little rain during rest of month.
	30-Jun-2005	June Dry					No samples taken, dry
	25-Aug-2005	August Dry					No sample taken, not enough run-off even after rain event earlier in the week of Aug 25.
	28-Sep-2005	Summer Rain					No sample taken, not enough run-off
	14-Oct-2005	October Dry					No sample taken, Dry
	30-Nov-2005	Fall Rain					No sample taken, not enough run-off
	24-Apr-2006	Spring Freshet	625	7.80	8.2	8.1	Good Flow. Garbage observed on east side of Access road.
	30-Apr-2006	April Dry					No Dry Period During Month
	31-May-2006	Spring Rain					Rain event early in month, no run-off occuring later in month.
	09-Jun-2006	June Dry					Low Water
	09-Aug-2006	August Dry					Low Water
	14-Sep-2006	Summer Rain					Dry
	12-Oct-2006	October Dry	705	7.60	8.6	6.27	Slow flow, good volume of water in creek.
	13-Dec-2006	Fall Rain	507	7.40	5.8	8.15	Slow flow, good volume of water in creek.
	23-Mar-2007	Spring Freshet	458	7.60	4.5	7.7	Slow Flow, Clear.
	26-Apr-2007	April Dry					Dry
	17-May-2007	Spring Rain	630	8.00	13.4	7.75	Slow Flow, Clear.
	19-Jun-2007	June Dry					Dry, No water next day after June 9 (9.8mm) and June 19 (22.4mm).
	10-Aug-2007	August Dry					Dry, No water next day after largest rain event on August 7 (18mm).
	26-Sep-2007	Summer Rain					Dry. No water next day after last rain event on Sept 26 (7.8mm).
	10-Oct-2007	Fall Rain					Dry, 38 mm previous three days.
	31-Oct-2007	October Dry					Dry
	29-Nov-2007	Additional Fall	700	7.00	3.8	9.89	Slow Flow, Clear. Leaves lining bottom of Creek.
	09-Apr-2008	Spring Freshet	522	7.10	11.2	7.71	Clear. Moderate flow
	20-Aug-2008	Summer Dry					Dry. Attempts made after 13.7 mm of rain in last 7 days
	16-Sep-2008	Summer Rain	584	7.50	15.3	6.21	Slow flow. TSS visible (possibly from development)
	18-Dec-2008	Fall Rain	642	7.90	3.2	8.05	Clear. Slow flow
	28-May-2009	Spring Freshet	676	7.50	13	5.6	Some sediment/ Good flow
	27-Jul-2009	Summer Dry	389	7.90	19.6	6.04	Slow flow/ Mucky
	14-Oct-2009		803	7.60	8	9.27	Slow flow/ Mucky
	05-Nov-2009		929	7.80	6.6	6.6	Slow flow/ weeds
	26-Nov-2009		705	8.00	9.3	8.6	Slow flow/ weeds
	16-Dec-2009		705	8.00	6.1	8.9	Broke ice
	25-Mar-2010		6.14	7.10	7.8	647	Slightly cloudy with goodflow
	20-Aug-2010		9.35	22.10	8.2	653	Clear, stream very shallow with staff gauge out of the water
	04-Oct-2010		7.55	9.50	7.6	878	Slightly cloudy, staff gauge out of water
	29-Nov-2010		9.46	4.40	7	932	Clear
	15-Mar-2011		795	7.90	3.9	9.95	Good flow, clear
	07-Jul-2011		962	7.91	18.2	8.42	Decent flow
	30-Sep-2011		1081	7.74	13.8	7.07	Very shallow with low flow
	19-Oct-2011		1075	9.01	9.2	10.31	Very low flow and very shallow
	13-Dec-2011		948	8.04	2.5	11.81	Clear with good flow
	04-May-2012	Spring Wet	880	7.89	15.4	8.84	Good flow
	06-Jun-2012	June Trigger	990	7.61	13.2	8.38	Very shallow and low flow yellowish color
	13-Aug-2012	August Dry	644	7.80	19.6	7.21	Clear, very shallow with low flow
	25-Sep-2012	September Dry	704	7.97	11.8	6.36	Clear low flow
	04-Dec-2012	Fall Wet	768	7.39	4.1	8.77	Good flow clear
	05-Apr-2013	Spring Wet	876	7.76	2.1	6.97	Good flow slightly yellow
	17-Jul-2013	Summer Dry	901	7.83	18.3	7.21	Low flow yellowish colour lots of aquatic veg
	12-Sep-2013	Sept Wet	529	7.75	18.6	9.16	Good flow cloudy

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 3A							
	02-Dec-2013	Dec Wet	1003	7.58	3.9	9.22	Slight yellow colour low flow
	31-Mar-2014	Spring Freshet	814	7.32	3.2	8.68	Slightly yellow good flow
	16-Jul-2014	July Dry	773	7.75	16.2	11.2	Yellowish with low flow
	06-Aug-2014	August Trigger	778	7.80	15.1	4.95	Yellowish with low flow
	22-Sep-2014	Sept Wet	393	7.22	12.6	5.65	Really good flow cloudy
	01-Dec-2014	Fall Wet	879	7.81	2.6	6.94	Yellowish with good flow
	14-Apr-2015	Spring Freshet	789	7.35	6.5	9.47	Good flow clear
	29-Jul-2015	July Dry	1003	7.16	17.2	9.6	Very low flow. Brownish colour
	10-Sep-2015	Sept Wet	578	7.76	16.6	11.35	very slight yellowish colour low flow.
	30-Dec-2015	December Wet					Creek was blocked due to the culvert cleaning activities
	10-Mar-2016	Spring Freshet	509	7.83	3.2	11.34	Slightly yellow good flow
	26-Jul-2016	Summer Dry					Dry
	06-Oct-2016	Fall Dry	773	7.17	12.5	11.98	Very shallow /slightly yellow /very low flow
	28-Oct-2016	Fall Wet	721	7.50	4.7	8.07	Mostly clear low flow
	24-Nov-2016	Trigger Event	715	7.50	4.4	10.76	Slightly yellow
	05-Apr-2017	Spring Freshet	514	7.64	8.7	6.24	Yellowish with good flow
	23-Aug-2017	Summer Dry	861	7.27	15.9	8.09	Very low flow yellowish colour
	26-Oct-2017	October Wet	780	7.79	6.9	9.21	Slightly yellow good flow
	29-Nov-2017	Fall Wet	839	7.92	5.6	7.84	Very slight yellow colour low flow
SW 4							
	10-Apr-1992		N/A	N/A	10		Clear, good flow out of culvert
	11-Jun-1992						Not sampled
	13-Aug-1992		1200	7.60	15		Fairly clear, biological build up on culvert
	10-Nov-1992		1000	8.00	7		Yellowish red, red staining on culvert and grass
	20-Apr-1993		600	9.30	5		Cloudy, discharge from wetland appears silty
	10-Jun-1993		600	9.20	14		Some silt, fast flow out of wetland
	29-Nov-1993	Spring Freshet	900	8.10	1	11.04	Yellow colour
	13-Apr-1994	Spring Rain	600	7.40	6	5.68	Cloudy brown, silty. Entering clear ditch water
	26-May-1994	Summer Rain	700	8.10	11	4.2	Light yellow colour, some visible particles
	04-Aug-1994	Fall Rain	900	8.10	14	11.31	Trickle from culvert, previously dry
	21-Nov-1994	Spring Freshet					Dry, not sampled although there has been substantial rain falls
	13-Apr-1995	Spring Rain	700	8.00	3	11.35	Debris in culvert (twigs etc.), fairly good flow
	17-May-1995	Summer Rain	700	6.90	12	4.38	Clear, good flow through culvert
	28-Nov-1995	Fall Rain	1615	7.60	5.7	11	Leaf accumulation in ditch, lots of growing, very little flow
	16-Apr-1996	Spring Freshet	734	8.20	5.1	10.8	Grass in ditch,
	18-Jun-1996	Spring Rain	1150	N/A	15	6	Very little flow, lots of grass in ditch
	30-Oct-1996	Summer Rain	675	8.10	9.2	4.5	Good flow
	06-Dec-1996	Fall Rain	720	7.40	2.5	2.4	Good flow
	16-Apr-1997	Spring Freshet	557	7.60	7.2	4.3	Good flow
	26-Nov-1997	Fall Rain	701	7.40	10.3	2.2	Sampled for TSS only; flow well clear
	17-Jun-1998	Spring Rain					No flow
	07-Dec-1998	Fall Rain					No flow
	23-Apr-1999	Spring Freshet	479	8.30	8	2.1	Clear, good flow
	30-Jun-1999	Summer Rain	N/A	N/A	N/A	N/A	
	06-Dec-1999	Fall Rain	319	6.80	10.5	1.2	Good flow from pipe, foam present
	15-Mar-2000	Spring Freshet	315	7.00	4.2	3	Good flow; clear
	20-Sep-2000	Fall Dry					No sample - pipe is not discharging
	27-Nov-2000	Fall Rain					No Flow
	20-Mar-2001	Spring Freshet	288	7.10	3.8	2.1	Good flow from pipe
	10-Oct-2001	Fall Dry					Dry
	03-Dec-2001	Fall rain	355	7.60	7.7	1	Flowing, cloudy

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				**Comments**
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 4							
	18-Feb-2002	Spring Freshet					Not enough water to grab samples.
	15-May-2002	Spring Rain					No flow observed
	06-Jun-2002	Summer Rain					Dry
	23-Dec-2002	Fall Rain					Rains for 2 days, still not enough water to sample
	18-Mar-2003	Spring Freshet					No Flow from culvert, frozen
	26-May-2003	Spring Rain					No sample taken - Although there was rain, no water to sample
	06-Aug-2003	Summer Rain					No flow
	19-Nov-2003	Fall Rain	513	7.60	11.9	2.52	Good flow, culvert half full
	10-Mar-2004	Spring Freshet	418	7.40	6.9	4.57	Clear, good flow
	22-Apr-2004	Spring Rain					No sample taken - Although there was rain, no water to sample
	27-May-2004	April Dry	444	7.82	15.1	2.88	Clear, some flow
	17-Aug-2004	August Dry					No sample collected, dry,
	19-Oct-2004	Summer Rain					No flow
	08-Dec-2004	Fall Rain	444	7.66	9.5		Good flow, culvert third full
	04-Apr-2005	Spring Freshet	404	7.94	6.1	4.47	Pipe is flowing half full, clear
	30-Apr-2005	April Dry					No sample taken due to rain
	16-May-2005	Spring Rain					No sample taken, not enough run-off after rain event on May 16. Very little rain during rest of month.
	25-Aug-2005	August Dry					No sample taken, not enough run-off even after rain event earlier in the week of Aug 25.
	28-Sep-2005	Summer Rain					No sample taken, not enough run-off
	30-Nov-2005	Fall Rain					No sample taken, not enough run-off
	24-Apr-2006	Spring Freshet	470	7.80	8.9	5.18	Culvert flowing (half full), clear.
	30-Apr-2006	April Dry					No Dry Period During Month
	31-May-2006	Spring Rain					Dry
	09-Aug-2006	August Dry					Dry
	14-Sep-2006	Summer Rain					Dry
	12-Oct-2006	October Dry	411	7.40	9.5	1.81	low flow. Water discoloured due to large amounts of leaves in bush.
	13-Dec-2006	Fall Rain	370	7.10	5	5.8	Some flow in culvert (about half full), clear.
	23-Mar-2007	Spring Freshet	277	7.80	3.9	8.39	Good Flow. Pipe 3/4 full. Ice cover in bused area.
	26-Apr-2007	April Dry					Dry
	17-May-2007	Spring Rain	245	7.60	13.3	2.71	Good Flow. Pipe 1/4 full.
	10-Aug-2007	August Dry					Dry, No water next day after largest rain event on August 7 (18mm).
	26-Sep-2007	Summer Rain					Dry. No water next day after last rain event on Sept 26 (7.8mm).
	10-Oct-2007	Fall Rain					Dry, 38 mm previous three days.
	31-Oct-2007	October Dry					Dry
	29-Nov-2007	Additional Fall					Dry
	09-Apr-2008	Spring Freshet	240	7.10	9	7.71	Good Flow. Pipe 1/2 full. Flooded in bush area.
	20-Aug-2008	Summer Dry					Dry. Attempts made after 13.7 mm of rain in last 7 days
	16-Sep-2008	Summer Rain	457	7.60	16.5	1.86	Clear. Good flow. Pipe 1/4 full
	18-Dec-2008	Fall Rain	527	7.60	3.6	3.11	Clear. Slow flow
	28-May-2009	Spring Freshet	321	8.40	16.6	9.22	Silky
	27-Jul-2009	Summer Dry	219	8.90		5.88	Silky
	14-Oct-2009						No Discharge from location
	05-Nov-2009		350	8.10		6.3	No Discharge from location
	26-Nov-2009		324	8.50		9.58	
	16-Dec-2009		324	8.50		8.79	
	25-Mar-2010		7.21	6.90	7.5	409	clear
	20-Aug-2010		19.13	22.40	9.4	302	Last small pool of Water, very low flow, clear
	04-Oct-2010		7.27	10.40	7.6	298	Clear with very little flow
	29-Nov-2010		7.67	3.70	7.2	549	Slightly cloudy with very low flow
	15-Mar-2011		792	7.87	2.1	14.55	Good flow

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 4							
	07-Jul-2011						No flow coming out of culvert and very low flow in ditch
	30-Sep-2011		dry	dry	dry	dry	No flow coming out of culvert
	19-Oct-2011		409	8.68	9.9	11.86	
	13-Dec-2011		532	8.26	1.8	13.62	Slightly cloudy with low flow
	04-May-2012	Spring Wet	531	8.35	19.7	9.56	Decent flow
	06-Jun-2012	June Trigger					No flow
	13-Aug-2012	August Dry	N/A	N/A	N/A	N/A	No flow
	25-Sep-2012	September Dry					No flow
	04-Dec-2012	Fall Wet	661	7.90	4.5	10.51	Low flow clear
	05-Apr-2013	Spring Wet	926	7.91	2.3	8.21	Clear with decent flow
	17-Jul-2013	Summer Dry					No flow
	12-Sep-2013	Sept Wet	306	8.41	20.3	7.74	Good flow slightly cloudy
	02-Dec-2013	Dec Wet	716	8.23	3.2	7.21	Clear low flow
	31-Mar-2014	Spring Freshet	685	7.23	2.9	8.13	Slightly cloudy good flow
	16-Jul-2014	July Dry	425	8.10	20	11.86	Slightly cloudy with low flow
	06-Aug-2014	August Trigger	360	8.05	20.6	6.68	Greyish low flow lots of aquatic vegetation
	22-Sep-2014	Sept Wet	393	7.22	12.3	5.65	Good flow cloudy
	01-Dec-2014	Fall Wet	725	7.65	1.6	6.91	Slightly cloudy with good flow
	14-Apr-2015	Spring Freshet	696	7.23	10.6	6.93	Low flow slightly cloudy
	29-Jul-2015	July Dry					No flow coming out of culvert
	10-Sep-2015	Sept Wet	351	7.84	21.1	10.31	Slight yellow lots of aquatic vegetation
	30-Dec-2015	December Wet	435	8.45	2	9.37	Slightly cloudy low flow
	10-Mar-2016	Spring Freshet	633	8.33	4.6	11.41	Low flow out of culvert. clear
	26-Jul-2016	Summer Dry					Dry
	06-Oct-2016	Fall Dry	402	7.31	15.8	10.19	Very low flow slightly brown/ lots of vegetation
	28-Oct-2016	Fall Wet	434	7.90	3.7	7.81	Slight yellowish/ brown low flow
	24-Nov-2016	Trigger Event	490	8.40	3.1	9.15	Clear low
	05-Apr-2017	Spring Freshet	438	7.63	10.1	7.36	Clear with low flow
	23-Aug-2017	Summer Dry	448	7.24	21.3	6.32	Low flow slightly cloudy
	26-Oct-2017	October Wet					No flow no sample
	29-Nov-2017	Fall Wet	712	7.71	3.9	9.63	Clear low flow
SW 5							
	10-Apr-1992		N/A	N/A	10		Clear
	11-Jun-1992		1600	7.40	15		Clear
	13-Aug-1992		1400	7.40	14		Clear, slow
	10-Nov-1992		1800	7.80	8		Clear, some sediment
	20-Apr-1993		1500	9.30	5		Fairly clear, yellow colour, some silt, silty bottom
	10-Jun-1993		1200	8.90	14		Some suspended silt, very silty bottom
	02-Sep-1993		400	7.70	17	6.3	Dark colour, lots of silt and weeds, slow
	05-Nov-1993		1000	8.00	7	11.87	Dirty brown colour, slow
	30-Nov-1993		1100	8.00	1	11.21	Dark colour, weed and algae growth
	13-Apr-1994	Spring Freshet	2400	7.20	6.5	5.66	Clear through weeds, some sediment load
	04-May-1994	Spring Dry	2100	7.60	12	5.43	Light yellow, clear, lot of weeds at culvert opening
	26-May-1994	Spring Rain	1000	8.00	11	10.53	Brown colour, very silty, mud bottom, weeds/grass
	17-Jun-1994	June Dry	1800	7.40	19	9.55	Clear yellow, heavy growth, liitle flow
	04-Aug-1994	Summer Rain	1200	8.00	19	11.23	Very weedy, sample appears silty
	17-Aug-1994	August Dry					Dry, not sampled, some small stagnant pools
	14-Oct-1994	Fall Dry					Dry, not sampled, some small stagnant pools
	21-Nov-1994	Fall Rain	600	8.00	9	11.2	Fairly clear, lots of reeds and grass
	13-Apr-1995	Spring Freshet	2200	7.80	5	11.05	Clear/yellow colour, lots of weeds/mud
	28-Apr-1995	Spring Dry	1600	8.00	10	10.05	Clear, silty/muddy/weedy botom, lots of reeds

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 5							
	17-May-1995	Spring Rain	1000	7.40	13	10.7	Clear with some silt, growth around staff gauge
	30-Jun-1995	June Dry	2100	7.60	18	5.3	Very weedy
	23-Aug-1995	August Dry	2000	7.50	18	6.89	Clear/yellow sample, very weedy, scum orange film, minimal flow
	20-Oct-1995	Fall Dry	2200	7.70	12	6.84	Very weedy/bull rushes, minimal flow
	28-Nov-1995	Fall Rain	4450	7.80	6	8	Lots of grass and reeds
	16-Apr-1996	Spring Freshet	1418	8.10	6.3	8.5	Some flow, lots of reeds
	27-May-1996	Spring Dry	1800	8.20	11	6.2	Some flow, weeds, some silt
	18-Jun-1996	Spring Rain	1200	N/A	16	6.3	Some flow, lots of reeds and grass
	06-Aug-1996	June Dry	2150	N/A	16	N/A	Very little flow, Lots of reeds
	07-Oct-1996	August Dry	N/A	N/A	N/A	N/A	Lots of reeds
	30-Oct-1996	Summer Rain	1244	8.00	10.2	5.4	Some flow, lots of reeds
	06-Dec-1996	Fall Rain	6260	7.80	6.5	5.4	Little flow, water cloudy, Gas Line work on Speedvale
	16-Apr-1997	Spring Freshet	1133	7.70	7.3	6.7	Some garbage around area. Very little flow coming from silt dams
	23-May-1997	Spring Dry	1597	7.30	9.6	6.9	No flow
	07-Aug-1997	Summer Dry					No flow - dry
	18-Nov-1997	Fall Dry	16370	7.50	3.8	3.5	Leaves lining bottom of creek, no flow, clear water
	26-Nov-1997	Fall Rain	2110	7.60	10.9	6.4	Cloudy, no flow
	17-Jun-1998	Spring Rain	486	7.80	20.8	3.3	Standing water
	07-Dec-1998	Fall Rain	1350	6.80	8.9	5.8	Very slight flow
	23-Apr-1999	Spring Freshet	964	7.70	8.6	5.7	Standing water, clear
	30-Jun-1999	Summer Rain	N/A	N/A	N/A	N/A	
	06-Dec-1999	Fall Rain	474	7.10	10.2	6.5	Very small flow through silt in culvert, very narrow
	15-Mar-2000	Spring Freshet	636	7.40	4.8	7.2	Trickling flow
	27-Mar-2000	MOEE Samples	431	7.40	7.7	7.3	Good flow; somewhat of a trickle
	20-Sep-2000	Fall Dry					No sample - location is dry; pile of silt has formed in creek 6 m downstream; removed silt
	27-Nov-2000	Fall Rain	1253	7.10	6.5	4.1	Very little flow / still; some silt in bottom
	20-Mar-2001	Spring Freshet	552	7.60	5.5	6	Very little flow, clear
	10-Oct-2001	Fall Dry					Dry
	03-Dec-2001	Fall rain	974	7.90	8.8	3.8	No real flow (trickle), clear
	18-Feb-2002	Spring Freshet					Not enough water to grab samples.
	17-Apr-2002	April Dry					Dry Conditions with warm temperatures - no flows observed
	15-May-2002	Spring Rain					No flow observed
	06-Jun-2002	Summer Rain	134	7.60	11.7		Some flow
	17-Jun-2002	June Dry					No dry conditions due to heavy rains, Dry event could not be completed
	12-Aug-2002	August Dry					No rain for 10 days, no surface water to sample
	25-Oct-2002	October Dry					No more than 2 dry days in a row, no samples taken
	23-Dec-2002	Fall Rain					Rains for 2 days, still not enough water to sample
	18-Mar-2003	Spring Freshet	744	7.50	3.4	9.8	Low flow, visible TSS
	28-Apr-2003	April Dry					No sample taken - Could not get 5 days of no rain
	26-May-2003	Spring Rain					No sample taken - Although there was rain, no water to sample
	18-Jun-2003	June Dry					No sample taken - Could not get 5 days of no rain
	06-Aug-2003	Summer Rain					Very little water
	26-Aug-2003	August Dry					No sample taken - Could not get 5 days of no rain
	24-Oct-2003	October Dry					No sample taken - Could not get 5 days of no rain
	19-Nov-2003	Fall Rain	657	7.70	11.2	8.3	Some flow, clear
	10-Mar-2004	Spring Freshet	1115	7.60	4.3	8.73	Clear, trickle flow
	22-Apr-2004	Spring Rain					No sample taken - Although there was rain, no water to sample
	27-May-2004	April Dry	944	8.09	15.6	6.9	Clear, trickle flow
	28-Jun-2004	June Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	17-Aug-2004	August Dry					No sample collected, dry,
	19-Oct-2004	Summer Rain					No flow

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 5							
	28-Oct-2004	October Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	08-Dec-2004	Fall Rain	965	8.08	8.6		Very little flow, clear.
	04-Apr-2005	Spring Freshet	960	8.51	6.5	9.68	Some flow, visible TSS
	30-Apr-2005	April Dry					No sample taken due to rain
	16-May-2005	Spring Rain					No sample taken, not enough run-off after rain event on May 16. Very little rain during rest of month.
	30-Jun-2005	June Dry					No samples taken, dry
	25-Aug-2005	August Dry					No sample taken, not enough run-off even after rain event earlier in the week of Aug 25.
	28-Sep-2005	Summer Rain					No sample taken, not enough run-off
	14-Oct-2005	October Dry					No sample taken, Dry
	30-Nov-2005	Fall Rain					No sample taken, not enough run-off
	24-Apr-2006	Spring Freshet	933	7.80	8	8.8	Slow flow, clear.
	30-Apr-2006	April Dry					No Dry Period During Month
	31-May-2006	Spring Rain					Rain event early in month, no run-off occuring later in month.
	09-Jun-2006	June Dry					Low Water
	09-Aug-2006	August Dry					Low Water
	14-Sep-2006	Summer Rain					Dry
	12-Oct-2006	October Dry	1063	7.70	10.8	7.8	No flow. Lots of leaves and grass.
	13-Dec-2006	Fall Rain	707	7.40	6.8	9.05	No flow.
	23-Mar-2007	Spring Freshet	825	8.00	5.6	8.88	Slow to No Flow. Ice/slush blockage upstream.
	26-Apr-2007	April Dry					Dry
	17-May-2007	Spring Rain	959	8.40	12.7	6.55	Slow Flow, Clear.
	19-Jun-2007	June Dry					Dry, No water next day after June 9 (9.8mm) and June 19 (22.4mm).
	10-Aug-2007	August Dry					Dry, No water next day after largest rain event on August 7 (18mm).
	26-Sep-2007	Summer Rain					Dry. No water next day after last rain event on Sept 26 (7.8mm).
	10-Oct-2007	Fall Rain					Dry, 38 mm previous three days.
	31-Oct-2007	October Dry					Dry
	29-Nov-2007	Additional Fall	1281	6.90	3.8	10	Slow to No Flow, Clear. Leaves/silt buildup in ditch..
	09-Apr-2008	Spring Freshet	806	7.10	9.7	8.62	Clear. Slow flow
	20-Aug-2008	Summer Dry					Dry. Attempts made after 13.7 mm of rain in last 7 days
	16-Sep-2008	Summer Rain	1422	7.20	16	4.97	Clear. Very low flow.
	18-Dec-2008	Fall Rain	826	7.90	3.5	10.18	Clear. Very little flow
	28-May-2009	Spring Freshet	589	7.60	15.1	7.86	Silky
	27-Jul-2009	Summer Dry	1333	7.60	18.7	3.58	No flow/ Clean
	14-Oct-2009		1934	7.60	6.8	1.86	Slow flow/ Clean
	05-Nov-2009		1734	8.00	6.8	8.86	Slow flow/ Clean
	26-Nov-2009		1944	8.00	9.2	8.8	Slow flow/ Clean
	16-Dec-2009		1944	8.00	6.2	7.78	Broke ice
	25-Mar-2010		6.67	7.10	7.3	573	Slightly cloudy with average flow
	20-Aug-2010		9.5	20.40	8.4	701	Brownish colour
	04-Oct-2010		4.48	8.50	7	904	Slightly murky with average flow
	29-Nov-2010		8.15	1.30	7.1	682	Clear, Ice on surface,
	15-Mar-2011		904	7.91	3.1	11.26	Very slight yellowish colour good flow
	07-Jul-2011		1307	7.83	19.1	6.84	Low flow
	30-Sep-2011		dry	dry	dry	dry	No flow and creek had dried up at this end
	19-Oct-2011		535	8.90	8.9	10.79	Clear with low flow and some aquatic vegetation
	13-Dec-2011		10.72	8.10	2.9	11.28	Good flow very slight yellowish colour
	04-May-2012	Spring Wet	973	7.72	13.7	9.32	Low flow clear
	06-Jun-2012	June Trigger					No flow
	13-Aug-2012	August Dry	N/A	N/A	N/A	N/A	No flow
	25-Sep-2012	September Dry					No flow

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 5							
	04-Dec-2012	Fall Wet	617	7.50	4.4	9.99	Clear wit decent flow
	05-Apr-2013	Spring Wet	1120	7.96	2.6	8.07	Clear with decent flow
	17-Jul-2013	Summer Dry					No flow
	12-Sep-2013	Sept Wet	304	7.88	20	8.17	Low flow cloudy
	02-Dec-2013	Dec Wet	1106	7.13	1.4	9.55	Very low flow slight yellow colour
	31-Mar-2014	Spring Freshet	397	7.52	2.4	10.18	Clear with good flow
	16-Jul-2014	July Dry	1270	7.83	17.1	4.9	Clear with low flow
	06-Aug-2014	August Trigger	1047	7.73	15.8	4.58	Mostly clear with low flow
	22-Sep-2014	Sept Wet	986	7.77	14.3	6.67	Good flow clear
	01-Dec-2014	Fall Wet	966	7.95	2.6	7.65	Clear with low flow
	14-Apr-2015	Spring Freshet	456	7.33	7.2	10.57	Good flow clear
	29-Jul-2015	July Dry					No flow coming out of culvert or upstream from site
	10-Sep-2015	Sept Wet	517	7.81	24.9	13.46	Clear low flow
	30-Dec-2015	December Wet	526	7.96	1	10.21	Clear decent flow
	10-Mar-2016	Spring Freshet	553	8.10	3.6	10.2	Very slightly yellow decent flow
	26-Jul-2016	Summer Dry					Dry
	06-Oct-2016	Fall Dry					Dry
	28-Oct-2016	Fall Wet					Dry
	24-Nov-2016	Trigger Event	1159	7.79	6.8	10.03	Slightly brownish
	05-Apr-2017	Spring Freshet	443	7.63	8	6.79	Clear with good flow
	23-Aug-2017	Summer Dry	739	7.44	18.9	9.11	Very low flow, high aquatic veg, yellowish
	26-Oct-2017	October Wet	699	7.68	7.7	6.94	Slightly yellow low flow
	28-Nov-2017	Fall Wet	966	8.01	3.2	9.11	Slightly yellow low flow
SW 7							
	10-Apr-1992		N/A	N/A	10		Clear
	11-Jun-1992		800	7.40	14		Clear, red staining on creek bottom
	13-Aug-1992		1000	7.40	14		Slightly yellow, good flow
	10-Nov-1992		900	7.60	6		Reddish staining on creek bottom and grass
	20-Apr-1993		700	9.20	5		Clear, fast, gravel bottom, red staining on culvert
	10-Jun-1993		800	8.40	15		Clear
	01-Sep-1993				1		Dry, not sampled
	26-May-1994	Spring Rain	700	8.10	11	7.56	Light yellow colour, good flow
	17-Jun-1994	June Dry	1000	7.10	21	1.4	Yellow colour, some ponding and stagnant areas
	17-Aug-1994	August Dry					Dry, not sampled
	21-Nov-1994	Fall Rain	2000	8.10		11.15	Clear, gravelly bottom, weeds
	17-May-1995	Spring Rain	900	7.10	13	5.26	Clear sample, gravel bottom, little growth
	30-Jun-1995	June Dry					Dry, not sampled
	23-Aug-1995	August Dry					Dry, not sampled
	28-Nov-1995	Fall Rain	810	7.80	4.4	9	Some grass and leaves in creek
	18-Jun-1996	Spring Rain	800	N/A	16	5.7	Fairly good flow, some sticks in culvert
	06-Aug-1996	June Dry	1400	N/A	18	N/A	No flow
	07-Oct-1996	August Dry	N/A	N/A	N/A	N/A	Little flow, scum observed on water down stream
	06-Dec-1996	Fall Rain	819	7.60	2.3	5.2	Good flow
	26-Nov-1997	Fall Rain	1182	7.90	3.6	3.8	Water clear and running
	17-Jun-1998	Spring Rain					No flow
	07-Dec-1998	Fall Rain	781	7.60	10.1	4.2	Some flow; lots of woody debris
	23-Apr-1999	Spring Freshet					Not sampled
	30-Jun-1999	Summer Rain	N/A	N/A	N/A	N/A	
	06-Dec-1999	Fall Rain	447	6.80	9	5.2	Good flow
	15-Mar-2000	Spring Freshet	187	7.10	4	4.5	Some flow; clear
	20-Sep-2000	Fall Dry					No sample - flow path is dry; lined with old leaves

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 7							
	27-Nov-2000	Fall Rain	672	6.70	7.1	4.3	Some flow; lots of leaves lining bottom
	20-Mar-2001	Spring Freshet	104	7.30	2.2	4.2	Water flowing, clear
	10-Oct-2001	Fall Dry					Dry
	03-Dec-2001	Fall rain	704	7.80	8	3	Slight flow, clear
	18-Feb-2002	Spring Freshet					Not enough water to grab samples.
	15-May-2002	Spring Rain					No flow observed
	06-Jun-2002	Summer Rain	924	7.50	13		Very little flow, almost still. A few sticks in culvert, clear.
	17-Jun-2002	June Dry					No dry conditions due to heavy rains, Dry event could not be completed
	12-Aug-2002	August Dry					No rain for 10 days, no surface water to sample
	25-Oct-2002	October Dry					No more than 2 dry days in a row, no samples taken
	23-Dec-2002	Fall Rain					Rains for 2 days, still not enough water to sample
	18-Mar-2003	Spring Freshet	592	7.60	2.2	6.84	Excellent flow, clear. Note construction on adjacent property
	26-May-2003	Spring Rain					No sample taken - Although there was rain, no water to sample
	18-Jun-2003	June Dry					No sample taken - Could not get 5 days of no rain
	06-Aug-2003	Summer Rain					Very little water, construction continues on adjacent property
	26-Aug-2003	August Dry					No sample taken - Could not get 5 days of no rain
	24-Oct-2003	October Dry					No sample taken - Could not get 5 days of no rain
	19-Nov-2003	Fall Rain					No Access due to construction
	10-Mar-2004	Spring Freshet					No access due to construction on adjacent property along Watson Rd.
	22-Apr-2004	Spring Rain					No sample taken - Although there was rain, no water to sample
	27-May-2004	April Dry	468	7.83	16.1	6.81	Water has visible TSS. Note silt fence near construction has been breached by about 0.9m of water.
	28-Jun-2004	June Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	17-Aug-2004	August Dry					No flow, small puddle, not enough water to sample.
	19-Oct-2004	Summer Rain					No flow
	28-Oct-2004	October Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	08-Dec-2004	Fall Rain	406	7.98	9.3		Moderate flow, clear. Silt fence up stream is overflowing with water.
	04-Apr-2005	Spring Freshet	499	8.00	6.1	6.72	Good flow, Silt fence up-stream is being breached by water
	30-Apr-2005	April Dry					No sample taken due to rain
	16-May-2005	Spring Rain					No sample taken, not enough run-off after rain event on May 16. Very little rain during rest of month.
	30-Jun-2005	June Dry					No samples taken, dry
	25-Aug-2005	August Dry					No sample taken, not enough run-off even after rain event earlier in the week of Aug 25.
	28-Sep-2005	Summer Rain					No sample taken, not enough run-off
	14-Oct-2005	October Dry					No sample taken, Dry
	30-Nov-2005	Fall Rain					No sample taken, not enough run-off
	24-Apr-2006	Spring Freshet	459	7.80	9.2	8.23	Good flow. Visible silt.
	30-Apr-2006	April Dry					No Dry Period During Month
	31-May-2006	Spring Rain					Rain event early in month, no run-off occuring later in month.
	09-Jun-2006	June Dry					Low Water
	09-Aug-2006	August Dry					Low Water
	14-Sep-2006	Summer Rain	307	7.90	17.6	6.21	Good Flow. Lots of TSS (Silty).
	12-Oct-2006	October Dry	377	7.80	9.8	7.55	Good flow. Visible TSS.
	13-Dec-2006	Fall Rain	303	7.40	6.5	9.5	Good flow. Visible TSS.
	23-Mar-2007	Spring Freshet	539	7.00	5.1	8.14	Slow Flow, Visible TSS.
	26-Apr-2007	April Dry					Dry
	17-May-2007	Spring Rain	479	8.00	12.9	8.05	Good Flow, Lots of Visible TSS.
	19-Jun-2007	June Dry					Dry, No water next day after June 9 (9.8mm) and June 19 (22.4mm).
	10-Aug-2007	August Dry					Dry, No water next day after largest rain event on August 7 (18mm).
	26-Sep-2007	Summer Rain					Dry. No water next day after last rain event on Sept 26 (7.8mm).
	10-Oct-2007	Fall Rain	331	7.10	12.8	5.31	Very Slow Flow, Visible TSS.

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				**Comments**
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 7							
	31-Oct-2007	October Dry					Dry
	29-Nov-2007	Additional Fall	950	7.00	4	10.2	Flowing, Visible TSS.
	09-Apr-2008	Spring Freshet	469	7.10	7.5	7.97	Good Flow. Visible TSS
	20-Aug-2008	Summer Dry					Dry. Attempts made after 13.7 mm of rain in last 7 days
	16-Sep-2008	Summer Rain	385	7.90	17.5	5.76	Low flow. Visible TSS.
	18-Dec-2008	Fall Rain	676	7.60	4.5	6.77	Low flow. Visible TSS.
	28-May-2009	Spring Freshet	586	7.40	13.6	15.5	Good flow
	27-Jul-2009	Summer Dry	365	8.00	18.9	6.26	Slow flow
	14-Oct-2009		620	7.40	9.2	7.92	Slow flow
	05-Nov-2009		840	7.40	4.2	4.92	Slow flow
	26-Nov-2009		517	9.80	9.2	4.92	Slow flow
	16-Dec-2009		517	9.80	4.7	8.73	Broke ice
	25-Mar-2010		9.87	6.90	7.1	556	Clear with good flow
	20-Aug-2010		6.61	22.50	7.7	587	Clear with low flow
	04-Oct-2010		6.86	10.40	7.4	516	Clear with good flow
	29-Nov-2010		9.27	4.00	7.4	651	Clear with lower than average flow
	15-Mar-2011		1031	7.73	2.6	8.3	Mostly clear
	07-Jul-2011		563	7.83	22.7	6.54	Decent flow
	30-Sep-2011		509	8.39	16.3	7.74	Good flow
	19-Oct-2011		552	8.56	9.1	10.94	Clear with decent flow
	13-Dec-2011		821	8.01	2.8	12.41	Clear with good flow
	04-May-2012	Spring Wet	674	8.16	18.4	8.82	
	06-Jun-2012	June Trigger	611	7.50	16.1	7.35	Clear with decent flow
	13-Aug-2012	August Dry	N/A	N/A	N/A	N/A	cloudy
	25-Sep-2012	September Dry	4.38	7.81	12.1	7.89	Clear decent flow
	04-Dec-2012	Fall Wet	703	7.55	3.7	9.34	Good flow slight yellow color
	05-Apr-2013	Spring Wet	984	7.90	4.2	7.59	Very slight yellow colour very good flow
	17-Jul-2013	Summer Dry	686	7.64	19.8	9.76	Clear- very slightly cloudy good flow
	12-Sep-2013	Sept Wet	337	8.02	21.1	8.93	Good flow clear
	02-Dec-2013	Dec Wet	911	7.67	3.1	10.17	Good flow clear
	31-Mar-2014	Spring Freshet	978	7.11	4.5	7.29	Slightly cloudy good flow
	16-Jul-2014	July Dry	471	7.90	19.1	7.47	clear with flow lots of emergent vegetation
	06-Aug-2014	August Trigger	577	7.97	20.3	4.1	Clear with good flow
	22-Sep-2014	Sept Wet	525	7.84	13.8	6.59	Really good flow clear
	01-Dec-2014	Fall Wet	741	7.87	1.8	6.94	Clear with really good flow
	14-Apr-2015	Spring Freshet	917	7.25	9.3	6.34	Really good flow clear
	29-Jul-2015	July Dry	8.6	6.96	23.8	4.9	Low flow, very slight yellowish colour
	10-Sep-2015	Sept Wet	485	8.08	14.7	10.82	Cloudy with low flow lots of emergent vegetation
	30-Dec-2015	December Wet	494	8.69	1.5	9.89	Good flow clear
	10-Mar-2016	Spring Freshet	567	8.08	3.7	10.58	Good flow, lots of emergent vegetation. clear
	26-Jul-2016	Summer Dry	469	7.79	21.4	9.34	Slightly brownish low flow
	06-Oct-2016	Fall Dry	504	7.35	15.6	11.17	Brownish low flow
	28-Oct-2016	Fall Wet	530	7.92	3.6	9.36	Clear flow
	24-Nov-2016	Trigger Event	530	7.81	2.9	11.36	Low flow clear
	05-Apr-2017	Spring Freshet	471	7.35	10.1	6.98	Slightly yellowish good flow
	23-Aug-2017	Summer Dry	510	7.03	19.8	10.2	Clear low flow
	26-Oct-2017	October Wet	540	7.23	9.6	10.28	Clear with good flow
	29-Nov-2017	Fall Wet	659	8.21	4.4	7.76	Clear good flow
SW 15							
	15-Apr-1992		N/A	N/A	N/A	N/A	Clear, some sediment
	11-Jun-1992		700	7.40	17		Oily film, some sediment, red stain along bank

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 15							
	13-Aug-1992		700	7.40	15		Oily film, Heavy biological build up on weeds, creating excessive sediment
	10-Nov-1992		700	7.80	4		Clear, good volume
	20-Apr-1993		600	9.00	6		Very clear, rock/gravel bottom, high volume
	10-Jun-1993		700	9.00	13		Fairly clear, mud/rock bottom, weeds
	02-Sep-1993		500	7.80	23	5.14	Dark colour, lots of algal growth
	30-Nov-1993		1000	8.20	1	11.34	Clear, ice on edge
	26-May-1994	Spring Rain	700	8.30	14	3.7	Yellow colour, good volume, suspended particles visible
	17-Jun-1994	June Dry	700	7.20	26	5.3	Cloudy yellow, abundant invertebrates, little flow
	17-Aug-1994	August Dry	600	7.20	13	6.74	Lots of algae growth, oily film on surface, muddy bottom
	21-Nov-1994	Fall Rain	700	8.10	6	10.83	Murky dark colour, ditch has been reworked on right side
	17-May-1995	Spring Rain	600	7.30	15	5.25	Very clear, algae on top, some suspended sediments, good flow
	30-Jun-1995	June Dry	700	7.60	22	5.48	Faily clear, algae, slow flow
	23-Aug-1995	August Dry	700	7.00	23	6.7	Clear, lots of algae, lots of minnows
	28-Nov-1995	Fall Rain	810	7.60	2	9	Ice and snow but creek is clear
	18-Jun-1996	Spring Rain	700	N/A	17	3	Lots of suspended particulate, good flow
	06-Aug-1996	June Dry	700	N/A	19		Little flow
	07-Oct-1996	August Dry	N/A	N/A	N/A	N/A	Little flow, clear
	06-Dec-1996	Fall Rain	692	7.70	1.7	4.8	Some ice on creek, cold water
	07-Aug-1997	Summer Dry	708	8.20	13.3	1.7	No flow; algae plentiful
	26-Nov-1997	Fall Rain	603	7.60	4.1	4.2	Clear and running; looks like a trap is at fence
	17-Jun-1998	Spring Rain					No flow
	07-Dec-1998	Fall Rain	1118	7.00	8.9	3.3	Good flow, lots of vegetation in water
	23-Apr-1999	Spring Freshet					Not sampled
	30-Jun-1999	Summer Rain	N/A	N/A	N/A	N/A	
	06-Dec-1999	Fall Rain	175	6.50	7.5	4.1	Flowing well
	15-Mar-2000	Spring Freshet	151	6.90	2.3	5.2	Good flow; visible flow from ditch into creek
	20-Sep-2000	Fall Dry	241	8.00	16.1	2.3	Very little flow; film observed on water on downstream side; called B.Taylor @ Waste to look at water
	27-Nov-2000	Fall Rain	569	7.60	4.7	4.1	Good flow; ice in creek
	20-Mar-2001	Spring Freshet	90	7.10	2.2	2.8	Good flow, visible run-off from ditch (west)
	10-Oct-2001	Fall Dry	644	7.80	7.9	2.1	Very little flow, clear
	03-Dec-2001	Fall rain	607	7.50	6	3.5	Good Flow, clear
	18-Feb-2002	Spring Freshet					Not enough water to grab samples.
	15-May-2002	Spring Rain					No flow observed
	06-Jun-2002	Summer Rain	636	7.80	14.2		Good flow, some visible TSS
	17-Jun-2002	June Dry					No dry conditions due to heavy rains, Dry event could not be completed
	12-Aug-2002	August Dry					No rain for 10 days, no surface water to sample
	25-Oct-2002	October Dry					No more than 2 dry days in a row, no samples taken
	23-Dec-2002	Fall Rain					Rains for 2 days, still not enough water to sample
	18-Mar-2003	Spring Freshet	319	7.60	3.6	5.95	Good flow, clear, snow and ice in culvert
	26-May-2003	Spring Rain					No sample taken - Although there was rain, no water to sample
	18-Jun-2003	June Dry					No sample taken - Could not get 5 days of no rain
	06-Aug-2003	Summer Rain	463	7.70	18.7	1.31	Some flow, clear, orange tinge to creek bottom and sides.
	26-Aug-2003	August Dry					No sample taken - Could not get 5 days of no rain
	24-Oct-2003	October Dry					No sample taken - Could not get 5 days of no rain
	19-Nov-2003	Fall Rain	348	7.60	15.4	4.74	Good flow, clear
	10-Mar-2004	Spring Freshet	368	7.30	12	5.27	Clear, good flow
	22-Apr-2004	Spring Rain					No sample taken - Although there was rain, no water to sample
	27-May-2004	April Dry	523	7.71	15.6	3.11	Clear, flowing well. Duck with duckling observed in creek.
	28-Jun-2004	June Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	17-Aug-2004	August Dry	540	7.38	14.7	1.59	Very little flow, reddish tinge on creek bed, some TSS.

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 15							
	19-Oct-2004	Summer Rain	756	7.40	7.2	4.52	Some flow, clear.
	28-Oct-2004	October Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	08-Dec-2004	Fall Rain	533	7.66	13		Good flow, clear. Some patchy ice.
	04-Apr-2005	Spring Freshet	413	7.65	7.7	6.97	Fast flow
	30-Apr-2005	April Dry					No sample taken due to rain
	16-May-2005	Spring Rain					No sample taken, not enough run-off after rain event on May 16. Very little rain during rest of month.
	30-Jun-2005	June Dry					No samples taken, dry
	25-Aug-2005	August Dry					No sample taken, not enough run-off even after rain event earlier in the week of Aug 25.
	28-Sep-2005	Summer Rain					No sample taken, not enough run-off
	14-Oct-2005	October Dry					No sample taken, Dry
	30-Nov-2005	Fall Rain					No sample taken, not enough run-off
	24-Apr-2006	Spring Freshet	514	7.60	11.4	5.37	Good flow, clear.
	30-Apr-2006	April Dry					No Dry Period During Month
	31-May-2006	Spring Rain					Rain event early in month, no run-off occuring later in month.
	09-Jun-2006	June Dry					Low Water
	09-Aug-2006	August Dry					Low Water
	14-Sep-2006	Summer Rain	568	7.30	17.4	2.1	Very little flow. Dead shunk observed. Sample upstream of this point.
	12-Oct-2006	October Dry	580	7.70	10	3.66	Good flow, clear.
	13-Dec-2006	Fall Rain	364	7.30	8.6	7.56	Good flow, clear.
	23-Mar-2007	Spring Freshet	432	7.00	5.7	6.99	Fast Turbulent Flow, Clear
	26-Apr-2007	April Dry					Dry
	17-May-2007	Spring Rain	510	7.60	13.7	4.55	Good Flow, Clear
	19-Jun-2007	June Dry					Dry, No water next day after June 9 (9.8mm) and June 19 (22.4mm).
	10-Aug-2007	August Dry					Dry, No water next day after largest rain event on August 7 (18mm).
	26-Sep-2007	Summer Rain					Dry. No water next day after last rain event on Sept 26 (7.8mm).
	10-Oct-2007	Fall Rain	1105	7.10	14.9	2.45	Very Low Flow, clear.
	31-Oct-2007	October Dry					Dry
	29-Nov-2007	Additional Fall	1124	6.90	7.4	5.35	Slow Flow, Ice covered.
	09-Apr-2008	Spring Freshet	329	7.00	8	5.15	Clear. Fast flow
	20-Aug-2008	Summer Dry					Dry. Attempts made after 13.7 mm of rain in last 7 days
	16-Sep-2008	Summer Rain	540	8.00	18.5	2.27	Clear. Good flow
	18-Dec-2008	Fall Rain	444	7.40	7.6	7.3	Clear. Good flow
	28-May-2009	Spring Freshet	517	7.20	15.2	0.99	Some sediment/ Good flow
	27-Jul-2009	Summer Dry	540	7.20	17.8	1.99	Slow flow/ Lots of vegetation
	14-Oct-2009		659	7.00	11	4.35	Slow flow/ Lots of vegetation
	05-Nov-2009		703	7.70	3	3.45	Slow flow/ Lots of vegetation
	26-Nov-2009		644	7.70	7	8.45	Slow flow/ Lots of vegetation
	16-Dec-2009		644	7.70	3.9	6.43	Broke ice
	25-Mar-2010		8.21	7.30	7.2	720	clear
	20-Aug-2010		3.52	20.40	7.6	608	Very clear with good flow, lots of aquatic vegetation
	04-Oct-2010		5.63	10.20	7.4	595	Very clear with good flow
	29-Nov-2010		9.1	1.60	7.3	688	Clear with average flow
	15-Mar-2011		637	8.35	1.6	11.35	Clear, really good flow
	07-Jul-2011		753	7.47	21.9	2.72	Decent flow
	30-Sep-2011		870	7.40	14.1	3.96	Slightly yellowish good flow
	19-Oct-2011		794	8.36	8.8	7.77	Clear good flow
	13-Dec-2011		816	8.21	0.8	7.7	Clear with strong flow, ice on top
	04-May-2012	Spring Wet	642	7.83	17.8	7.15	Good flow clear
	06-Jun-2012	June Trigger	727	7.22	15.7	4.5	Good flow
	13-Aug-2012	August Dry	968	7.51	22	5.4	Lower flow than normal with a pump in the creek someone is using for irrigation

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 15							
	25-Sep-2012	September Dry	1338	7.71	11.3	6.67	Clear low flow, pump in creek
	04-Dec-2012	Fall Wet	744	7.51	3.1	8.12	Good flow clear
	05-Apr-2013	Spring Wet	610	8.24	1.5	7.04	Clear with very good flow
	17-Jul-2013	Summer Dry	764	7.69	20.1	8.76	Really good flow yellowish colour
	12-Sep-2013	Sept Wet	660	7.84	19.2	9.17	Slightly yellowish really good flow
	02-Dec-2013	Dec Wet	960	7.62	4.4	8.16	Yellowish low fow
	31-Mar-2014	Spring Freshet	632	7.31	2.6	7.02	Really good flow lots of ice and ponding water
	16-Jul-2014	July Dry	669	7.64	17	10.42	Clear with really good flow
	06-Aug-2014	August Trigger	635	7.61	17.5	3.2	Clear with really good flow
	22-Sep-2014	Sept Wet	7.46	7.23	12.6	4.99	really good flow clear
	01-Dec-2014	Fall Wet	688	7.80	1.4	8.11	Clear with really good flow
	14-Apr-2015	Spring Freshet	706	7.92	7.9	8.25	really good flow clear
	29-Jul-2015	July Dry	786	6.99	19.6	8.67	Low flow. Very slight yellowish colour
	10-Sep-2015	Sept Wet	525	7.48	20.3	9.36	Cloudy with good flow
	30-Dec-2015	December Wet	505	8.03	0.8	6.97	Really good flow clear
	10-Mar-2016	Spring Freshet	393	8.09	1.4	12.76	Really good flow clear
	26-Jul-2016	Summer Dry	506	7.77	21.6	11.65	Low flow. Beaver dam removed
	06-Oct-2016	Fall Dry	726	7.25	15.5	11.79	Yellowish average flow
	28-Oct-2016	Fall Wet	7.3	7.46	4.1	9.61	Slightly yellow low flow
	24-Nov-2016	Trigger Event	640	7.50	2.6	10.9	Slight yellow beaver dam around downstream culvert
	05-Apr-2017	Spring Freshet	401	7.61	10.2	8.42	Clear good flow. Beaver dam downstream of culvert
	23-Aug-2017	Summer Dry	714	6.97	20.1	9.11	Slightly yellow- beaver dam has been removed
	26-Oct-2017	October Wet	676	7.21	9.2	7.64	Slightly yellow good flow
	29-Nov-2017	Fall Wet	690	7.94	3.1	7.21	Clear good flow
SW 16							
	02-Sep-1993		500	7.40	23	5.14	Fairly clear, numerous bugs
	05-Nov-1993		1200	8.00	8	10.61	Fairly clear
	30-Nov-1993		1000	8.10	2	10.72	Yellow colour
	13-Apr-1994	Spring Freshet	700	7.20	5.5	5.51	Reddish yellow colour, fairly clear
	26-Apr-1994	Spring Rain	750	8.00	11	10.54	Yellowish colour, very clear, reddish colouring on mud and colvert
	04-May-1994	Spring Dry	800	8.30	10	7.58	Brown colour, very silty, good flow
	17-Jun-1994	June Dry	800	7.20	16	9.75	Clear, red colouring on bottom, very slow flow
	04-Aug-1994	Summer Rain	1000	8.10	16	10.7	Note minnow creek at culvert, lots of traffic apparent
	17-Aug-1994	August Dry	1000	7.70	14	9.75	Culvert red stained, muddy bottom/ weeds, insect/frogs/minnows
	14-Oct-1994	Fall Dry	900	8.10	9	10.52	Yellowish colours, slightly silty due to activity in storm culvert(Oct 13)
	21-Nov-1994	Fall Rain	700	8.10	8	10.72	Very cloudy brown silty, good volume
	13-Apr-1995	Spring Freshet	900	8.00	4	10.95	New gate, some rust in water from gate, mud bottom, yellow sample
	28-Apr-1995	Spring Dry	700	8.10	10	10.13	Clear sample, muddy bottom, algea around gate, lots of bugs/shells
	17-May-1995	Spring Rain	1600	7.60	12	9.76	Very silty, cloudy sample, gravel/mud bottom
	30-Jun-1995	June Dry	700	7.80	17	8.1	Clear, minimal flow
	11-Aug-1995	Summer Rain	N/A	N/A	N/A	N/A	
	23-Aug-1995	August Dry	800	7.30	15	8.11	Fairly clear/yellowish sample, gravel piled from ditching, algea present
	20-Oct-1995	Fall Dry	800	7.80	11	9.46	Clear/pale yellow sample, surface bugs, gravel washed in from west side.
	28-Nov-1995	Fall Rain	1177	7.60	5.4	10	Very little to no flow, water appears to be standing
	16-Apr-1996	Spring Freshet	687	8.10	4.8	6.4	Very little flow
	27-May-1996	Spring Dry	800	7.80	9	4.6	Some debris behide grate
	18-Jun-1996	Spring Rain	N/A800	N/A	15	5.5	Very murky, good flow
	06-Aug-1996	June Dry	N/A1100	N/A	17	N/A	Some sticks behide grate
	07-Oct-1996	August Dry	N/A	N/A	N/A	N/A	Lots of reeds, water level high
	30-Oct-1996	Summer Rain	798	8.00	8.9	5	Sticks behind grate
	06-Dec-1996	Fall Rain	1809	7.40	4	5	Little flow

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				**Comments**
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 16							
	16-Apr-1997	Spring Freshet	890	7.80	6	7.2	Straw trapped behind grate should be cleaned
	23-May-1997	Spring Dry	803	7.40	7.2	4.4	
	07-Aug-1997	Summer Dry	843	7.20	13.4	4	Beaver dam downstream
	18-Nov-1997	Fall Dry	1089	7.60	6.4	5	Open water, very deep, clear
	26-Nov-1997	Fall Rain	1037	7.40	7.6	5.5	Water churned up, flow
	17-Jun-1998	Spring Rain	699	7.90	16.3	3.2	Some flow, lots of suspended particles, invertebrates present
	07-Dec-1998	Fall Rain	639	7.60	10.6	5.2	Murky, very little flow, can hear water trickling through beaver dam
	23-Apr-1999	Spring Freshet	555	7.90	8.9	6.1	Debris behind grate, some flow, grate cleaned, better flow
	30-Jun-1999	Summer Rain	N/A	N/A	N/A	N/A	
	06-Dec-1999	Fall Rain	398	6.90	6.2	6.9	Some flow, sticks behind culvert
	15-Mar-2000	Spring Freshet	428	7.20	4.1	5.4	Some flow; removed sticks behind grate
	27-Mar-2000	MOEE Samples	168.2	7.00	5.3	5	Cloudy; some TSS
	20-Sep-2000	Fall Dry	131	7.60	13.5	5.1	
	27-Nov-2000	Fall Rain	553	7.20	8.1	5	Very little flow; bags removed from behind grate
	20-Mar-2001	Spring Freshet	120	7.60	4.3	5.2	Some flow, weeds have accumulated behind grate on culvert
	10-Oct-2001	Fall Dry	878	7.50	9.9	3.4	Very little flow, trickle
	03-Dec-2001	Fall rain	407	7.80	7.8	2.7	
	18-Feb-2002	Spring Freshet					Not enough water to grab samples.
	17-Apr-2002	April Dry					Dry Conditions with warm temperatures - no flows observed
	15-May-2002	Spring Rain					No flow observed
	06-Jun-2002	Summer Rain	879	7.00	11.2		Some flow, tadpoles seen, clear
	17-Jun-2002	June Dry					No dry conditions due to heavy rains, Dry event could not be completed
	12-Aug-2002	August Dry					No rain for 10 days, no surface water to sample
	25-Oct-2002	October Dry					No more than 2 dry days in a row, no samples taken
	23-Dec-2002	Fall Rain					Rains for 2 days, still not enough water to sample
	18-Mar-2003	Spring Freshet	365	7.40	4.7	9.19	Good flow, visible TSS
	28-Apr-2003	April Dry					No sample taken - Could not get 5 days of no rain
	26-May-2003	Spring Rain					No sample taken - Although there was rain, no water to sample
	18-Jun-2003	June Dry					No sample taken - Could not get 5 days of no rain
	06-Aug-2003	Summer Rain	778	8.00	16.3	6.85	Very little flow, cloudy, some debri noted behind grate
	26-Aug-2003	August Dry					No sample taken - Could not get 5 days of no rain
	24-Oct-2003	October Dry					No sample taken - Could not get 5 days of no rain
	19-Nov-2003	Fall Rain	529	7.80	10.6	7.81	Good flow, debri noted behind grate
	10-Mar-2004	Spring Freshet	630	7.30	2.5	7.49	Murky/clear water churning, some flow. Grass observed behined grate.
	22-Apr-2004	Spring Rain					No sample taken - Although there was rain, no water to sample
	27-May-2004	April Dry	826	8.00	13.2	4.87	Lock missing from grate. Debri observed behind grate, which was removed.
	28-Jun-2004	June Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	17-Aug-2004	August Dry	821	8.27	13.9	8.32	Little flow, numerous water spiders observed.
	19-Oct-2004	Summer Rain	1006	8.60	8.9	9.73	Low flow, observe silt build up behide grate (~0.2m)
	28-Oct-2004	October Dry					No sample taken - Could not get 5 days of dry conditions due to significant rain all month
	08-Dec-2004	Fall Rain	575	7.95	5		Moderate flow, clear. Silt observed at culvert exit (from SW1).
	04-Apr-2005	Spring Freshet	624	7.93	4.8	7.45	debri (sticks, weeds) behind grate
	30-Apr-2005	April Dry					No sample taken due to rain
	16-May-2005	Spring Rain					No sample taken, not enough run-off after rain event on May 16. Very little rain during rest of month.
	30-Jun-2005	June Dry					No samples taken, dry
	25-Aug-2005	August Dry					No sample taken, not enough run-off even after rain event earlier in the week of Aug 25.
	28-Sep-2005	Summer Rain					No sample taken, not enough run-off
	14-Oct-2005	October Dry					No sample taken, Dry
	30-Nov-2005	Fall Rain					No sample taken, not enough run-off
	24-Apr-2006	Spring Freshet	562	7.80	8.4	7.48	Good flow. Weeds behind grate.

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 16							
	30-Apr-2006	April Dry					No Dry Period During Month
	31-May-2006	Spring Rain					Rain event early in month, no run-off occuring later in month.
	09-Jun-2006	June Dry					Low Water
	09-Aug-2006	August Dry					Low Water
	14-Sep-2006	Summer Rain	767	8.00	16.6	8.06	No flow, cloudy. Some TSS.
	12-Oct-2006	October Dry	624	7.70	8.6	6.86	Slow flow, clear.
	13-Dec-2006	Fall Rain	508	7.40	4.9	8.3	Good flow, clear. Some grass behind grate.
	23-Mar-2007	Spring Freshet	577	7.40	5.5	6.28	Good Flow, Some weed behind grate.
	26-Apr-2007	April Dry					Dry
	17-May-2007	Spring Rain	609	7.90	12.1	6.68	Good Flow, Clear
	19-Jun-2007	June Dry					Dry, No water next day after June 9 (9.8mm) and June 19 (22.4mm).
	10-Aug-2007	August Dry					Dry, No water next day after largest rain event on August 7 (18mm).
	26-Sep-2007	Summer Rain					Dry. No water next day after last rain event on Sept 26 (7.8mm).
	10-Oct-2007	Fall Rain	1678	7.00	12.8	7.42	No Flow, visible TSS. Slight buildup of mud ~2m downstream.
	31-Oct-2007	October Dry					Dry
	29-Nov-2007	Additional Fall	878	7.00	4.5	11.8	Flowing, Clear
	09-Apr-2008	Spring Freshet	574	7.00	10.5	6.27	Clear. Good flow. Some grass behide grate
	20-Aug-2008	Summer Dry					Dry
	16-Sep-2008	Summer Rain	659	7.40	16.2	4.64	Clear. Moderate flow. Silt blowing down and washing into creek.
	18-Dec-2008	Fall Rain	613	7.90	4	7.11	
	28-May-2009	Spring Freshet	759	7.60	12.4	4.62	Some sediment/ Good flow
	27-Jul-2009	Summer Dry	401	7.80	23	4.32	Slow flow/ Lots of vegetation/ Also two bags of garbage (yard waste)
	14-Oct-2009		883	7.70	7.8	9.81	no flow/ Lots of vegetation/ Also two bags of garbage (yard waste)
	05-Nov-2009		991	7.60	7.6	9.66	
	26-Nov-2009		999	7.80	8.3	12.33	
	16-Dec-2009		999	7.80	2.4	6.06	
	25-Mar-2010		7.76	6.50	7.5	769	clear
	20-Aug-2010		5.88	19.70	7.9	718	Brownish clour with lots of floating aquatic vegetation
	04-Oct-2010		7.03	9.40	7.4	867	Cloudy with floating aquatic vegetation
	29-Nov-2010		9.05	4.70	6.9	954	Slightly cloudy
	15-Mar-2011		756	7.49	4.7	8.09	
	07-Jul-2011		990	7.79	18.7	7.68	Good flow
	30-Sep-2011		835	7.53	13.3	5.57	
	19-Oct-2011		1050	8.81	10	11.78	Really good flow very clear with aquatic veg
	13-Dec-2011		928	7.91	2.9	11.81	Yellowish with decent flow
	04-May-2012	Spring Wet	923	7.57	14.2	7.83	Good flow, slightly yellowish
	06-Jun-2012	June Trigger	941	7.53	12.7	8.39	Yellowish with low flow
	13-Aug-2012	August Dry	640	7.64	19.6	5.7	Clear low flow
	25-Sep-2012	September Dry	7.74	7.91	11.6	6.97	Slightly yellow decent flow
	04-Dec-2012	Fall Wet	906	7.29	4.4	7.94	yellowish
	05-Apr-2013	Spring Wet	859	7.97	1.9	6.77	Yellowish with good flow
	17-Jul-2013	Summer Dry	851	7.69	17.6	7.91	Low flow yellowish colour
	12-Sep-2013	Sept Wet	5.86	7.73	18.1	7.44	Good flow slight yellowish colour
	02-Dec-2013	Dec Wet	857	7.55	2.4	10.36	Ice on creek really good flow clear
	31-Mar-2014	Spring Freshet	873	7.32	2.2	8.3	Very slightly yellow good flow
	16-Jul-2014	July Dry	594	7.59	18	5.92	Yellowish with low flow lots of aquatic vegetation
	06-Aug-2014	August Trigger	597	7.87	16	5.32	Cloudy with good flow
	22-Sep-2014	Sept Wet	590	7.46	12.7	6.1	Slightly yellow good flow
	01-Dec-2014	Fall Wet	859	8.26	3.1	8.21	Yellowish with good flow
	14-Apr-2015	Spring Freshet	8.18	7.22	7.8	8.05	Slightly yellow good flow
	29-Jul-2015	July Dry	926	7.02	15.8	12.41	Low flow. Yellowish colour

C4: Surface Water Field Measurements

Station	Date	Sample Event	Field Parameters				Comments
			Cond	pH	Temp	DO	
			uS		C	mg/L	
SW 16							
	10-Sep-2015	Sept Wet	556	7.41	16.8	8.76	Yellowish with moderate flow
	30-Dec-2015	December Wet					Creek was blocked off due to culvert cleaning activities
	10-Mar-2016	Spring Freshet	504	7.89	2.2	9.89	Slightly yellow good flow
	26-Jul-2016	Summer Dry	585	7.80	18.8	8.23	Very slightly yellow low flow
	06-Oct-2016	Fall Dry	776	7.02	12.4	10.39	Very slightly yellow low flow
	28-Oct-2016	Fall Wet	665	7.67	3.1	8.81	Brownish low flow
	24-Nov-2016	Trigger Event	664	7.61	3.4	10.13	Clear low flow
	05-Apr-2017	Spring Freshet	519	7.53	10.1	8.01	Slightly yellow good flow
	23-Aug-2017	Summer Dry	856	7.40	16.9	8.14	High amount of aquatic veg, low flow
	26-Oct-2017	October Wet	725	7.85	7.9	8.06	Slightly yellow decent flow
	29-Nov-2017	Fall Wet	839	7.76	5.6	8.22	Slightly yellow low flow

Table C5

2017 Semi-Annual MISA Priority Pollutants Analysis from the Main Tank

Conventional Parameters

	Semi-Annual Samples			
	July 20, 2017		**November 28, 2017**	
Analytical Test Groups (ATG)	MDL (mg/L)	Result (mg/L)	MDL (mg/L)	Result (mg/L)
Metals				
Ag	0.0005	<0.0005	0.0001	<0.0001
Al	0.025	0.047	0.005	0.031
As	0.005	<0.005	0.001	<0.001
B	0.05	6.3	0.01	0.75
Ba	0.01	0.61	0.002	0.23
Be	0.0025	<0.0025	0.0005	<0.0005
Bi	0.005	<0.005	0.001	<0.001
Ca	1	200	0.2	140
Cd	0.0005	<0.0005	0.0001	<0.0001
Co	0.0025	0.0063	0.0005	0.0011
Cr	0.025	<0.025	0.005	<0.005
Cu	0.005	<0.005	0.001	0.0016
F	0.1	0.23	0.1	0.17
Fe	0.5	13	0.1	2.6
K	1	110	0.2	16
Li	0.025	0.064	0.005	0.01
Mg	0.25	130	0.05	68
Mn	0.01	0.23	0.002	0.23
Mo	0.0025	<0.0025	0.0005	0.00058
Na	0.5	480	0.1	170
Ni	0.005	0.04	0.001	0.0073
P	0.5	0.62	0.1	<0.1
Pb	0.0025	<0.0025	0.0005	<0.0005
Sb	0.0025	<0.0025	0.0005	<0.0005
Se	0.01	<0.01	0.002	<0.002
Si	0.25	14	0.05	9
Sn	0.005	<0.005	0.001	<0.001
Sr	0.005	0.76	0.001	0.45
Ti	0.025	<0.025	0.005	<0.005
Tl	0.00025	<0.00025	0.00005	<0.00005
U	0.0005	<0.0005	0.0001	0.00061
V	0.0025	0.0055	0.0005	0.00085
W	0.005	<0.005	0.001	<0.001
Zn	0.025	<0.025	0.005	0.052
Conventional				
BOD (C)	40	<40	2	<2
Cl-	10	750	3	240
COD	20	230	4	57
Sp. Cond. (umhos/cm)	1	4600	1	2100
Cr VI	0.0005	<0.0005	0.0005	<0.0005
DOC	0.4	72	0.5	20
F-	0.1	0.23	0.1	0.17
Hg	0.0001	<0.0001	0.0001	<0.0001
NH_3-N	5	120	0.25	12
NO_2-N	0.01	<0.01	0.01	0.039
NO_3-N	0.1	<0.1	0.1	0.85
Oil & Grs(A)	0.5	<0.5		
Oil & Grs(M)	0.5	<0.5		
Oil & Grs.	0.5	<0.5		
pH		7.26		7.76
Phenols	0.001	<0.001	0.005	0.0051
S=	0.02	0.049	0.02	<0.02
SO4=	1	<1	1	45
TDS	10	2390	10	1000
TOC	0.2	76	0.5	21
Total CN-	0.005	0.0072	0.005	<0.005
Total P	0.02	0.34	0.004	0.057
TSS	2	36	1	8

Samples collected from main pumping station
MDL = method detection limit
ug/L = micrograms per Litre = parts per billion
mg/L = milligrams per Litre = parts per million

Table C5

2017 Semi-Annual MISA Priority Pollutants Analyisis from the Main Tank

Organic Parameter Groups

	Semi-Annual Samples			
	July 20, 2017		**November 28, 2017**	
Analytical Test Groups (ATG)	MDL	Result	MDL	Result
ATG 16 Volatiles, Halogenated				
1,1,1-Trichloroethane (ug/L)	1	<1	1	<1
1,1,1,2-Tetrachloroethane	2	<2	2	<2
1,1,2,2-Tetrachloroethane (ug/L)	2	<2	2	<2
1,1,2-Trichlorethane (ug/L)	2	<2	2	<2
1,1-Dichloroethane (ug/L)	1	<1	1	<1
1,1-Dichloroethylene (ug/L)	1	<1	1	<1
1,2-Dichlorobenzene (ug/L)	2	<2	2	<2
1,2-Dichloroethane (ug/L)	2	<2	2	<2
1,2,-Dichloropropane (ug/L)	1	<1	1	<1
1,3-Dichlorobenzene (ug/L)	2	<2	2	<2
1,4-Dichlorobenzene (ug/L)	2	<2	2	<2
Acetone (ug/L)	100	<100	100	<100
Bromodichloromethane	1	<1	1	<1
Bromoform (ug/L)	2	<2	2	<2
Bromomethane (ug/L)	5	<5	5	<5
Carbon tetrachloride (ug/L)	1	<1	1	<1
Chlorobenzene (ug/L)	1	5.2	1	<1
Chloroform (ug/L)	1	<1	1	<1
Cis-1,2-Dichloroethane (ug/L)	1	<1	1	<1
Cis-1,3-Dichloropropylene (ug/L)	2	<2	2	<2
Dibromochloromethane (ug/L)	2	<2	2	<2
Ethylene dibromide (ug/L)	2	<2	2	<2
Methyl-t-Butyl Ether (ug/L)	2	<2	2	<2
Methyl Ethyl Ketone (MEK) (ug/L)	50	<50	50	<50
Methyl Isobutyl Ketone (MIBK) (ug/L)	50	<50	50	<50
Methylene chloride (ug/L)	5	<5	5	<5
Tetrachloroethylene (ug/L)	1	<1	1	<1
Trans-1,2-Dichloroethylene (ug/L)	1	<1	1	<1
Trans-1,3-Dichloropropylene (ug/L)	2	<2	2	<2
Trichloroethylene (ug/L)	1	<1	1	<1
Trichlorofluoromethane (ug/L)	2	<2	2	<2
Vinyl chloride (ug/L)	2	<2	2	<2
ATG 17 Volatiles, Non-Halogenated				
Benzene (ug/L)	1	2	1	<1
Ethylbenzene (ug/L)	1	<1	1	<1
Styrene (ug/L)	2	<2	2	<2
Toluene (ug/L)	2	<2	2	<2
o-Xylene (ug/L)	1	<1	1	<1
m-Xylene and p-Xylene (ug/L)	1	2.5	1	<1
ATG 18 Volatiles, Water Soluble				
Acrolein (ug/L)	100	<100	100	<100
Acrylonitrile (ug/L)	50	<50	50	<50

Table C5

2017 Semi-Annual MISA Priority Pollutants Analyisis from the Main Tank

Organic Parameter Groups

	Semi-Annual Samples			
	July 20, 2017		**November 28, 2017**	
Analytical Test Groups (ATG)	MDL	Result	MDL	Result
ATG 19 Extractables, Base Neutral				
Acenaphthene (ug/L)	0.8	<0.8	0.2	<0.2
5-nitro Acenaphthene (ug/L)	4	<4	1	<1
Acenaphthylene (ug/L)	0.8	<0.8	0.2	<0.2
Anthracene (ug/L)	0.8	<0.8	0.2	<0.2
Benzo (a) anthracene (ug/L)	0.8	<0.8	0.2	<0.2
Benzo (a) pyrene (ug/L)	0.8	<0.8	0.2	<0.2
Benzo (b) fluroanthene (ug/L)	0.8	<0.8	0.2	<0.2
Benzo (g,h,i) perylene (ug/L)	0.8	<0.8	0.2	<0.2
Benzo (k) fluoranthene (ug/L)	0.8	<0.8	0.2	<0.2
Biphenyl (ug/L)	2	<2	0.5	<0.5
Camphene (ug/L)	4	<4	1	<1
1-Chloronaphthalene (ug/L)	4	<4	1	<1
2-Chloronaphthalene (ug/L)	2	<2	0.5	<0.5
Chrysene (ug/L)	0.8	<0.8	0.2	<0.2
Dibenzo (a,h) anthracene (ug/L)	0.8	<0.8	0.2	<0.2
Fluoranthene (ug/L)	0.8	<0.8	0.2	<0.2
Fluorene (ug/L)	0.8	<0.8	0.2	<0.2
Indeno (1,2,3-cd) pyrene (ug/L)	0.8	<0.8	0.2	<0.2
Indole (ug/L)	4	<4	1	<1
1-Methylnaphthalene (ug/L)	0.8	<0.8	0.2	<0.2
2-Methylnaphthalene (ug/L)	0.8	<0.8	0.2	<0.2
Naphthalene (ug/L)	0.8	<0.8	0.2	<0.2
Perylene (ug/L)	0.8	<0.8	0.2	<0.2
Phenanthrene (ug/L)	0.8	<0.8	0.2	<0.2
Pyrene (ug/L)	0.8	<0.8	0.2	<0.2
Benzylbutylphthalate (ug/L)	2	<2	0.5	<0.5
Bis (2-ethylhexyl) phthalate (ug/L)	8	<8	2	<2
Di-n-Butyl Phthalate (ug/L)	8	<8	2	<2
Di-n-Octyl Phthalate (ug/L)	3.2	<3.2	0.8	<0.8
4-Bromophenyl phenyl ether (ug/L)	1.2	<1.2	0.3	<0.3
4-Chlorophenyl phenyl ether (ug/L)	2	<2	0.5	<0.5
Bis (2-chloroisopropyl) ether (ug/L)	2	<2	0.5	<0.5
Bis (2-chloroethyl) ether (ug/L)	2	<2	0.5	<0.5
Diphenyl ether (ug/L)	1.2	<1.2	0.3	<0.3
2,4-Dinitrotoluene (ug/L)	2	<2	0.5	<0.5
2,6-Dinitrotoluene (ug/L)	2	<2	0.5	<0.5
Bis (2-chloroethoxy) methane (ug/L)	2	<2	0.5	<0.5
N-Nitrosodi-n-propylamine (ug/L)	2	<2	0.5	<0.5
ATG 20 Extractables, Acid (Phenolics)				
2,3,4-Trichlorophenol (ug/L)	2	<2	0.5	<0.5
2,3,5-Trichlorophenol (ug/L)	2	<2	0.5	<0.5
2,4,5-Trichlorophenol (ug/L)	2	<2	0.5	<0.5
2,4,6-Trichlorophenol (ug/L)	2	<2	0.5	<0.5
2,4-Dimethylphenol (ug/L)	2	<2	0.5	<0.5
2,4-Dinitrophenol (ug/L)	1.2	<1.2	0.3	<0.3
2,4-Dichlorophenol (ug/L)	8	<8	2.5	<2.5
2,6-Dichlorophenol (ug/L)	2	<2	0.5	<0.5
2-Chlorophenol (ug/L)	1.2	<1.2	0.3	<0.3
4-Chloro-3-methylphenol (ug/L)	2	<2	0.5	<0.5
4-Nitrophenol (ug/L)	5.6	<5.6	1.4	<1.4
m-Cresol & p-Cresol (ug/L)	2	<2	0.5	<0.5
o-Cresol (ug/L)	2	<2	0.5	<0.5
Pentachlorophenol (ug/L)	4	<4	1	<1
Phenol (ug/L)	2	<2	0.5	<0.5

Table C5

2017 Semi-Annual MISA Priority Pollutants Analyisis from the Main Tank

Organic Parameter Groups

	Semi-Annual Samples			
	July 20, 2017		November 28, 2017	
Analytical Test Groups (ATG)	MDL	Result	MDL	Result
ATG 21 Extractables, Phenoxy Acid Herbicides				
2,4,5-T (ug/L)	1	<1	1	<1
Silvex (ug/L)	1	<1	1	<1
2,4-D (ug/L)	1	<1	1	<1
Dinoseb (ug/L)	2	<2	2	<2
2,4-DB (ug/L)	1	<1	1	<1
Dichlorprop (ug/L)	1	<1	1	<1
Dicamba (ug/L)	1	<1	1	<1
MCPP (ug/L)	2	<2	2	<2
MCPA (ug/L)	2	9.9	2	3.3
Picloram (ug/L)	5	<5	5	<5
ATG 22 Extractables, Organochlorine Pesticides				
Aldrin (ug/L)	0.005	<0.005	0.005	<0.005
Alpha-BHC (ug/L)	0.005	<0.005	0.005	<0.005
Beta-BHC (ug/L)	0.005	<0.005	0.005	<0.005
Delta-BHC (ug/L)	0.005	<0.005	0.005	<0.005
Gamma-BHC (ug/L)	0.003	<0.003	0.003	<0.003
Alpha-Chlordane (ug/L)	0.005	<0.005	0.005	<0.005
Gamma-Chlordane (ug/L)	0.005	<0.005	0.005	<0.005
4,4'-DDD (ug/L)	0.005	<0.005	0.005	<0.005
4,4'-DDE (ug/L)	0.005	<0.005	0.005	<0.005
4,4'-DDT (ug/L)	0.005	<0.005	0.005	<0.005
2,4'-DDT (ug/L)	0.005	<0.005	0.005	<0.005
Dieldrin (ug/L)	0.005	<0.005	0.005	<0.005
Endosulfan I (ug/L)	0.005	<0.005	0.005	<0.005
Endosulfan II (ug/L)	0.005	<0.005	0.005	<0.005
Endosulfan Sulphate (ug/L)	0.005	<0.005	0.005	<0.005
Endrin (ug/L)	0.005	<0.005	0.005	<0.005
Endrin Aldehyde (ug/L)	0.005	<0.005	0.005	<0.005
Heptachlor (ug/L)	0.005	<0.005	0.005	<0.005
Heptachlor Epoxide (ug/L)	0.005	<0.005	0.005	<0.005
p,p Methoxychlor (ug/L)	0.01	<0.01	0.01	<0.01
Mirex (ug/L)	0.005	<0.005	0.005	<0.005
Endrin Ketone (ug/L)	0.005	<0.005	0.005	<0.005
Toxaphene (ug/L)	0.2	<0.2	0.2	<0.2
PCB's, Total (ug/L)	0.05	<0.05	0.05	<0.05
ATG 23 Extractables, Neutral - Chlorinated				
Hexachloroethane (ug/L)	0.01	<0.01	0.01	<0.01
1,2,4-Trichlorobenzene (ug/L)	0.01	<0.01	0.01	<0.01
1,2,3-Trichlorobenzene (ug/L)	0.01	<0.01	0.01	<0.01
Hexachlorobutadiene (ug/L)	0.009	<0.009	0.009	<0.009
2,4,5-Trichlorotoluene (ug/L)	0.01	<0.01	0.01	<0.01
1,2,3,5-Tetrachlorobenzene (ug/L)	0.01	<0.01	0.01	<0.01
1,2,4,5-Tetrachlorobenzene (ug/L)	0.01	<0.01	0.01	<0.01
Hexachlorocyclopentadiene (ug/L)	0.025	<0.025	0.025	<0.025
1,2,3,4-Tetrachlorobenzene (ug/L)	0.01	<0.01	0.01	<0.01
Pentachlorobenzene (ug/L)	0.005	<0.005	0.005	<0.005
Hexachlorobenzene (ug/L)	0.005	<0.005	0.005	<0.005
Octachlorostyrene (ug/L)	0.005	<0.005	0.005	<0.005

Table C5

2017 Semi-Annual MISA Priority Pollutants Analyisis from the Main Tank

Organic Parameter Groups

	Semi-Annual Samples			
	July 20, 2017		**November 28, 2017**	
Analytical Test Groups (ATG)	MDL	Result	MDL	Result
ATG 24 Chlorinated Dibenzo-p-dioxins and Dibenzofurans				
2,3,7,8-Tetrachlorodibenzo-p-dioxin (pg/L)		<1.29		<1.06
2,3,7,8-tetrachlorodibenzofuran		<1.24		<1.24
Octachlorodibenzo-p-dioxin (pg/L)		3.45		<1.68
Octachlorodibenzofuran (pg/L)		<1.18		<1.24
Total heptachlorinated dibenzo-p-dioxins (pg/L)		<1.21		<1.38
Total heptachlorinated dibenzofurans (pg/L)		<1.17		<1.05
Total hexachlorinated dibenzo-p-dioxins (pg/L)		<1.2		<1.18
Total hexachlorinated dibenzofurans (pg/L)		<0.724		<1.24
Total pentachlorinated dibenzo-p-dioxins (pg/L)		<1.11		<1.49
Total pentachlorinated dibenzofurans (pg/L)		<1.14		<1.19
Total tetrachlorinated dibenzo-p-dioxins (pg/L)		<1.29		<1.06
Total tetrachlorinated dibenzofurans (pg/L)		<1.24		<1.24
Total Toxic Equivalency		3.59		3.96
ATG 26 Fatty and Resin Acids				
Palmitaleic acid (ug/L)	0.003	<0.003	0.003	<0.003
Palmitic acid (ug/L)	0.03	0.059	0.03	<0.03
Linoleic acid (ug/L)	0.003	<0.003	0.003	<0.003
Lenolenic acid (ug/L)	0.003	<0.003	0.003	<0.003
Oleic acid (ug/L)	0.003	<0.003	0.003	<0.003
Pimaric acid (ug/L)	0.0165	0.07	0.0165	<0.003
Sandracopimaric acid (ug/L)	0.003	<0.003	0.003	<0.003
Isopimaric acid (ug/L)	0.003	<0.003	0.003	<0.003
Dehydroabietic acid (ug/L)	0.005	<0.005	0.005	<0.005
Abietic acid (ug/L)	0.005	<0.005	0.005	<0.005
Neoabietic acid (ug/L)	0.003	<0.003	0.003	<0.003
9,10-Dichlorostearic acid (ug/L)	0.003	0.0057	0.003	<0.003
14-Chlorodehydroabietic acid (ug/L)	0.003	<0.003	0.003	<0.003
12-Chlorodehydroabietic acid (ug/L)	0.003	<0.003	0.003	<0.003

Notes:

MDL = Method Detection Limit
ug/L = micrograms per Litre = parts per billion
mg/L = milligrams per Litre = parts per million
pg/L = picograms per litre = parts per trillion

C6: VOLATILE ORGANIC ANALYSIS - 2017 - EASTVIEW ROAD LANDFILL SITE

MONITOR	51-II	51-IR	55-IR	56-IR	57-I	58-I	59-I	61-IR
DATE	15-Nov-2017	15-Nov-2017	15-Nov-2017	15-Nov-2017	14-Nov-2017	14-Nov-2017	15-Nov-2017	14-Nov-2017
1,1,1-Trichlorethane	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
1,1,2,2-Tetrachloroethyl	<2	<10	<2	<2	<5	<5	<20	<5
1,1,2-Trichloroethane	<2	<10	<2	<2	<5	<5	<20	<5
1,1-Dichloroethane	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
1,1-Dichloroethylene	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
1,2-Dibromoethane	<2	<10	<2	<2	<5	<5	<20	<5
1,2-Dichlorobenzene	<2	<10	<2	<2	<5	<5	<20	<5
1,2-Dichloroethane	<2	<10	<2	<2	<5	<5	<20	<5
1,2-Dichloropropane	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
1,3-Dichlorobenzene	<2	<10	<2	<2	<5	<5	<20	<5
1,4-Dichlorobenzene	<2	<10	<2	<2	<5	<5	<20	<5
2-Chloroethylvinyl ether	-	-	-	-	-	-	-	-
Acrolein	-	-	-	-	-	-	-	-
Acrylonitrile	-	-	-	-	-	-	-	-
Benzene	4.1	5.9	2.6	<1	<2.5	<2.5	11	<2.5
Bromodichloromethane	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
Bromoform	<2	<10	<2	<2	<5	<5	<20	<5
Bromomethane	<5	<25	<5	<5	<13	<13	<50	<13
Carbon Tetrachloride	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
Chlorobenzene	<1	<5	4.6	<1	<2.5	<2.5	<10	<2.5
Chloroethane								
Chloroform	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
Chloromethane								
Cis-1,2-Dichloroethylen	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
Cis-1,3-Dichloropropyle	<2	<10	<2	<2	<5	<5	<20	<5
Dibromochloromethane	<2	<10	<2	<2	<5	<5	<20	<5
Ethylbenzene	<1	160	<1	<1	<2.5	<2.5	270	<2.5
m-Xylene and p-Xylene	<1	400	<1	<1	<2.5	<2.5	820	<2.5
Methylene Chloride	<5	<25	<5	<5	<13	<13	<50	<13
o-Xylene	<1	200	<1	<1	<2.5	<2.5	330	<2.5
Styrene	<2	<10	<2	<2	<5	<5	<20	<5
Tetrachloroethylene	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
Toluene	<2	15	<2	<2	<5	<5	<20	<5
Trans-1,2-Dichloroethyl	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
Trans-1,3-Dichloroprop	<2	<10	<2	<2	<5	<5	<20	<5
Trichloroethylene	<1	<5	<1	<1	<2.5	<2.5	<10	<2.5
Trichlorofluoromethane	<2	<10	<2	<2	<5	<5	<20	<5
Vinyl Chloride	<2	<10	<2	<2	<5	<5	<20	<5

C6: VOLATILE ORGANIC ANALYSIS - 2017 - EASTVIEW ROAD LANDFILL SITE

AECOM

MONITOR DATE	63-I 15-Nov-2017	65-I 15-Nov-2017	66-IR 15-Nov-2017	67-I 15-Nov-2017
1,1,1-Trichlorethane	<0.5	<0.5	<0.5	<2.5
1,1,2,2-Tetrachloroethyl	<1	<1	<1	<5
1,1,2-Trichloroethane	<1	<1	<1	<5
1,1-Dichloroethane	<0.5	<0.5	<0.5	<2.5
1,1-Dichloroethylene	<0.5	<0.5	<0.5	<2.5
1,2-Dibromoethane	<1	<1	<1	<5
1,2-Dichlorobenzene	<1	<1	<1	<5
1,2-Dichloroethane	<1	<1	<1	<5
1,2-Dichloropropane	<0.5	<0.5	<0.5	<2.5
1,3-Dichlorobenzene	<1	<1	<1	<5
1,4-Dichlorobenzene	<1	<1	<1	<5
2-Chloroethylvinyl ether	-	-	-	-
Acrolein	-	-	-	-
Acrylonitrile	-	-	-	-
Benzene	1	2.6	0.87	<2.5
Bromodichloromethane	<0.5	<0.5	<0.5	<2.5
Bromoform	<1	<1	<1	<5
Bromomethane	<2.5	<2.5	<2.5	<13
Carbon Tetrachloride	<0.5	<0.5	<0.5	<2.5
Chlorobenzene	<0.5	<0.5	<0.5	<2.5
Chloroethane				
Chloroform	<0.5	<0.5	<0.5	<2.5
Chloromethane				
Cis-1,2-Dichloroethylen	<0.5	<0.5	<0.5	<2.5
Cis-1,3-Dichloropropyle	<1	<1	<1	<5
Dibromochloromethane	<1	<1	<1	<5
Ethylbenzene	<0.5	<0.5	<0.5	<2.5
m-Xylene and p-Xylene	<0.5	<0.5	<0.5	<2.5
Methylene Chloride	<2.5	<2.5	<2.5	<13
o-Xylene	<0.5	<0.5	<0.5	<2.5
Styrene	<1	<1	<1	<5
Tetrachloroethylene	<0.5	<0.5	<0.5	<2.5
Toluene	<1	<1	<1	<5
Trans-1,2-Dichloroethyl	<0.5	<0.5	<0.5	<2.5
Trans-1,3-Dichloroprop	<1	<1	<1	<5
Trichloroethylene	<0.5	<0.5	<0.5	<2.5
Trichlorofluoromethane	<1	<1	<1	<5
Vinyl Chloride	<1	<1	<1	<5

Table C7: Comparison of Downgradient Monitors in Buffer Land Boundary to Guideline B7 Criteria for 2017

Parameter		Chloride	Sodium	Sulphate	Copper	Iron	Manganese	Zinc	Boron	Cadmium	Chromium	Lead	Nitrate	Nitrite
ODWS		**250**	**200**	**500**	**1**	**0.30**	**0.05**	**5**	**5**	**0.005**	**0.05**	**0.01**	**10**	**1**
Background		73.1	21.8	46.00		0.56	0.02	0.01	0.025		0.01		0.15	0.03
Guideline B7 Criteria		162	111	273		0.56	0.03	2.50	1.27		0.13		2.61	0.27
2-I	5/2/2017	6.4	6.8	49.0		**8.8**	**0.087**	0.02	0.094		< 0.01		< 0.10	< 0.01
	11/8/2017	8.4	6.4	45.0		**8.4**	**0.092**	0.03	0.092		< 0.01		< 0.10	< 0.01
2-II	5/2/2017	6.0	27.0	17.0		< 0.10	0.01	0.05	0.028		< 0.01		1.69	< 0.01
9-I	5/2/2017	24.0	20.0	63.0		0.24	**0.16**	0.35	0.170		< 0.01		0.18	< 0.01
10-II	5/3/2017	**920**	**380**	35.0		0.13	**0.054**	0.02	0.033		< 0.01		1.63	0.02
	11/13/2017													
13-III	5/3/2017	1.9	24.0	6.6		< 0.10	0.00	< 0.01	0.094		< 0.01		0.17	< 0.01
	11/13/2017	1.8	24.0	1.3		**1.5**	**0.12**	< 0.01	0.086		< 0.01		0.13	< 0.01
13-IV	5/3/2017	**940**	**540**	13.0		**2.8**	**0.087**	0.01	0.026		< 0.01		0.25	< 0.01
	11/13/2017	**1000**	**510**	9.6		**2.3**	**0.091**	0.01	0.033		< 0.01		0.10	0.02
13-V	5/3/2017	9.7	20.0	15.0		< 0.10	0.01	0.04	0.018		< 0.01		< 0.10	< 0.01
	11/13/2017	40.0	34.0	1.0		**1.4**	**0.16**	0.01	0.023		< 0.01		< 0.10	< 0.01
14-II	5/8/2017	120.0	110.0	3.6		0.17	0.02	0.01	0.087		< 0.01		0.60	< 0.01
	11/13/2017	110.0	110.0	3.6		**3.8**	**0.38**	0.02	0.091		< 0.01		< 0.10	0.02
14-III	5/8/2017	8.3	8.5	7.1		**0.78**	**0.12**	0.01	0.077		< 0.01		< 0.10	< 0.01
	11/13/2017	44.0	34.0	34.0		**7**	**0.4**	0.02	0.120		< 0.01		< 0.10	< 0.01
15-III	4/27/2017	17.0	43.0	21.0		< 0.10	< 0.00	< 0.01	0.100		< 0.01		0.51	< 0.01
	11/8/2017	16.0	46.0	20.0		< 0.10	0.02	< 0.01	0.110		< 0.01		0.28	0.06
15-IV	4/27/2017	78.0	30.0	30.0		0.17	0.02	0.01	0.098		< 0.01		0.73	0.02
	11/8/2017	130.0	57.0	41.0		**3.4**	**0.28**	0.01	0.270		< 0.01		< 0.10	0.06
15-V	4/27/2017	3.2	5.1	13.0		0.21	**0.045**	0.02	0.140		< 0.01		< 0.10	< 0.01
	11/8/2017	47.0	20.0	11.0		**6**	**4.6**	0.05	0.390		< 0.01		< 0.10	0.02
16-IV	4/24/2017	45.0	49.0	190.0		< 0.10	0.02	0.02	1.000		< 0.01		**3.09**	0.02
	11/8/2017	53.0	48.0	180.0		**1.2**	**0.24**	0.02	0.850		< 0.01		< 0.10	0.06
16-V	4/24/2017	5.8	7.1	78.0		< 0.10	0.01	0.03	0.350		< 0.01		1.77	< 0.01
17-III	5/2/2017	1.5	3.4	27.0		< 0.10	< 0.00	0.01	< 0.010		< 0.01		< 0.10	< 0.01
17-IV	5/2/2017	< 1.0	1.5	2.4		< 0.10	< 0.00	0.02	< 0.010		< 0.01		0.16	< 0.01
	11/13/2017													
18-III	5/2/2017	3.9	4.4	170.0		0.14	0.03	0.06	0.052		< 0.01		1.27	< 0.05
	11/13/2017	26.0	16.0	**1800**		< 0.10	**0.24**	0.13	0.066		< 0.01		0.66	< 0.05
35-I	5/8/2017	6.9	5.8	5.4		**3.3**	**0.097**	**9.3**	0.024		< 0.01		0.11	< 0.01

Average concentration in 2017 from monitors 4-II,19-II and 19-IV used in comparison to Guideline B7 values
Concentrations that exceed the RUG are denoted Bolding and Underlined
All concentrations are in mg/L

Table C8: Comparison of Downgradient Bedrock Boundary Monitors to Guideline B7 Criteria for 2017

Parameter		Chloride	Sodium	Sulphate	Copper	Iron	Manganese	Zinc	Boron	Cadmium	Chromium	Lead	Nitrate	Nitrite
ODWS		250	200	500	1	0.30	0.05	5	5	0.005	0.05	0.01	10	1
Background		22.1	14.3	29.70		0.38	0.01	0.01	0.036		0.005		0.11	0.03
Guideline B7 Criteria		136	107	265		0.38	0.03	2.51	1.28		0.016		2.58	0.27
13-I	5/3/2017	< 1.0	36.0	< 1.0		0.17	0.01	< 0.01	0.100		< 0.01		< 0.10	< 0.01
14-IV	5/8/2017	1.1	40.0	< 1.0		< 0.10	< 0.00	0.01	0.088		< 0.01		< 0.10	< 0.01
	11/13/2017	1.1	39.0	< 1.0		< 0.10	< 0.00	< 0.01	0.090		< 0.01		< 0.10	< 0.01
15-I	4/27/2017	< 1.0	43.0	< 1.0		< 0.10	< 0.00	< 0.01	0.110		< 0.01		< 0.10	< 0.01
16-VII	4/24/2017	< 1.0	40.0	< 1.0		< 0.10	0.00	< 0.01	0.110		< 0.01		< 0.10	< 0.01
	11/8/2017	1.4	36.0	< 1.0		0.14	0.00	< 0.01	0.089		< 0.01		< 0.10	< 0.01
17-I	5/2/2017	< 1.0	34.0	< 1.0		**0.53**	0.01	0.01	0.080		< 0.01		< 0.10	< 0.01
9A-I	5/2/2017	8.8	40.0	11.0		**0.4**	0.02	< 0.01	0.120		< 0.01		< 0.10	< 0.01

Average concentration in 2017 from monitors 4-IR, 19-I, 53-I, 54-I used in comparison to Guideline B7 values
Concentrations that exceed the Guideline B7 criteria are marked are bolded and underlined
Exceedances observed for lead are due to the Laboratory Method Detection Limit
All concentrations are in mg/L

Appendix D

Combustible Gas Monitoring Results

TABLE D1 - GAS CONCENTRATIONS READINGS - LANDFILL MONITORS

DATE	1-I Waste % Vol	51-I Waste % Vol	51-II Outwash % Vol	52-I Outwash % Vol	55-I Outwash % Vol	56-I Outwash % Vol	57-I Outwash % Vol	58-I Outwash % Vol	59-I Waste % Vol	61-I Outwash % Vol	62-I Waste % Vol	63-I Outwash % Vol	64-I Waste % Vol	65-I Waste % Vol	66-I Outwash % Vol	67-I Waste % Vol
26-Mar-93	40	55	50	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
29-Apr-93	40	55	55	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
21-May-93	40	55	55	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
21-Jun-93	40	55	55	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
16-Jul-93	45	55	55	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10-Aug-93	45	55	55	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
16-Sep-93	43	48	55	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
13-Oct-93	38	50	50	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24-Nov-93	30	50	52	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
17-Dec-93	45	55	50	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
19-Jan-94	10	50	0	50	0	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a
11-Feb-94	5	5	0	5	0	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a
10-Mar-94	4	5	0	5	0	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a
19-Apr-94	5	7	0.35	6	0.35	0.5	0.25	0.6	5	6	n/a	n/a	n/a	n/a	n/a	n/a
12-May-94	4	7	3.05	0.75	0.15	0.8	0.2	6	6	1.25	n/a	n/a	n/a	n/a	n/a	n/a
23-Jun-94	4	25	1.1	6	0.3	0.65	1.7	6	10	1.75	n/a	n/a	n/a	n/a	n/a	n/a
12-Jul-94	1	15	0.5	1.05	0.9	0.55	0.45	0.8	0	1.9	n/a	n/a	n/a	n/a	n/a	n/a
10-Aug-94	11	25	0.6	0.95	0.8	3.6	2.4	1.05	6	3.05	n/a	n/a	n/a	n/a	n/a	n/a
16-Sep-94	25	22	1	7	0.2	5	1.05	0.5	10	1.75	n/a	n/a	n/a	n/a	n/a	n/a
12-Oct-94	2	15	0.85	1.6	0.8	0.5	0.25	1.4	2.85	1.95	n/a	n/a	n/a	n/a	n/a	n/a
11-Nov-94	0	15	0.3	1.85	0.5	1.75	1.05	0.35	7	0.4	n/a	n/a	n/a	n/a	n/a	n/a
14-Dec-94	4	18	0.4	10	0.95	3.85	0.9	1.1	10	0.9	n/a	n/a	n/a	n/a	n/a	n/a
17-Jan-95	1	10	0.85	1	1.2	0.3	0.45	0.7	6	0.1	n/a	n/a	n/a	n/a	n/a	n/a
9-Feb-95	1	15	0.45	1.25	0.55	0.15	0.3	0.35	6	0.1	n/a	n/a	n/a	n/a	n/a	n/a
10-Mar-95	13	57	1.25	1.75	1.1	0.55	0.35	0.65	12	18	57	22	n/a	n/a	n/a	n/a
13-Apr-95	16	56	1.75	2.5	0.9	0.4	0.5	0.3	14	20	58	18	n/a	n/a	n/a	n/a
18-May-95	8	62	1.35	2.05	0.7	0.5	0.35	0.85	23	4.95	30	15	n/a	n/a	n/a	n/a
30-Jun-95	2	30	0.75	53	2.45	18	1.85	1.15	73	2.4	43	2.75	n/a	n/a	n/a	n/a
20-Jul-95	2	45	0.45	2.55	1.6	1	1.05	0.9	95	1.75	52	65	59	29	50	15
21-Sep-95	3	44	3.3	47	2.6	2.2	4.1	3.3	38	6	44	16	53	6	64	56
18-Oct-95	4	45	4.6	44	4	3.2	2.75	1.6	39	7	42	18	54	8	50	52
22-Nov-95	3	2.7	0	2.65	0.05	4	0.7	0	1.6	0.15	54	77	55	57	67	58
21-Dec-95	53	55	0.2	54	0.1	25	9	2	50	0.05	64	23	55	57	57	58
9-Jan-96	54	54	0.15	53	0.35	25	0.05	15	53	0.6	54	20	54	57	57	57
8-Feb-96	52	53	0	51	0.15	43	0.5	3.65	26	0.1	52	12	0	56	55	55
8-Mar-96	51	52	0.1	51	0	35	1.15	37	51	1.6	52	42	52	54	55	55
18-Apr-96	50	0.35	0.15	50	2	20	0.05	4.5	49	0.05	51	25	50	54	54	54
16-May-96	51	51	0.05	51	0.1	18	0.55	4	51	1.15	52	23	50	55	54	54
16-Jul-96	14	47	0.1	48	0.05	0.2	0	2.35	48	0.05	50	2.3	48	49	52	51

Gas concentrations are measured in per cent volume in air

TABLE D1 - GAS CONCENTRATIONS READINGS - LANDFILL MONITORS

DATE	1-I	51-I	51-II	52-I	55-I	56-I	57-I	58-I	59-I	61-I	62-I	63-I	64-I	65-I	66-I	67-I
	Waste	Waste	Outwash	Outwash	Outwash	Outwash	Outwash	Outwash	Waste	Outwash	Waste	Outwash	Waste	Waste	Outwash	Waste
	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol	% Vol
26-Sep-96	48	49	0.05	49	0.1	0	0	1.05	48	0	49	1.3	49	50	52	52
1-Nov-96	48	50	0.15	49	0.7	23	0	0.05	49	0	50	39	49	51	52	53
28-Nov-96	13	58	1.8	2.5	0.9	0.4	0.5	0.3	14	20	58	18	0	0	0	0
13-Dec-96	49	51	0	49	0.9	18	0	0	49	0.05	50	22	50	54	53	52
27-Jan-97	57	53	0	61	28	19	0	0	51	0.1	45	27	55	51	59	62
11-Feb-97	27	52	0.15	51	0.65	29	0	0	51	0	52	27	52	61	55	55
13-Mar-97	35	53	0.05	45	0.45	22	0	0	62	0	45	22	45	65	33	61
30-Apr-97	46	50	0.05	50	0.05	0.15	0	0.05	50	0.2	52	30	51	61	54	54
27-May-97	2	49	0.05	50	0.2	0.15	0.05	0.05	50	0.15	52	17	50	60	54	54
14-Aug-97	10	51	0.1	51	4.9	33	0	0.1	51	0.05	53	0.9	52	63	55	55
30-Sep-97	19	52	0	52	4.1	0	0	0	52	0	52	0	52	14	41	46
18-Nov-97	n/a	41	0	62	4.95	0	0	0	59	0	57	0	50	19	49	44
26-Jan-98	n/a	50	0	51	0.95	0	0	0	51	0	52	1.65	52	60	55	55
20-Mar-98	n/a	51	0	51	1	12	0.15	0	50	0	53	3.85	51	63	54	54
27-May-98	n/a	45	0	41	0	2	0	0	32	0	23	2.3	41	39	51	44
16-Sep-98	n/a	55	0	57	0.05	1	0	0	27	0	47	0	47	41	31	53
21-Oct-98	n/a	65	0	62	0	3	0	0	46	0	49	0	41	39	29	55
10-Dec-98	n/a	66	0.05	55	0	0.05	0	0	39	0	50	0	55	37	25	49
12-Jan-99	n/a	35	0	22	3.75	0	0	0	45	0	39	0	38	25	41	37
16-Feb-99	n/a	36	0	25	2.65	0	0	0	33	0	44	0	34	15	27	32
18-Mar-99	n/a	49	0	51	25	0	0	0	0	0	34	0	49	34	32	51
13-Apr-99	n/a	63	0	98	1.65	0	0	0	0	0	23	0	57	55	29	32
20-May-99	n/a	55	0	88	1.45	0	0	0	32	0	19	0	45	32	28	31
16-Jun-99	n/a	51	0	61	0.75	0	0.05	0	29	0	18	0	29	59	37	29
24-Jul-99	n/a	65	0	74	8	0	0	0	19	0	17	0	24	36	28	34
18-Aug-99	n/a	62	0	88	0.2	0	0	0	15	0	21	0	21	29	29	27
21-Sep-99	n/a	51	0	65	0.2	0	0	0	21	0	32	0	14	27	37	41
14-Oct-99	n/a	56	0	62	0.1	0	0	0	19	0	41	0	12	24	41	37
23-Nov-99	n/a	45	0	51	0.1	0	0	0	15	0	37	0	11	19	20	47
27-Jan-00	n/a	47	0	55	0.05	0	0	0	12	0	26	0	9	12	15	34
16-Feb-00	n/a	41	0	59	0.05	0	0	0	15	0	19	0	7	15	14	24
22-Mar-00	n/a	47	0.05	31	14	24	0.05	17	46	1.65	62	19	47	59	59	47
18-Apr-00	n/a	42	0.05	34	17	30	0	14	32	1.7	39	23	54	51	49	62
21-Jun-00	n/a	32	0.2	55	21	13	0	24	59	2.15	48	17	39	41	56	58
18-Jul-00	n/a	59	0.1	47	13	14	0.6	19	43	3.55	43	27	54	45	39	42
24-Aug-00	n/a	55	0.05	62	19	24	0.45	27	47	23	59	22	61	54	55	47
19-Oct-00	n/a	31	0.1	41	4.45	4.9	0.05	16	61	3.05	47	20	43	47	49	61
14-Nov-00	n/a	51	0.1	50	9	20	0.05	22	50	2.3	51	21	51	54	54	53
15-Dec-00	n/a	43	0.1	46	22	26	0	21	65	1.75	45	16	47	33	47	56

Gas concentrations are measured in per cent volume in air

TABLE D1 - GAS CONCENTRATIONS READINGS - LANDFILL MONITORS

DATE	1-I Waste % Vol	51-I Waste % Vol	51-II Outwash % Vol	52-I Outwash % Vol	55-I Outwash % Vol	56-I Outwash % Vol	57-I Outwash % Vol	58-I Outwash % Vol	59-I Waste % Vol	61-I Outwash % Vol	62-I Waste % Vol	63-I Outwash % Vol	64-I Waste % Vol	65-I Waste % Vol	66-I Outwash % Vol	67-I Waste % Vol
21-Feb-01	n/a	40	0.05	44	29	21	0	18	45	1.6	33	12	33	29	41	45
3-Aug-01	n/a	61	0.01	51	31	32	0.01	26	42	1.45	39	19	57	31	43	51
14-Jan-02	n/a	32	0.01	64	71	27	0.01	36	64	1.1	89	17	45	22	42	44
19-Mar-02	n/a	57	0.05	44	56	19	0.05	17	49	2.05	39	18	37	45	37	54
15-May-02	n/a	52	0.01	32	29	25	0.05	25	37	1.55	31	3	51	1.15	43	41
16-Jul-02	n/a	40	0	41	21	21	0	19	1.1	1.1	22	0	31	2.35	32	38
12-Sep-02	n/a	37	0.05	1.15	35	29	0.05	17	51	2.7	46	5	41	34	46	51
18-Nov-02	n/a	43	0	52	51	11	0	22	47	1.9	1.4	0.6	36	31	29	2.15
13-Feb-03	n/a	34	0.1	45	44	10	0.05	20	34	1.25	26	0.45	23	1.15	21	41
13-Aug-03	n/a	61	0.05	46	25	31	0.1	0.1	71	1.05	37	0.45	37	1.35	32	47
20-Jul-04	n/a	17.4	19.5	59.7	44.2	7.4	0.3	0.8	57.4	49.8	62.3	37.4	58.3	1	0.7	1.5
17-Sep-04	n/a	7.8	11.3	64.2	47.2	10	1.1	2.3	59.5	56.2	61.2	39.6	61.2	3.4	1.3	2.1
14-Dec-04	n/a	0	0	63.2	56.4	8	0	0	63.2	58.1	64.5	33.8	63	0	0.2	0
24-Feb-05	n/a	42.1	46.5	48.5	51.2	22	0	0	50.3	0	19.5	5.1	53	0	43.2	2
28-Jul-05	n/a	48.9	47.2	41.3	34.7	27.6	1.1	0.4	49.6	0.9	15.7	2.3	21.9	1.8	43.5	3.8
10-Feb-06	n/a	29.4	8.2	54.3	18.7	0.2	0	0.9	10.9	0.1	3.2	0	58.5	0	0.9	0.4
6-Sep-06	n/a	34.4	0	59.8	21.9	0	0	1.5	6.5	0.2	5.1	0	60.2	0	1.2	0
6-Feb-07	n/a	12.3	0	41.2	17.3	0.2	0	0.9	5.3	0.4	2.1	0	53.2	0	0.3	0.8
10-Aug-07	n/a	0	0	23.3	32.1	0	0	0	2.3	0	1.2	0	12.2	0	0	0.3
12-Mar-08	n/a	0.8	0	31.5	10.2	1.5	0	0	4.2	1.1	1.1	0	47.6	0	0.2	3.1
17-Sep-08	n/a	0.4	0	12.1	4.8	1.9	0	0	2.4	0.8	0.9	0	43.1	0	0	2.1
24-Dec-09	0	0.4	0	12.1	4.8	1.9	0	0	2.4	0.8	0.9	0	41	0	0	2.1
6-Mar-10	0	12.3	0	41.2	0	0	0	0.9	5.3	0.4	2.1	0	53.2	0	0.3	0.8
10-Aug-10	0	30.1	1	8.9	2.1	0.1	0	0.5	1.5	0	3.7	0	0.5	0	0.2	0
9-Mar-11	0	0	0	5.9	9.5	0.5	0	0.2	2.1	0	0.2	0	36.7	0	0	0.4
16-Jun-11	0	0	0	0.7	0.5	0	0	0	0.2	0	0.6	0	5.6	0	0	0
25-Aug-11	0	0	0	0.2	0.2	0	0	0	0.6	0	0	0	9.9	0	0	0
1-Nov-11	0	0	0	0	0.5	0.2	0	0	0.2	0	0	0	14.5	0	0.2	0
24-Apr-12	0	0	0	0.2	0.3	0	0	0	0.2	0	0.6	0	3.9	0	0	0
14-Sep-12	0	0	0	0	0.5	0.4	0	0	0	0	0	0	6.5	0	0.4	0
19-Mar-13	0	0	0	4.3	9.5	0.5	0	0.4	2.1	0	0.2	0	36.7	0	0	0.4
13-Aug-13	0	0	0	1.2	2.5	0.2	0	0	0	0	0	0	6.5	0	0.2	0
13-Mar-14	0	0	0	1.3	2.5	0.2	0	0.1	2.1	0	0	0	5.7	0	0	0.4
18-Aug-14	0	0.4	0.1	0	4.8	1.2	0	0	0	0	0	0.1	6.5	0	0.1	0.3
6-Apr-15	0	0	0	0	0.5	0	0	0	0	0	0	0	0.4	0	0	0.1
11-Aug-15	0	0	0	0	1.8	0.2	0	0	0	0	0	0	1.5	0	0	0
21-Apr-16	0	0	0	0	0.7	0	0	0.2	0	0	0	0	0.4	0	0	0.1
26-Jul-16	0	0	0	0	0.2	0.1	0	0	0	0	0	0	0	0	0	0
11-Apr-17	0	0	0	0.4	0.2	0	0	0	0.2	0	0	0	0	0	0	0.7
21-Aug-17	0	0	0	0	1.3	1.1	0	0	0	0	0	0	0.5	0	0	0

Gas concentrations are measured in per cent volume in air

TABLE D2 - GAS CONCENTRATIONS IN C AND D SERIES MONITORS - WEST SIDE OF SITE

Date	C1-II % vol	C2-II % vol	C3-I % vol	D1-I % vol	D2-I % vol
10-Feb-93	0.25	17	0	18	18
26-Mar-93	0	1.9	0	5	9
29-Apr-93	0	0	0	2.25	8
21-May-93	0	0	0	1.6	2.7
21-Jun-93	0	0	0	3.45	2.65
16-Jul-93	0	0	0	16	6
10-Aug-93	0	0	0	16	8
16-Sep-93	0	0	0	15	14
13-Oct-93	0	0	0	18	10
24-Nov-93	0	0	0	13	10
17-Dec-93	0	0	0	20	3.6
19-Jan-94	0	0	0	6	3.25
11-Feb-94	0	6	0	12	6
10-Mar-94	0	0	0	0	0.6
19-Apr-94	0	0	0	0.8	0.25
12-May-94	0	0	0	1.25	1.2
23-Jun-94	0	0	5	1.5	1.05
12-Jul-94	0	0	0	1	0.5
10-Aug-94	0	0	0	2.6	1.1
16-Sep-94	0	0	0	2.25	0.9
12-Oct-94	0	0	0	0.85	0
11-Nov-94	0	0	0	0.8	0
14-Dec-94	0	0	0	1.4	0.8
17-Jan-95	0	0	0	0.2	0
9-Feb-95	0	0	0	0.3	0
10-Mar-95	0	0	0.6	11	18
13-Apr-95	0	0	0.9	12	15
18-May-95	0	0	0	15	12
30-Jun-95	0	0	0	0.9	1.65
20-Jul-95	0	0	0	0.55	1.05
21-Sep-95	0	0	0	0.4	0.25
18-Oct-95	0	0	0	0	0.75
22-Nov-95	0	0	0	4	0.85
21-Dec-95	0	0	0	3.3	31
9-Jan-96	0	0	0	12	33
8-Feb-96	3.3	0		22	35
8-Mar-96	0.15	19	0	16	18
18-Apr-96	0.1	2.4	0	17	1.6
16-May-96	0	0.05	0.05	9	32
16-Jul-96	0	0	0	25	30
26-Sep-96	0	0	0	16	37
1-Nov-96	0	0.05	0	16	30
28-Nov-96	0	0	0.85	14	17
13-Dec-96	0	0.05	0.05	4.25	22
27-Jan-97	0	0.05	0.1	4.15	18
11-Feb-97	0	0	0	29	12
13-Mar-97	0	0	0	15	6
30-Apr-97	0	0	0	1	29
27-May-97	0	0	0	3.8	4.2
14-Aug-97	0	0	0.05	11	29
30-Sep-97	0	0	0	0.25	0
18-Nov-97	0	0	0	0.15	0
26-Jan-98	0	0	0	31	25
20-Mar-98	0	0	0	16	19
27-May-98	0	0	0	8	0.85
16-Sep-98	0	0	0	9	0.85
21-Oct-98	0	0	0	15	1
10-Dec-98	0	0	0	6	0.1

Gas concentrations are measured in per cent volume in air

TABLE D2 - GAS CONCENTRATIONS IN C AND D SERIES MONITORS - WEST SIDE OF SITE

Date	C1-II % vol	C2-II % vol	C3-I % vol	D1-I % vol	D2-I % vol
12-Jan-99	0	0	0	0.05	0
16-Feb-99	0	0	0	0.1	0
18-Mar-99	0	0	0	0.05	0
13-Apr-99	0	0	0	0.1	0
20-May-99	0	0	0	0.05	0.1
16-Jun-99	0	0	0	0	0
24-Jul-99	0	0	0	0	0
18-Aug-99	0	0	0	0	0
21-Sep-99	0	0	0	0	0
14-Oct-99	0	0	0	0	0
23-Nov-99	0	0	0	0	0
27-Jan-00	0	0	0	0	0
16-Feb-00	0	0	0	0	0
22-Mar-00	0	0	0	0.15	3
18-Apr-00	0	0	0	0.1	3
21-Jun-00	0	0	0	0.1	2.75
18-Jul-00	0	0	0	0.05	9
24-Aug-00	0	0	0	0.1	2.1
19-Oct-00	0	0	0	0.15	4.05
14-Nov-00	0	0	0	0.1	8
15-Dec-00	0	0	0	0.05	3.85
21-Feb-01	0	0	0	0.05	0
11-Apr-01	0	0	0	0	0.4
20-Jun-01	0	0	0	0	0.15
3-Aug-01	0	0	0	0	0.05
15-Oct-01	0	0	0	0	0.05
4-Dec-01	0	0	0	0	0.05
14-Jan-02	0	0	0	0	0.1
19-Mar-02	0	0	0	0	0
15-May-02	0	0	0	0	0.2
16-Jul-02	0	0	0	0	0.1
12-Sep-02	0	0	0	0.05	0.05
18-Nov-02	0	0	0	0	0.05
13-Feb-03	0	0	0	0.05	0.05
17-Apr-03	0	0	0	0	0.05
19-Jun-03	0	0	0	0.05	0.05
13-Aug-03	0	0	0	0	0.05
21-Oct-03	0	0	0	0.05	0.05
20-Jul-04	0	0	0	1.7	5.2
17-Sep-04	0	0	0	2.3	9.3
14-Dec-04	0	0	0	0	7.2
24-Feb-05	0	0	0	0	3.1
28-Jul-05	0	0	0	0.9	2.1
10-Feb-06	0	0	0	0	0.2
6-Sep-06	0	0	0	0	0
6-Feb-07	0	0	0	0	0
10-Aug-07	0	0	0	0	0
12-Mar-08	0	0	0	0	0
17-Sep-08	0	0	0	0	0
24-Dec-09	0	0	0	0	0
6-Mar-10	0	0	0	0	0
10-Aug-10	0	0	0	0.1	0
9-Mar-11	0	0	0	0	0
16-Jun-11	0	0	0	0	0
25-Aug-11	0	0	0	0	0
1-Nov-11	0	0	0	0	0
24-Apr-12	0	0	0	0	0
14-Sep-12	0	0	0	0	0

Gas concentrations are measured in per cent volume in air

TABLE D2 - GAS CONCENTRATIONS IN C AND D SERIES MONITORS - WEST SIDE OF SITE

Date	C1-II % vol	C2-II % vol	C3-I % vol	D1-I % vol	D2-I % vol
19-Mar-13	0	0	0	0	0
13-Aug-13	0	0	0	0	0
13-Mar-14	0	0	0	0	0
18-Aug-14	0	0	0	0	0
6-Apr-15	0	0	0	0	0
11-Aug-15	0	0	0	0	0
21-Apr-16	0	0	0	0	0
26-Jul-16	0	0	0	0	0
11-Apr-17	0	0	0	0	0
21-Aug-17	0	0	0	0	0

TABLE D3 - GAS CONCENTRATIONS IN C AND D SERIES MONITORS - SOUTH SIDE OF SITE

Date	C5-I % vol	C6-II % vol	C7-I % vol	C8-I % vol	C9-II % vol	C10-II % vol	C11-II % vol	C12-I % vol	C13-I % vol	C14-I % vol	D3-I % vol	D4-I % vol	D5-I % vol
10-Feb-93	4.45	0	0	0	0	0	0	0	13	n/a	13	0	n/a
26-Mar-93	16	0.4	0.8	0	0	0	2.9	0	1.95	n/a	5	0	n/a
29-Apr-93	6	0	2.6	0.5	0	0	0	0	0	n/a	5	0	n/a
21-May-93	6	0	2.6	0	0.15	0	0	0	0.2	n/a	4.1	0	n/a
21-Jun-93	6	0	0.3	0	0	0	0	0	0.25	n/a	5	0	n/a
16-Jul-93	40	25	20	5	15	0.05	0	0	15	n/a	20	0	n/a
10-Aug-93	35	10	40	3.45	6	0	0	0.25	6	n/a	30	0	n/a
16-Sep-93	30	4.25	25	2.45	4.05	0	0	0.15	3.15	n/a	35	0	n/a
13-Oct-93	25	3.6	30	1.6	6	0	0.05	0.25	0.65	n/a	20	0	n/a
24-Nov-93	20	2.9	22	2	8	0	0	0.6	0.1	n/a	15	0.7	n/a
17-Dec-93	13	3.25	18	1.9	6	0	0	0.2	0	n/a	20	0	n/a
19-Jan-94	13	2.6	15	0.85	5	0	0	0.1	0	n/a	14	0	n/a
11-Feb-94	8	1.15	0	0	0	0	0	0	0	n/a	3.2	0	n/a
10-Mar-94	0	0	0	0	0	0	0	0	0	n/a	4.15	0	n/a
19-Apr-94	0.25	0	0.1	0	0	0	0	0	0	n/a	1.9	0	n/a
12-May-94	0	0.6	6	0	0	0	0	0	0	n/a	0.85	0	n/a
23-Jun-94	0	0	2.15	0	0.55	0	0	0	0.1	n/a	0	0	n/a
12-Jul-94	0.3	0	2.4	0	0	0	0	0	0.05	n/a	0	0	n/a
10-Aug-94	0	0	2.45	0	0	0	0	0	0	n/a	2.05	0	n/a
16-Sep-94	0	0	0.25	0	0.05	0	0	0	0	n/a	0.05	0	n/a
12-Oct-94	0	0	0.85	0	0	0	0	0	0	n/a	3.15	0	n/a
11-Nov-94	0.05	0	0.75	0	0	0	0	0	0	n/a	1.9	0	n/a
14-Dec-94	0	0	1.2	0	0	0	0	0	0	n/a	1	0.25	n/a
17-Jan-95	0	0	0.55	0	0	0	0	0	0	n/a	0	0	n/a
9-Feb-95	0	0	0	0	0	0	0	0	0	n/a	0	0	n/a
10-Mar-95	0	0	1.5	12	0	0	0	0.1	0	n/a	0.05	0.15	n/a
13-Apr-95	0	0	1.6	11	0	0	0	0	0	n/a	0.8	0	n/a
18-May-95	1.15	0.1	18	0.65	0	0	0	0	0.2	n/a	18	0.15	n/a
30-Jun-95	0	0	0.65	0.25	0.3	0	0	0	0	n/a	2.45	1.6	n/a
20-Jul-95	0	0	0.4	0.15	0.1	0	0	0	0	0	1.55	0.55	0.75
21-Sep-95	0.5	0	1.1	0.85	0	0.9	0	0	0	0	39	1.05	0.5
18-Oct-95	0.8	0	1.5	0.75	0	1.2	0	0	0	0	34	1.75	2.2
22-Nov-95	2.75	2	1.4	0.05	0.15	0	0	0	0	0	1	0	1.45
21-Dec-95	4.25	0.05	27	0	8	0.15	0	0	0.75	0	36	0	0
9-Jan-96	3	0	20	1.65	0.05	0.05	0.1	0	0	0	46	0	1.6
8-Feb-96	8	32	34	1.35	6	0.05	0	0	0.05	0	37	0.25	3.85
8-Mar-96	0	0	39	0.1	0.75	0	0	0	0	0	20	0	2.6
18-Apr-96	0	0	28	0.05	0	0.05	0	0	0	0	4	0	5.3
16-May-96	0	0	38	0.05	2.35	0	0	0	0.05	0	22	0	0.7
16-Jul-96	2.8	0.45	1.65	4.95	20	0	3.15	0	0.45	0	8	0	23
26-Sep-96	11	2.3	39	2.85	10	0	0.75	0.05	2.2	0	44	0	38
1-Nov-96	15	3.55	29	0.3	11	0.15	0.05	0	2.5	0	33	0.05	25
28-Nov-96	0	0	1.75	14	0	0	0	0	0	0	0.8	0	0

Gas concentrations are measured in per cent volume in air

TABLE D3 - GAS CONCENTRATIONS IN C AND D SERIES MONITORS - SOUTH SIDE OF SITE

Date	C5-I	C6-II	C7-I	C8-I	C9-II	C10-II	C11-II	C12-I	C13-I	C14-I	D3-I	D4-I	D5-I
	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol
13-Dec-96	3.25	0.05	33	0.25	3.25	0	0.25	0	2.1	0	36	0	40
27-Jan-97	3.05	0.05	39	0.3	3.15	0	0.45	0	3.05	0	41	0.05	37
11-Feb-97	16	0.5	36	0.15	9	0	0.1	0	2.5	0	0.05	0.05	29
13-Mar-97	11	0.75	23	0.25	0	0	0.15	0	3.65	0	0.35	0.05	13
30-Apr-97	10	0	33	4.95	2.65	0	0	0	0	0	18	0	29
27-May-97	0	0	15	4.3	3.6	0	0	0	0	0	27	0	22
14-Aug-97	0.05	0	0.4	0	18	0	0	0	0	0.35	28	27	48
30-Sep-97	0	0	5.3	0	17	0	2.6	0	0	0.65	4.85	0	43
18-Nov-97	0	0	5.5	0	14	0	0.6	0	0	0.45	4.55	0	39
26-Jan-98	0	0	9	0.3	16	0	0.35	0	1.65	0	31	0	21
20-Mar-98	0	0	3.25	0	2.25	0	0	0	0	0	18	0	39
27-May-98	0	0	2.75	0	1.6	0	0	0	0	0	11	0	22
16-Sep-98	0.1	0	1.15	0	2.05	0	0	0	0	0	9	0	40
21-Oct-98	0	0	0.6	0	1.05	0	0	0	0	0	7	0	32
10-Dec-98	0	0	0.4	0	0.75	0	0	0	0	0	4	0	27
12-Jan-99	0	0	3	0	11	0	0.45	0	0	0.35	4	0	49
16-Feb-99	0	0	1.6	0	0.6	0	0.05	0	0	0.05	2.25	0	33
18-Mar-99	0	0	3.8	0	25	0	0	0	0	0.1	27	0	41
13-Apr-99	0	0	2.9	0	17	0	0.05	0	0	0.05	14	0	52
20-May-99	0	0	2.25	0	15	0	0.1	0	0	0	12	0	49
16-Jun-99	0	0	1.9	0	12	0	0.05	0	0	0	10	0	15
24-Jul-99	0	0	1.55	0	10	0	0.15	0	0	0	9	0	12
18-Aug-99	0	0	1.95	0	0.1	0	0.05	0	0	0	22	0	16
21-Sep-99	0	0	0	0	0	0	0	0	0	0	14	0	23
14-Oct-99	0	0	0.05	0	0	0	0.05	0	0	0	11	0	18
23-Nov-99	0	0	0	0	0	0	0.05	0	0	0	16	0	11
27-Jan-00	0	0	0.05	0	0	0	0	0	0	0	15	0	9
16-Feb-00	0	0	0.05	0	0	0	0	0	0	0	10	0	5
22-Mar-00	0	0	1.45	0	0	0	0	0	0	0.6	0.05	0	22
18-Apr-00	0	0	3.1	0	0	0	0	0	0	0.15	0.4	0	24
21-Jun-00	0.05	0	2.05	0	0	0	0	0	0	0	0.05	0	2.75
18-Jul-00	0.05	0	1	0	0	0	0	0	0	0.8	0.05	0.05	20
24-Aug-00	0	0	3.45	0	0	0	0	0	0	0.45	0	0.05	4
19-Oct-00	0	0	2.45	0	0	0	0	0	0	0.8	0	0	21
14-Nov-00	0.05	0	3	0	0	0	0	0	0	0.75	0	0	29
15-Dec-00	0.05	0	2.45	0	0	0	0	0	0	0.6	0	0	33
21-Feb-01	0	0	0	0	0	0	0	0	0	0.05	0	0	22
11-Apr-01	0.05	0	0	0.05	0	0	0	0	0.05	0.1	0	0	19
20-Jun-01	0	0	0	0	0	0	0	0	0	0	0	0	15
3-Aug-01	0	0	0.95	0	0	0	0	0	0	0.05	0	0	26
15-Oct-01	0	0	0	0	0	0	0	0	0	0.05	0.05	0.1	20
4-Dec-01	0.05	0	0.1	0	0	0	0	0	0	0	0	0.05	17
14-Jan-02	0	0	0.75	0	0	0	0	0	0.05	0.2	0.05	0	32

Gas concentrations are measured in per cent volume in air

TABLE D3 - GAS CONCENTRATIONS IN C AND D SERIES MONITORS - SOUTH SIDE OF SITE

Date	C5-I % vol	C6-II % vol	C7-I % vol	C8-I % vol	C9-II % vol	C10-II % vol	C11-II % vol	C12-I % vol	C13-I % vol	C14-I % vol	D3-I % vol	D4-I % vol	D5-I % vol
19-Mar-02	0	0	0.05	0	0	0	0	0	0	0	0	0	12
15-May-02	0	0	0.9	0	0	0	0	0	0	0	0.05	0.05	14
16-Jul-02	0.05	0	0	0	0	0	0	0	0	0	0	0	27
12-Sep-02	0	0	0.05	0	0	0	0	0	0.05	0	0	0	19
18-Nov-02	0.05	0	0.1	0	0	0	0	0	0.05	0.1	0.05	0	22
13-Feb-03	0.05	0	0.05	0	0	0	0	0	0.05	0.05	0.05	0.05	10
17-Apr-03	0	0	0.05	0	0	0	0	0	0.05	0.1	0.05	0	23
19-Jun-03	0.05	0	0.05	0	0	0	0	0	0.05	0.15	0.05	0	18
13-Aug-03	0	0	0.05	0	0	0	0	0	0	0.1	0.05	0	9
21-Oct-03	0.05	0	0.05	0	0	0	0	0	0.05	0.05	0.05	0	22
20-Jul-04	0	0	0	0	0	0	0	0	0	0	18.4	0.8	2.8
17-Sep-04	0	0	0	0	0	0	0	0	0	0	23.4	1.1	2.1
14-Dec-04	0	0	0	0	0	0	0	0	0	0	27.8	1.6	3.2
24-Feb-05	0	0	0	0	0	0	0	0	0	0	2.4	1.1	1.5
28-Jul-05	0	0	0	0	0	0	0	0	0	0	1.9	0.8	1.3
10-Feb-06	0	0	0	0	0	0	0	0	0	0	12.3	0.1	0.6
6-Sep-06	0.5	0	0	0	0	0	0	0	0	0	15.1	0	0
6-Feb-07	0	0	0	0	0	0	0	0	0	0	11.2	0.2	0.4
10-Aug-07	0	0	0	0	0	0	0	0	0	0	0	0.6	0.8
12-Mar-08	0	0	0	0	0	0	0	0	0	0	2.1	0	0.9
17-Sep-08	0	0	0	0	0	0	0	0	0	0	1.7	0.2	0.7
24-Dec-09	0	0	0	0	0	0	0	0	0	0	1.7	0.2	0.7
6-Mar-10	0	0	0	0	0	0	0	0	0	0	11.2	0.2	0.4
10-Aug-10	0	0	0	0	0	0	0	0	0	0	0.6	0.2	0.6
9-Mar-11	0	0	0	0	0	0	0	0	0	0	0.3	0	0.2
16-Jun-11	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-11	0	0	0	0	0	0	0	0	0	0	0.2	0	0
1-Nov-11	0	0	0	0	0	0	0	0	0	0	0	0.1	0
24-Apr-12	0	0	0	0	0	0	0	0	0	0	0	0	0
14-Sep-12	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0
19-Mar-13	0	0	0	0	0	0	0	0	0	0	0.7	0	0.3
13-Aug-13	0	0	0	0	0	0	0	0	0	0	0	0.1	0
13-Mar-14	0	0	0	0	0	0	0	0	0	0	0.2	0	0
18-Aug-14	0	0	0	0	0	0	0	0	0	0	0	0	0
6-Apr-15	0	0	0	0	0	0	0	0	0	0	0	0	0
11-Aug-15	0	0	0	0	0	0	0	0	0	0	0	0	0
21-Apr-16	0	0	0	0	0	0	0	0	0	0	0	0	0.1
26-Jul-16	0	0	0	0	0	0	0	0	0	0	0	0.2	0
11-Apr-17	0	0	0	0	0	0	0	0	0	0	0.2	0	0
21-Aug-17	0	0	0	0	0	0	0	0	0	0	0	0.1	0

Gas concentrations are measured in per cent volume in air

TABLE D4 - GAS CONCENTRATION READINGS - PROPERTY BOUNDARY MONITORS

Date	2-II	4-III	5-II	12-III	14-III	15-V	16-IV	16-V	19-IV	20-IV
	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol
26-Jan-98	0	0	0	0	0	0	0	0	0	0
20-Mar-98	0	0	0	0	0	0	0	0	0	0
16-Sep-98	0	0	0	0	0	0	0	0	0	0
21-Oct-98	0	0	0	0	0	0	0	0	0	0
10-Dec-98	0	0	0	0	0	0	0	0	0	0
12-Jan-99	0	0	0	0	0	0	0	0	0	0
16-Feb-99	0	0	0	0	0	0	0	0	0	0
18-Mar-99	0	0	0	0	0	0	0	0	0	0
13-Apr-99	0	0	0	0	0	0	0	0	0	0
20-May-99	0	0	0	0	0	0	0	0	0	0
16-Jun-99	0	0	0	0	0	0	0	0	0	0
24-Jul-99	0	0	0	0	0	0	0	0	0	0
18-Aug-99	0	0	0	0	0	0	0	0	0	0
21-Sep-99	0	0	0	0	0	0	0	0	0	0
14-Oct-99	0	0	0	0	0	0	0	0	0	0
23-Nov-99	0	0	0	0	0	0	0	0	0	0
27-Jan-00	0	0	0	0	0	0	0	0	0	0
16-Feb-00	0	0	0	0	0	0	0	0	0	0
22-Mar-00	0	0	0	0	0	0	0	0	0	0
18-Apr-00	0	0	0	0	0	0	0	0	0	0
21-Jun-00	0	0	0	0	0	0	0	0	0	0
18-Jul-00	0	0	0	0	0	0	0	0	0	0
24-Aug-00	0	0	0	0	0	0	0	0	0	0
19-Oct-00	0	0	0	0	0	0	0	0	0	0
14-Nov-00	0	0	0	0	0	0	0	0	0	0
15-Dec-00	0	0	0	0	0	0	0	0	0	0
21-Feb-01	0	0	0	0	0	0	0	0	0	0
11-Apr-01	0	0	0	0	0	0	0	0	0	0
20-Jun-01	0	0	0	0	0	0	0	0	0	0
3-Aug-01	0	0	0	0	0	0	0	0	0	0
15-Oct-01	0	0	0	0	0	0	0	0	0	0
4-Dec-01	0	0	0	0	0	0	0	0	0	0
14-Jan-02	0	0	0	0	0	0	0	0	0	0
19-Mar-02	0	0	0	0	0	0	0	0	0	0
15-May-02	0	0	0	0	0	0	0	0	0	0
16-Jul-02	0	0	0	0	0	0	0	0	0	0
12-Sep-02	0	0	0	0	0	0	0	0	0	0
18-Nov-02	0	0	0	0	0	0	0	0	0	0
13-Feb-03	0	0	0	0	0	0	0	0	0	0
17-Apr-03	0	0	0	0	0	0	0	0	0	0
19-Jun-03	0	0	0	0	0	0	0	0	0	0
13-Aug-03	0	0	0	0	0	0	0	0	0	0
21-Oct-03	0	0	0	0	0	0	0	0	0	0
20-Jul-04	0	0	0	0	0	0	0	0	0	0
17-Sep-04	0	0	0	0	0	0	0	0	0	0
14-Dec-04	0	0	0	0	0	0	0	0	0	0
24-Feb-05	0	0	0	0	0	0	0	0	0	0
28-Jul-05	0	0	0	0	0	0	0	0	0	0
10-Feb-06	0	0	0	0	0	0	0	0	0	0
6-Sep-06	0	0	0	0	0	0	0	0	0	0
6-Feb-07	0	0	0	0	0	0	0	0	0	0
10-Aug-07	0	0	0	0	0	0	0	0	0	0
12-Mar-08	0	0	0	0	0	0	0	0	0	0
17-Sep-08	0	0	0	0	0	0	0	0	0	0
24-Dec-09	0	0	0	0	0	0	0	0	0	0
6-Mar-10	0	0	0	0	0	0	0	0	0	0
10-Aug-10	0	0	0.2	0	0	0.1	0	0	0	1.2
9-Mar-11	0	0	0	0	0	0	0	0	0	0
16-Jun-11	0	0	0	0	0	0	0	0	0	0
25-Aug-11	0	0	0	0	0	0	0	0	0	0

Gas concentrations are measured in per cent volume in air

TABLE D4 - GAS CONCENTRATION READINGS - PROPERTY BOUNDARY MONITORS

Date	2-II	4-III	5-II	12-III	14-III	15-V	16-IV	16-V	19-IV	20-IV
	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol
1-Nov-11	0	0	0	0	0	0	0	0	0	0
24-Apr-12	0	0	0	0	0	0	0	0	0	0
14-Sep-12	0	0	0	0	0	0	0	0	0	0
19-Mar-13	0	0	0	0	0	0	0	0	0	0
13-Aug-13	0	0	0	0	0	0	0	0	0	0
13-Mar-14	0	0	0	0	0	0	0	0	0	0
18-Aug-14	0	0	0	0	0	0	0	0	0	0
6-Apr-15	0	0	0	0	0	0	0	0	0	0
11-Aug-15	0	0	0	0	0	0	0	0	0	0
21-Apr-16	0	0	0	0	0	0	0	0	0	0
26-Jul-16	0	0	0	0	0	0	0	0	0	0
11-Apr-17	0	0	0	0	0	0	0	0	0	0
21-Aug-17	0	0	0	0	0	0	0	0	0	0

Gas concentrations are measured in per cent volume in air

TABLE D5 - GAS CONCENTRATION AND PRESSURE MEASUREMENTS - GP SERIES PROBES

Date	Probe 97-1	Probe 97-2	Probe 97-3	Probe 97-4	Probe 97-5	Probe 00-06	Probe 00-07
	(SW corner of Site)	(N of Main Pump Station)	(NE of Storage Bldg)	(NE of Main Office)	(N of maintenance Shed)	(Flower bed adjacent to scale house)	(Near Main PS - replaces 97-2))
	Methane (% in air)	Methane (% in air)	Methane (% in air)	Methane (% in air)	Methane (% in air)	Methane (% in air)	Methane (% in air)
6-Aug-97	0	56	12	45	0.03		
11-Aug-97	0.01	55	10	39	0.21		
21-Aug-97	0	54	21	43	0.7		
27-Aug-97	0.02	53	14	43	0.6		
3-Sep-97	0.015	54	15	43	0.7		
8-Sep-97	0.025	54	17	43	0.27		
15-Sep-97	0.03	51	14	44	2.6		
30-Sep-97	0.01	54	11	43	0.55		
26-Sep-97	0.01	52	13	36	1.45		
8-Oct-97	0	54	12	44	0.43		
21-Oct-97	0	55	14	45	0.23		
29-Oct-97	0	55	15	45	0.05		
4-Nov-97	0	54	11	45	0.1		
26-Jan-98	0.01	53	17	43	0		
20-Mar-98	0.05	53	12	42	0.23		
27-May-98	0	52	15	46	0.26		
16-Sep-98	0.05	55	20	48	0.2		
21-Oct-98	0.02	55	15	47	0.36		
10-Dec-98	0.01	59	20	49	0.46		
12-Jan-99	0	51	16	4.4	0.4		
16-Feb-99	0	54	14	3.6	0.65		
18-Mar-99	0.01	48	17	42	0.35		
13-Apr-99	0	49	18	31	0.5		
20-May-99	0	54	14	5	0.45		
16-Jun-99	0.02	51	13	22	0.55		
15-Jul-99	0	53	14	38	0.2		
24-Aug-99	0	54	13	3.6	0.45		
21-Sep-99	0	52	15	2.05	0.5		
14-Oct-99	0	53	17	24	0.4		
23-Nov-99	0	52	23	6	0.6		
27-Jan-00	0	0	20	5	0.4		
16-Feb-00	0	0.05	25	41	0.2		
22-Mar-00	0	0.05	35	46	0.1		
18-Apr-00	0	0	42	4.1	0.3		
21-Jun-00	0	0.05	52	34	0.2		
18-Jul-00	0	0	34	5.5	0.15		
24-Aug-00	0	probe decommiss	20	42	0.45		
11-Oct-00	0	and replaced with	50	46	1.05	47	0
12-Oct-00	0		50	45	0.65	47	0
19-Oct-00	0		39	44	0.4	48	4.85
23-Oct-00	0		50	45	0.1	48	0.55
31-Oct-00	0		51	45	0.05	50	3.7
14-Nov-00	0		43	44	0.15	46	0.8
15-Dec-00	0		49	41	0.05	39	0.55
21-Feb-01	0		10	29	0	0.5	0.2
11-Apr-01	0		0	0.7	0	22	0
20-Jun-01	0		0	0.15	0	0.7	0.5
3-Aug-01	0.01		0	0.05	0	30	0.4
15-Oct-01	0		0.2	0.3	0	0	0.1
4-Dec-01	0.015		26	44	0	54	1.05
14-Jan-02	0		7	0.5	0	39	0.4

TABLE D5 - GAS CONCENTRATION AND PRESSURE MEASUREMENTS - GP SERIES PROBES

AECOM

Date	**Probe 97-1**	**Probe 97-2**	**Probe 97-3**	**Probe 97-4**	**Probe 97-5**	**Probe 00-06**	**Probe 00-07**
	(SW corner of Site)	(N of Main Pump Station)	(NE of Storage Bldg)	(NE of Main Office)	(N of maintenance Shed)	(Flower bed adjacent to scale house)	(Near Main PS - replaces 97-2))
	Methane (% in air)	Methane (% in air)	Methane (% in air)	Methane (% in air)	Methane (% in air)	Methane (% in air)	Methane (% in air)
19-Mar-02	0.05		0	0.05	0	0.5	0.3
15-May-02	0		0.05	0.6	0	19	0
16-Jul-02	0.02		0	0.05	0	0.05	0.1
12-Sep-02	0.1		0.1	0.75	0	22	0.05
18-Nov-02	0		0	1.95	0	53	0
13-Feb-03	0		0.05	0.2	0	1.45	0
17-Apr-03	0		0	0.1	0	0.85	0
19-Jun-03	0.05		0.05	0.45	0	0.45	0
13-Aug-03	0		0.05	0.15	0	0	0
21-Oct-03	1		0	0.05	0	11	0
20-Jul-04	0		0	0	0	2.1	0
17-Sep-04	0		0	1	0	2.9	0
14-Dec-04	0		0	0	0	3.5	0
24-Feb-05	0		0	0	0	1	0
12-May-05	0		0	0	0	2.1	0
28-Jul-05	0		0	0	0	0.3	0
7-Nov-05	0		0	0	0	3.2	0
10-Feb-06	0		0.9	0	0	8.2	0.6
13-Apr-06	0		6.3	0	0	19.3	0.9
6-Sep-06	0		19.2	0	0	58.1	1.3
6-Dec-06	0		4.1	0	0	45.6	0
6-Feb-07	0		3.2	0	0	41.3	0.3
22-May-07	0		15.2	0.1	0	32.3	0
10-Aug-07	0		19.5	0.7	0	37.2	0
20-Nov-07	0		20.1	0	0	47.3	0
12-Mar-08	0		1.3	0	0	28.4	0
25-Jun-08	0		9.3	0	0	19.3	0
17-Sep-08	0		2.1	0	0	14.3	0
18-Dec-08	0		3.1	0	0	9.3	0
10-Sep-09	0		2.1	0	0	9.4	0
24-Dec-09	0		1.9	0	0	13.9	0
6-Mar-10	0		0	20.9	0	61.8	15
10-Aug-10	0.4		54.8	0	0	55.9	1.7
9-Mar-11	0		2.1	0	0	23.5	0.5
16-Jun-11	0		4.3	0	0	33.5	0
25-Aug-11	0		0.4	0	0	43.8	0.1
1-Nov-11	0		1.9	0	0	40.1	0
24-Apr-12	0		1.7	0	0	9.5	0
14-Sep-12	0		1.1	0	0	7.4	0
19-Mar-13	0		2.1	0	0.1	14.5	0.5
13-Aug-13	0.1		0.9	0	0	9.8	0
13-Mar-14	0.1		3.6	0.1	0	16.8	0.9
18-Aug-14	0.3		0.4	0	0	26.8	0
6-Apr-15	1.1		1.6	0	0	6.1	0.3
11-Aug-15	1.3		0.1	0.3	0	9.1	0
21-Apr-16	2.1		1.9	0.8	0	3.7	0.1
26-Jul-16	0.1		0.5	0.6	0	4.3	0
11-Apr-17	2.1		0.4	0.1	0	1.7	0.5
21-Aug-17	0.2		0	0	0	3.4	0

TABLE D6 - METHANE GAS CONCENTRATION READINGS - SOUTH LEACHATE COLLECTION SYSTEM

Date	MH AS % vol	MH BS % vol	MH 1S % vol	MH 2S % vol	MH 3S % vol	MH 4S % vol	MH 5S % vol	MH 5SA % vol	SPS % vol	MH 6S % vol	MH 7S % vol	MH 8S % vol
10-Feb-93	n/a	n/a	0	0	0.15	0.35	0.85	n/a	0.25	2.5	8	18
26-Mar-93	n/a	n/a	0	0	0	0	0.8	n/a	0	0	15	45
29-Apr-93	n/a	n/a	0	0	0	0	0.2	n/a	0	1.75	4.2	10
21-May-93	n/a	n/a	0	0	0	0	0.2	n/a	0	1.5	5	13
21-Jun-93	n/a	n/a	0	0	0	0	0.3	n/a	0.35	2.9	8	20
16-Jul-93	n/a	n/a	0	0	0	0	0	n/a	15	0.3	6	45
10-Aug-93	n/a	n/a	0	0	0	0	0	n/a	20	2.95	25	45
16-Sep-93	n/a	n/a	0	0	0	0	0	n/a	2.7	3.6	18	38
13-Oct-93	n/a	n/a	0	0	0	0	0	n/a	1.4	2.45	12	32
24-Nov-93	n/a	n/a	0	0	0	0	0	n/a	2.45	4.1	18	38
17-Dec-93	n/a	n/a	0	0	0	0	0	n/a	3.7	12	25	40
19-Jan-94	0	0	0	0	0	0	0	0	2.6	8	20	35
11-Feb-94	0	0	0	0	0	0	0	0	0	6	8	25
10-Mar-94	0	0	0	0	0	0	0	0	2.6	0.15	0.75	4.1
19-Apr-94	0	0	0	0	0	0	0	0	0	0	7	0
12-May-94	0.1	0	0	0	0	0	0	0	0	0	6	0
23-Jun-94	0	0	0	0	0	0	0	0	0	0	2.8	0
12-Jul-94	0	0	0	0	0	0	0	0	0	5	7	5
10-Aug-94	0	0	0	0	0	0	0	0	0.5	0	1.45	0.8
16-Sep-94	0	0.1	0	0.25	0.15	0.05	0	0.35	0.85	0.15	15	0.6
12-Oct-94	0	0	0	0	0	0.7	0	10	0	5	0.45	6
11-Nov-94	0.2	0	0	0	0	0.2	0.7	0.55	0.7	0.05	3.95	0.3
14-Dec-94	3.25	0.6	0	0	0	6	0.9	6	3.3	0.2	5	0.4
17-Jan-95	0	0	0	0	0	0	0	0	0.05	0	2.35	0.1
9-Feb-95	0	0	0	0	0	0	0	1.05	0.75	0	1.85	0.025
10-Mar-95	0.9	0	0.35	2.75	0.9	1.75	0.95	58	0.4	3.05	40	1.8
13-Apr-95	0.6	0	0.25	3.1	1.6	16	3.25	56	3.1	2.7	37	7
18-May-95	0	0.55	0.25	0.1	0.3	8	0.1	4.05	1.55	1	52	12
30-Jun-95	0	0	0	0	0.1	33	0.55	48	18	9	43	1.35
20-Jul-95	0	0	0	0	0	43	1.65	52	10	10	37	1.9
21-Sep-95	0	1.2	8	0.2	1	36	0	52	1	0	40	4.85
18-Oct-95	0	2.2	8	1.75	2.6	38	0	54	1.9	0	35	8
22-Nov-95	0.55	0.45	0	0	0.6	0.65	0	0.15	0	0.75	2.5	2.3
21-Dec-95	3.85	1.4	0	0	0	1.45	0	32	40	0.8	36	2.15
9-Jan-96	1.65	0	0	0	0	38	0.15	53	35	4.6	36	1.2
8-Feb-96	1.85	0	0	0	0.05	47	49	50	0.05	18	51	5.25
8-Mar-96	5	0	0	0.05	0	31	0	45	0	11	31	10
18-Apr-96	0.01	0	2.5	0.2	0	0.35	0.7	0.3	0.05	0.95	45	1.25
16-May-96	5.5	0	0	0	18	0.7	0.65	0.4	0.1	4.25	50	2
16-Jul-96	2.3	1	0	0	0	31	0.5	0.35	0	1.4	37	2.75
26-Sep-96	1	0.7	0.45	0	0	45	1.9	49	23	2.5	48	2.9
1-Nov-96	0.07	0.05	0	0	0	42	0.5	45	0.05	0.4	35	1.2
28-Nov-96	0.07	0	0.02	2.25	1.05	1.55	0.65	48	0.04	3.1	46	1.3
13-Dec-96	0.45	0.4	0.25	0	0	46	0.25	50	33	0.65	46	0.95
27-Jan-97	0.1	7	0.15	0	0.05	37	0.15	54	36	0.85	31	0.7
11-Feb-97	5	0.35	0	0	0	5.5	0	10	0.05	0.7	43	0.7
12-Mar-97	4	0.2	0	0	0	4.5	0	2	0	0.65	57	0.5
30-Apr-97	16	0.15	0	0	0	42	1	52	0	9	46	2.3
27-May-97	0	2.15	0.4	0.15	0	41	0.65	0.05	0.05	2.9	28	0.05
14-Aug-97	0	4.65	0	1.15	0	2	0	33	8	1.35	26	1.25
30-Sep-97	0	10	0.6	0.45	0.75	8	0	40	5.1	0	0.05	0
18-Nov-97	0	9	0.6	0.2	0.55	6	0	35	5.4	0	0.05	0

Gas concentrations are measured in per cent volume in air

TABLE D6 - METHANE GAS CONCENTRATION READINGS - SOUTH LEACHATE COLLECTION SYSTEM

Date	MH AS % vol	MH BS % vol	MH 1S % vol	MH 2S % vol	MH 3S % vol	MH 4S % vol	MH 5S % vol	MH 5SA % vol	SPS % vol	MH 6S % vol	MH 7S % vol	MH 8S % vol
26-Jan-98	19	0	0.15	0	0	44	0.2	49	39	1.85	35	0.65
20-Mar-98	26	0.15	0	0	3.6	44	0.65	52	0	22	24	0.05
27-May-98	18	0.05	0	0	2.75	21	0.5	41	0	14	15	0.05
16-Sep-98	9	0	0	0	3.75	23	0.45	35	0	18	11	0
21-Oct-98	0	1.1	0	0.1	0.65	7	0.5	41	0.75	2.4	8	0
10-Dec-98	0.6	0	0	0.05	0	10	0.4	51	0.05	2.25	0.1	0
12-Jan-99	0	7	0.5	0.1	0.15	1	0	32	0	0	0.05	0
16-Feb-99	0	0	0.05	0	0.35	3	0	22	0	0	0.2	0
18-Mar-99	0	3	0	0	0.6	0.05	0	19	0	0	0.1	0
13-Apr-99	0	0.05	0	0	0.45	2	0	27	0	0	0.05	0
20-May-99	0	0	0	0	0.1	3	0	24	0	0	0.15	0
16-Jun-99	0	0	0	0	0.05	0.05	0	19	0	0	0.05	0
24-Jul-99	0	0	0	0	0	0	0	25	0	0	0.05	0
18-Aug-99	0	0	0	0	0	0	0	14	0	0	0	0
21-Sep-99	0	0	0	0	0	0	0	12	0	0	0	0
14-Oct-99	0	0	0	0	0	0	0	9	0	0	0	0
23-Nov-99	0	0	0	0	0	0	0	16	0	0	0	0
27-Jan-00	0	0	0	0	0	0	0	21	0	0	0	0
16-Feb-00	0	0	0	0	0	0	0	15	0	0	0	0
22-Mar-00	8	0.05	0	0.05	0	12	0.05	34	0.1	0.35	24	0.5
18-Apr-00	4.5	0.1	0	0	0	4.5	0.15	36	0.45	0.05	4	0.3
21-Jun-00	9	0.05	0	0	0.05	2.85	0.05	29	0.35	0.35	2	0
18-Jul-00	9	0.1	0	0	0	17	0.1	43	0.3	0.4	19	0.5
24-Aug-00	8	0	0.05	0	0	3.95	0.1	51	0	0.5	23	0.5
19-Oct-00	9	0.1	0	0.05	0.05	16	0.05	52	0.4	0.4	21	0.45
14-Nov-00	10	0.1	0.05	0.05	0.05	19	0.15	37	0.45	0.45	28	0.45
15-Dec-00	7	0	0	0	0	32	0.05	32	0.15	0.15	22	0.05
21-Feb-01	0	0.05	0	0.05	0	0.55	0.05	41	0.05	0.1	25	0.1
11-Apr-01	0.1	0	0	0	0.05	12	0.05	49	0	0.05	18	0.1
20-Jun-01	0.05	0	0	0	0.05	14	0.1	38	0.05	0.05	19	0.1
3-Aug-01	0.1	0	0	0.05	0.05	29	0.2	49	0	0.05	25	0.1
15-Oct-01	0.05	0.05	0	0	0.05	10	0.1	56	0	0.05	13	0.05
4-Dec-01	0	0	0	0	0	12	0.05	62	0	0.05	10	0.05
14-Jan-02	0.05	0	0	0	0.05	15	0.1	72	0.05	0.1	16	0.05
19-Mar-02	0.1	0	0	0	0	12	0.15	42	0.15	0.1	18	0.3
15-May-02	0.05	0	0	0	0	9	0.05	36	0.05	0.05	24	0.05
16-Jul-02	0.1	0	0	0	0	11	0.05	45	0.05	0.1	19	0.1
12-Sep-02	0	0	0	0	0	8	0.1	55	0	0.1	16	0.05
18-Nov-02	0.1	0.05	0	0	0	14	0.1	49	0	0.05	22	0.05
13-Feb-03	0.05	0	0	0	0	11	0.05	30	0	0.05	12	0.1
17-Apr-03	0.1	0	0	0	0	9	0.1	47	0	0.1	9	0.05
19-Jun-03	0.05	0	0	0	0	8	0	31	0.05	0.1	18	0.05
13-Aug-03	0.05	0	0	0	0	10	0.05	64	0	0.05	13	0.05
21-Oct-03	0.05	0	0	0	0	9	0.05	89	0	0.05	19	0
20-Jul-04	32.1	7.8	2.1	0.2	4.3	39.4	48.3	43.3	0.1	22.3	37.8	33.4
17-Sep-04	49.4	9.5	3.2	0	19.1	61.3	59.3	41.3	2.3	29.3	34.0	28.4
14-Dec-04	52.4	11.7	1.5	0	22.9	65.6	62.6	47.1	9.9	27.8	40.0	25.9
24-Feb-05	8.9	4.6	0	0	2.1	22.8	21.4	48.6	0	32.8	34.6	31.2
12-May-05	9.5	5.4	0.9	0	0	25.3	28.6	47.3	0	24.3	31.2	26.3
28-Jul-05	7.4	6.1	1.3	0.1	0.3	41	43	49.4	0	16.3	27.4	29.1
7-Nov-05	7.6	3.1	0.3	0.1	0	34.5	39.3	41.2	0.7	25.7	33.8	29.2
10-Feb-06	0	0	0	0	0.1	17.4	3	31.4	0	3.1	52.3	3.2

TABLE D6 - METHANE GAS CONCENTRATION READINGS - SOUTH LEACHATE COLLECTION SYSTEM

Date	MH AS % vol	MH BS % vol	MH 1S % vol	MH 2S % vol	MH 3S % vol	MH 4S % vol	MH 5S % vol	MH 5SA % vol	SPS % vol	MH 6S % vol	MH 7S % vol	MH 8S % vol
13-Apr-06	0	0.1	0	0	0.3	0.7	3.2	1.2	0	2.1	17.3	1.9
6-Sep-06	0	0	0	0	1.1	34.3	20.7	0	0	7.1	51.9	4.5
6-Dec-06	0	0	0	0	0.6	23.1	11.2	0	0	9.2	21.4	1.2
6-Feb-07	0	0	0	0	0	15.3	17.2	11.3	0	4.3	48.2	3.2
22-May-07	0	0	0	0	0	8.4	16.2	41.2	0	2.1	49.7	1.1
10-Aug-07	0	0	0	0	0	10.5	12.3	48.4	0	0.4	53.4	0.8
20-Nov-07	0	0	0	0	0	4.3	10.4	47.5	0	0.6	45.3	1
12-Mar-08	0	0	0	0	0	7.3	9.5	41.3	0	3.1	45.3	2.1
25-Jun-08	0	0	0	0	0	5.1	8.2	31.9	0	0	31.1	0
17-Sep-08	0	0	0	0	0	2.1	4.3	44.5	0	1.8	32.7	1.9
18-Dec-08	0	0	0	0	0	1.6	3.3	41.3	0	0	22.4	3.4
10-Sep-09	0	0	0	0	0	1.5	2.2	22.4	0	0	41.1	0
24-Dec-09	0	0	0	0	0	0	4.3	37.3	0	1.8	21.8	1.9
6-Mar-10	0	0	0	0	0	15.3	17.2	11.3	0	4.3	48.2	3.2
10-Aug-10	0	0.1	0	0	0.2	26.8	12.2	7.7	0	3.5	28.4	0.2
9-Mar-11	0	0	0	0	0	1.4	0.4	0	0	0	4.9	0.5
16-Jun-11	0	0	0	0	0	0	0.2	0	0	0	8.2	0.9
25-Aug-11	0	0	0	0	0	0	0	0.3	0	0	6.1	3.8
1-Nov-11	0	0	0	0	0	0	0	0	0	0	2.5	0
24-Apr-12	0	0	0	0	0	0	0.1	0	0	0	2.4	0.4
14-Sep-12	0	0	0	0	0	0	0	0	0	0	1.7	0.3
19-Mar-13	0	0	0	0	0	1.6	0.4	0	0	0	5.3	0.5
13-Aug-13	0	0	0	0	0	0	0	0	0	0	1.4	0.3
13-Mar-14	0	0	0	0.2	0	1.6	0.4	0	0	0	2.3	0.2
18-Aug-14	0	0.2	0	0	0	0	0	0	0.2	0	0.9	0.1
6-Apr-15	0	0	0	0	0	0.6	0	0	0	0	0.9	0.1
11-Aug-15	0	0.6	0	0	0	0	0	0	0	0	0.5	0
21-Apr-16	0	0	0	0	0	0	0	0	0	0	0.3	0.4
26-Jul-16	0	0.3	0	0	0	0	0	0	0	0	0.1	0.3
11-Apr-17	0	0	0	0	0	0	0	0	0	0	0.5	1.6
21-Aug-17	0	0	0	0	0	0	0	0	0	0	0	0.7

Gas concentrations are measured in per cent volume in air

TABLE D7 - METHANE GAS READINGS - WEST COLLECTION SYSTEM AND MAIN STATION

Date	MPS % vol	OMPS % vol	MH 1W % vol	MH 2W % vol	MH 3W % vol	MH 4W % vol	MH 5W % vol	WPS % vol	MH 6W % vol	MH 7W % vol	MH 8W % vol	MH 9W % vol
10-Feb-93	0	0	0	0	0	0	0.25	0	0.6	0.2	0.35	50
26-Mar-93	0	0	0	0	0	0	0.7	0	0	0	16	45
29-Apr-93	0	0	0	0	0	0	0	0	0	0	48	55
21-May-93	0	0	0	0	0	0	0	0	0	0	48	55
21-Jun-93	0	0	0	0	0	0	0	0.3	0	0	25	55
16-Jul-93	0	0	0	0	0	0	0.35	0	10	35	50	55
10-Aug-93	0	0	0	0	0	0	1.95	5	10	35	55	55
16-Sep-93	0	0	0	0	0	0	0.9	2.2	2.8	4.45	45	55
13-Oct-93	0	0	0	0	0	0	0	0.65	2	18	35	55
24-Nov-93	0	0	0	0	0	0	0	0.35	1.6	12	50	50
17-Dec-93	0	0	0	0	0	0	0	0.8	18	25	50	50
19-Jan-94	0	0	0	0	0	0	0	0.4	15	17	50	48
11-Feb-94	0	0	0	0	3.9	0.8	0.65	0.45	15	5	50	55
10-Mar-94	0	0	0	0	0	0	0	0.85	0	3.6	6	6
19-Apr-94	0	0	0	0	0	0	0	0.8	0	17	8	25
12-May-94	0	0	0	0	0	0	0.75	2.75	0.05	2.95	5	25
23-Jun-94	0	0	0	0	0	0	0	0.5	0	0	0	13
12-Jul-94	0.85	0	0	0	0	0	0	0.1	0	0.05	0.2	8
10-Aug-94	0	0.1	0	0	0	0	0	0.1	0	0	8	15
16-Sep-94	0.05	0.2	0	0	0	0	0	0.55	0	0	2.45	5
12-Oct-94	0	0	0	0	0	0	0	0.45	0	0.2	3.15	10
11-Nov-94	0.15	0.05	0	0	0	0	0	0.05	0	0.1	3.75	5
14-Dec-94	0	0	0	0	0	0	0	0.85	0	0.9	4	18
17-Jan-95	0.4	0	0	0	0	0	0	0.95	0.65	0.15	0.85	5
9-Feb-95	0.2	0	0	0	0	0	0	0.85	0	0	1.05	5
10-Mar-95	0	0	0	0	0	0	0.65	1.25	2.1	0.6	25	52
13-Apr-95	0	0	0	0	0	0	2.55	1.1	4.4	9	22	57
18-May-95	0.35	0.45	0	0	0	0	0	1.4	0	0	1.4	60
30-Jun-95	0.15	0.1	0	0	0	0	0.5	1	0.15	0.3	1	1.9
20-Jul-95	1.8	0.35	0	0	0	0	0.35	1.45	0.45	0.35	1.45	2.85
21-Sep-95	0	0	0	0	0	0	0.4	0.3	1.1	0.6	0.3	50
18-Oct-95	0	0	0	0	0	0	0	0.4	1.5	2.3	0.4	54
22-Nov-95	0.1	0.45	0	0	0	0	0.9	0	0.4	0.6	0	0.9
21-Dec-95	0	0.65	0	0	0	0	1.2	0	3	0.2	0	0.85
9-Jan-96	0.2	2.75	0	0	0	0.55	2.45	4.95	5	1.1	4.95	1.6
8-Feb-96	0.55	0.6	0	0.4	1.25	2.25	12	0	5.3	10	0	20
8-Mar-96	0.05	3.95	0.05	0.05	0.4	3.55	2.55	0	0.55	0.6	0	19
18-Apr-96	0.35	0.05	0	0	0	0.35	0.55	0	0.1	0.35	0	0.05
16-May-96	0.15	0.65	0	0	0	0.05	0.35	0	0.15	0.1	0	49
16-Jul-96	0.2	0.2	0	0	0	0.05	1.25	1.05	4.45	0.4	1.05	40
26-Sep-96	0.85	1.45	0	0	0	0.15	1.1	1.1	0.55	0.25	1.1	50
1-Nov-96	0.35	4.45	0	0	0	0.4	1.1	3.35	0.15	0.15	0	49
28-Nov-96	0	0	0	0	0	0.6	1.4	2.35	0.9	28	51	
13-Dec-96	1.2	0.1	0	0	0	0.4	0.35	0	0	0.05	0	50
27-Jan-97	0.95	0.05	0	0	0	0.45	0.3	0	0	0.1	0	52
11-Feb-97	0.1	2.3	0	0	0	0.3	1.55	0	0.45	0.25	0	2.25
12-Mar-97	0	1.5	0	0	0	0.1	0.75	0	0.1	0.1	0	2.55
30-Apr-97	0	0.35	0	0	0	0.2	3.05	0	0.7	1.35	0	51
27-May-97	0.2	1.9	0	0	0	0	0	0	0	0.05	0	50

TABLE D7 - METHANE GAS READINGS - WEST COLLECTION SYSTEM AND MAIN STATION

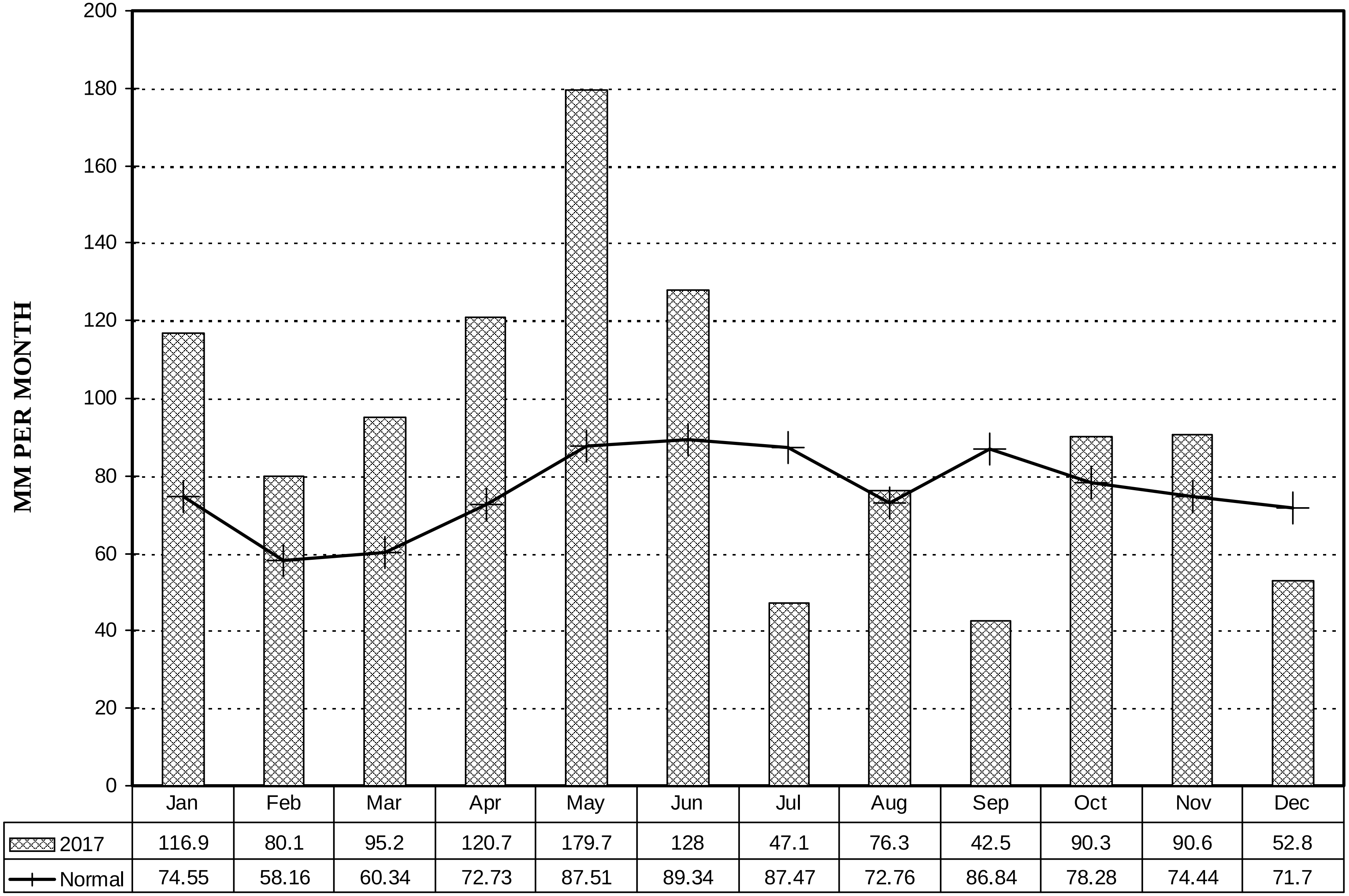
Date	MPS % vol	OMPS % vol	MH 1W % vol	MH 2W % vol	MH 3W % vol	MH 4W % vol	MH 5W % vol	WPS % vol	MH 6W % vol	MH 7W % vol	MH 8W % vol	MH 9W % vol
14-Aug-97	0	0.5	0	0	0	0	0	0	0	0.05	0	49
30-Sep-97	0	0.15	0	0	0	0	0	0	0	0	0	0
18-Nov-97	0	0.05	0	0	0	0	0	0	0	0	0	0
26-Jan-98	0	n/a	0	0	0	0	0	0	0	0.05	0	51
20-Mar-98	0.2	1.4	0	0	0	0	0	0.5	9	0.05	0.5	50
27-May-98	0.1	1.8	0	0	0	0	0	0.25	2	0	0.25	55
16-Sep-98	0	0.2	0	0	0	0	0	0.15	1	0	0.15	75
21-Oct-98	0	0.1	0	0	0	0	0	0	0.05	0	0	60
10-Dec-98	0	0.1	0	0	0	0	0	0.05	0	0	0.05	65
12-Jan-99	0	0	0	0	0	0	0	0	0	0	0	0
16-Feb-99	0	0	0	0	0	0	0	0.05	0	0	0.05	0
18-Mar-99	0	0	0	0	0	0	0	0	0	0	0	0.1
13-Apr-99	0	0	0	0	0	0	0	0	0	0	0	0.05
20-May-99	0	0	0	0	0	0	0	0	0	0	0	0.05
16-Jun-99	0	0	0	0	0	0	0	0	0	0	0	0.05
24-Jul-99	0	0	0	0	0	0	0	0	0	0	0	0
18-Aug-99	0	0	0	0	0	0	0	0	0	0	0	0.05
21-Sep-99	0	0	0	0	0	0	0	0	0	0	0	0
14-Oct-99	0	0	0	0	0	0	0	0	0	0	0	0
23-Nov-99	0	0	0	0	0	0	0	0	0	0	0	0
27-Jan-00	0	0	0	0	0	0	0	0	0	0	0	0
16-Feb-00	0	0	0	0	0	0	0	0	0	0	0	0
22-Mar-00	0	0	0	0	0	0	0	0	2	0.7	0	46
18-Apr-00	0	0	0	0	0	0	0	0	3.45	0.45	0	46
21-Jun-00	0	0	0	0	0	0	0	0	3.95	0.6	0	39
18-Jul-00	0	0	0	0	0	0	0	0	2.6	0.35	0	0.85
24-Aug-00	0	0	0	0	0	0	0	0	4.1	0.6	0	29
19-Oct-00	0	0	0	0	0	0	0	0	3.7	0.5	0	39
14-Nov-00	0	0	0	0	0	0	0.5	0	3.3	0.75	0	42
15-Dec-00	0	0	0	0	0	0	0.1	0	3.6	0.45	0	4
21-Feb-01	0	0	0	0	0	0	0	0	1.15	0.1	0	31
11-Apr-01	0	0	0	0	0	0	0.05	0	0.5	0	0	65
20-Jun-01	0	0	0	0	0	0	0.05	0	0.45	0.05	0	71
3-Aug-01	0	0	0	0	0	0	0	0	0.3	0.05	0	67
15-Oct-01	0	0	0	0	0	0	0.05	0	0.2	0.05	0	58
4-Dec-01	0	0	0	0	0	0	0	0	0.1	0	0	45
14-Jan-02	0	0	0	0	0	0	0	0	0.75	0.05	0	64
19-Mar-02	0	0	0	0	0	0	0.1	0	0.85	0.4	0	71
15-May-02	0	0	0	0	0	0	0	0	0.7	0	0	61
16-Jul-02	0	0	0	0	0	0	0	0	1.7	0.05	0	77
12-Sep-02	0	0	0	0	0	0	0	0	0.75	0.05	0	81
18-Nov-02	0	0	0	0	0	0	0	0	0.55	0	0	72
13-Feb-03	0	0	0	0	0	0	0	0	0.35	0	0	89
17-Apr-03	0	0	0	0	0	0	0	0	0.55	0	0	91
19-Jun-03	0	0	0	0	0	0	0	0	0.85	0	0	81
13-Aug-03	0	0	0	0	0	0	0	0	0.65	0	0	75
21-Oct-03	0	0	0	0	0	0	0	0	0.45	0	0	64
20-Jul-04	0	0	0	0	0	0	0	0	0	0	0	0
17-Sep-04	0	0	0.1	0	0	0	0	0	0	14.2	41.9	54.8
14-Dec-04	0	0	0.6	0	0	0	0	0	0	16.7	42.7	51.6

TABLE D7 - METHANE GAS READINGS - WEST COLLECTION SYSTEM AND MAIN STATION

Date	MPS	OMPS	MH 1W	MH 2W	MH 3W	MH 4W	MH 5W	WPS	MH 6W	MH 7W	MH 8W	MH 9W
	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol	% vol
24-Feb-05	0	0	0	0	0	0	0	0	0	0	37.2	53.4
12-May-05	0	0	0	0	0	0	0	0	0	2.1	32.4	48.7
28-Jul-05	0	0	0	0	0	0	0	0	0	0	29.4	47.8
7-Nov-05	0	0	0	0	0	0	0	0	0	3.3	25.7	51.1
10-Feb-06	0	0	0	0	0	0	0	0	0	0	0.3	5.2
13-Apr-06	0	0	0	0	0	0	0	0	0	0	0.9	3.9
6-Sep-06	0	0	0	0	0	0	0	0	0	0	1.8	2.7
6-Dec-06	0	0	0	0	0	0	0	0	0	0	1.7	1.2
6-Feb-07	0	0	0	0	0	0	0	0	0	0	0.6	2.3
22-May-07	0	0	0	0	0	0	0	0	0	0	0	4.7
10-Aug-07	0	0	0	0	0	0	0	0	0	0	0	5.9
20-Nov-07	0	0	0	0	0	0	0	0	0	0	0	5.2
12-Mar-08	0	0	0	0	0	0	0	0	0	0	0	31.2
25-Jun-08	0	0	0	0	0	0	0	0	0	0	0	8.1
17-Sep-08	0	0	0	0	0	0	0	0	0	0	0	5.4
18-Dec-08	0	0	0	0	0	0	0	0	0	0	0	11.2
10-Sep-09	0	0	0	0	0	0	0	0	0	0	0	1.2
24-Dec-09	0	0	0	0	0	0	0	0	0	0	0	3.1
6-Mar-10	0	0	0	0	0	0	0	0	0	0	0.6	2.3
10-Aug-10	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0.1
9-Mar-11	0	0	0	0	0	0	0	0	0	0	0.1	0
16-Jun-11	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-11	0	0	0	0	0	0	0	0	0	0	0	0
1-Nov-11	0	0	0	0	0	0	0	0	0	0	0	0
24-Apr-12	0	0	0	0	0	0	0	0	0	0	0	0
14-Sep-12	0	0	0	0	0	0	0	0	0	0	0	0
19-Mar-13	0	0	0	0	0	0	0	0	0	0	0.1	0
13-Aug-13	0	0	0	0	0	0	0	0	0	0	0	0.1
13-Mar-14	0	0	0	0	0	0	0	0	0	0	0.4	1.2
18-Aug-14	0	0	0	0	0	0	0	0	0	0	0.1	0.6
6-Apr-15	0	0	0	0	0	0	0	0	0	0	0.9	0.2
11-Aug-15	0	0	0	0	0	0	0	0	0	0	0.3	1.6
21-Apr-16	0	0	0	0	0	0	0	0	0	0	0.6	0.4
26-Jul-16	0	0	0	0	0	0	0	0	0	0	0	2.1
11-Apr-17	0	0	0	0	0	0	0	0	0	0	0.4	0
21-Aug-17	0	0	0	0	0	0	0	0	0	0	0	0.6

Appendix E

Detailed Water Budget – 2017



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
▨ 2017	116.9	80.1	95.2	120.7	179.7	128	47.1	76.3	42.5	90.3	90.6	52.8
—+— Normal	74.55	58.16	60.34	72.73	87.51	89.34	87.47	72.76	86.84	78.28	74.44	71.7

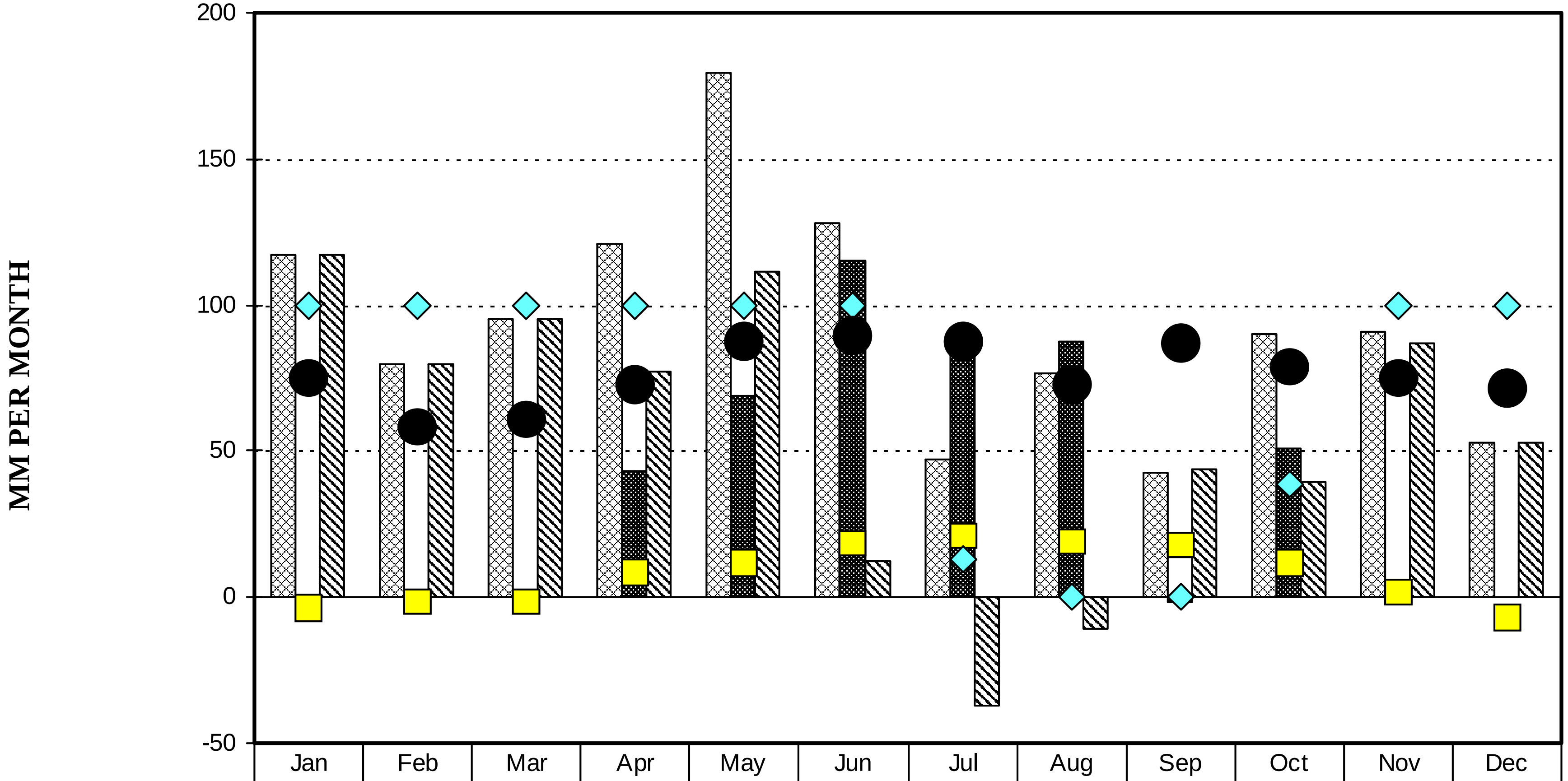
AECOM

Closed Eastview Road Landfill Site

Precipitation Comparison, 2017

FIGURE
E-1

60565850
13 Precip Data



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
▨ Precipitation	116.9	80.1	95.2	120.7	179.7	128	47.1	76.3	42.5	90.3	90.6	52.8
■ Evapotranspiration	0	0	0	43.5	68.7	115.4	84.1	87.3	-1.5	51	3.8	0
▧ Surplus Water	116.9	80.1	95.2	77.2	111	12.6	-37	-11	44	39.3	86.8	52.8
🟨 Temperature	-4	-1.9	-1.6	8.5	11.4	18.1	20.4	18.5	17.7	11.5	1.3	-6.9
◇ Soil Moisture	100	100	100	100	100	100	13	0	0	39	100	100
● Normal Precipitation	74.55	58.16	60.34	72.73	87.51	89.34	87.47	72.76	86.84	78.28	74.44	71.7

AECOM

Closed Eastview Road Landfill Site

Detailed Water Balance

Guelph Lakes Dam, 2017

FIGURE
E-2

60565850
13 Precip Surplus Data

Appendix F

Interim Assessment for Additional Hydrogeological Investigation

AECOM
105 Commerce Valley Drive West, Floor 7 905 886 7022 tel
Markham, ON, Canada L3T 7W3 905 886 9494 fax
www.aecom.com

December 10, 2015

Mr. Bill Shields
Supervisor of Governance & Compliance
Solid Waste Resources
Environmental Services Department
City of Guelph
59 Carden Street
Guelph, ON N1H 3A1

Dear: Mr. Shields:

Project No: 60339708

Regarding: Interim Assessment for Additional Hydrogeological Investigation on Monitor Replacement to the West of the Site with Respect to Chloride at Locations 37/50, and Follow-Up Assessment on Ministry of the Environment and Climate Change Comments, Closed Eastview Landfill Site, City of Guelph

As recommended by the Ministry of the Environment and Climate Change (MOECC) and agreed upon by the City, replacement of location 37 with a properly constructed monitor[1] for the deep and shallow wells was completed. This included the decommissioning of the two old wells. It was also proposed that a shallow well should be installed at former location 92, however, this location had to be decommissioned due to the development construction west of the site. As this was the case, and in consultation with the MOECC, this location was moved further north and away from this development area. These locations, completed in late 2011 and early 2012, are denoted as 37R and 96 and are shown on Figure 1. Upon completion, these locations were then included in the monthly water level and four times per year groundwater monitoring program. Monitoring of these locations has now been ongoing for over a full three year period. The borehole logs for these locations are attached.

Further to the above, the MOECC groundwater technical reviewer continued to express concern over the bedrock shallow groundwater flow and overall bedrock geological model for the site. The most recent concern was related to the downward gradient between the upper and lower bedrock aquifers and the potential this may be the cause of the groundwater flow pattern at the site. Based on these concerns, the geological model was re-visited, specifically as it relates to the underlying bedrock which is provided below. Also, included is a further assessment of the chloride levels as it relates to chloride concentrations observed at the western property boundary based on the most recent data collected from the replacement monitors and the assessment of the geological model.

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[1] *Original was open hole water well construction.*

Background

The current geological model for the site was generally related to the landfill, underlying overburden (outwash beneath the waste, upper and lower Till) and the shallow bedrock (Eramosa Member) also referred to as the upper aquifer. It was understood at that time that a bedrock aquitard and deep bedrock unit (Amabel, now the Gasport Formation) was present regionally beneath the site. The deep bedrock is referred to as the lower aquifer and is the water supply aquifer for the City. This model is shown schematically on Figure 2 and depicts the geology and interpreted ground water flow pattern within the units (horizontal or vertical). Larger flow arrows depict higher flow and the small arrows depict lower flow through these units.

Generally, leachate generated within the waste is expected to move down into the underlying outwash (consisting of sand, silty sand, sand and gravel) and then predominately move horizontally, which is ultimately intercepted and collected by the Perimeter Leachate Collection and Containment System (PLCCS). Based on the assessment of the PLCCS, it does collect a significant amount of groundwater flow from beneath the site as discussed in the Annual Reports. Although this is the case, the measured groundwater table and upper bedrock ground water levels indicate that there is a downward gradient through the till. Studies completed in the past showed that this till was very dense and had a very low permeability. It was concluded that although there will be some vertical flow to depth within the till, it was expected to be low, at around a few centimeters per year. Ongoing assessment of the vertical gradients as completed in the annual reports indicates that this flow is around 2 to 3 cm per year. Once any groundwater reaches the shallow bedrock, it is expected to move horizontally due to a much higher permeability. Predominate horizontal flow would also be expected in the upper bedrock as it is a sedimentary dolostone rock which is horizontally bedded. Although no site specific studies were completed, it is known that there is an aquitard at the base of the shallow bedrock. Based on other groundwater studies completed for the City, it is not expected that any significant vertical groundwater flow is occurring through this aquitard downwards to the lower bedrock. Flow in the lower bedrock is also expected to be significantly higher and also horizontal.

This overall geological model concluded that should any minor effects migrate through the till and reach the shallow bedrock, they would be diluted due to the higher flow in this unit. Further, based on this and the presence of the aquitard, any potential of impacts migrating towards the lower bedrock would not be expected.

Further to the above, the groundwater flow in the bedrock was found to be contradictory to the regional model, which interpreted flow to be south westerly, whereas flow on site appeared to be radially in to the site and then directed south. As well, actual measured water level in in the bedrock monitors also did not match that which was modelled. An interpretation of the bedrock topography was completed at that time which suggested that a bedrock low feature was trending south through the site and that it appeared that the upper bedrock groundwater flow was following this feature. Additional monitors, completed along the southern boundary in the early 2000's, continued to suggest that this flow pattern existed. However, based on the chloride issue at the western boundary, the MOECC suggested that the flow interpretation could be different with some potential flow to the west. Additional monitoring locations in this area were completed in 2007 to better delineate the groundwater flow in the bedrock as well as water quality with respect to chloride, which again suggested that the current flow pattern was still viable. As well, a refinement of the bedrock topography was completed at this time and it was still suggested that flow was into the site from the west as the bedrock elevation contact increased in this direction.

Current Geological Conditions and Investigation

Geological Model and Bedrock Water Levels

As per the MOECC comments, a further review of the geological conditions was completed including the deep bedrock (lower aquifer). No further review of the geological model was considered for the shallower geology as there were no changes. Figure 3 is a regional plan of the landfill including the surrounding water wells in the area. Based on the existing borehole locations and the inclusion of the water wells, cross-sections (Figure 4 to 8) as shown on Figure 3 were completed. Based on available geological data from the deep wells at the site and a review of the water well records, the approximate depth of the Vinemount Member was interpreted. It is this member which is considered the aquitard and has been commonly denoted in the well records and boreholes as being dark grey to black, with a higher shale content or shaly dolostone. Water levels measured in November 2014 at the bedrock monitors in the upper and lower aquifers along with the screened interval are illustrated on these cross sections. For reference, where applicable, the water table was also provided on the cross sections. Selected bedrock water level elevations are attached in Table 1.

The cross sections were completed along Speedvale Ave (A-A') to the north, Eastview Road to the south (B-B'), Watson Road to the east (C-C'), along the western boundary of the landfill (D-D') and further west of the landfill (E-E'). Overall, where noted, the Vinemount Member was found to be very consistent across the area with a bottom elevation at around 310 mASL, although the total thickness did appear to vary between 3 to 5 m. On site boreholes that intersected the upper portion of Vinemount indicate that there may be a transition zone present, which may account for the apparent variation in thickness. Screen intervals at the monitor in the shallow bedrock generally appear to be within a similar elevation range across most of the site, with the exception of monitors along Watson Road (Figure 7) where monitor 54-I is generally higher. As stated, measured water levels are plotted on the cross sections. At locations that had a water table level that were plotted, the measurable downward gradients to the shallow bedrock are apparent, as expected.

As part of the recent drilling and monitor replacement, both new locations had a similar shallow monitor installed along with a deep monitor in the shallow bedrock. The screen zones at these locations are on the cross sections (Figures 7 and 8) for 37R and 96, respectively. As commented on by the MOECC, there is a measured downward gradient at location 96 between the shallow and deeper monitor. Although this may be the case, minor or no change in water level between the shallow and deeper monitor are noted at 37R. This is best demonstrated on Figure 9, which illustrates the groundwater elevation trends at these locations since early 2012. Upon review of the cross section, with the inferred Vinemount, it appears that at location 37R, the deeper monitor was screen in the lower portion of the shallow bedrock slightly into the Vinemount, whereas due to the actual bedrock topographical contact at location 96, the deeper monitor was screen and seal in the lower portion of Vinemount and may be connected to the underlying Goat Island Dolostone (forms upper portion of the lower bedrock). Based on groundwater elevation trends, there does not appear to be any downward gradients within the shallow bedrock as observed at location 37R and the apparent difference in water levels at location 96 is most likely a reflection of the measured gradient across the Vinemount Member (aquitard).

With respect to the deep bedrock (lower aquifer), Figure 4 and 5 (cross sections) show the bedrock water levels measured in November 2014 at location 90 and 16, respectively. These figures illustrate the observed downward gradients across the Vinemount aquitard at these locations between the shallow bedrock (upper aquifer) and deep bedrock (lower aquifer). These downward gradients are best demonstrated on Figure 10 which illustrates the groundwater elevation trend at both locations since installation in 2003. From the measured water levels shown on these cross sections, although the downward gradients exist, the head levels in the deep bedrock (lower Aquifer) are found to be measured above the Vinemount Member (aquitard). Further, as observed on Figure 10, there has been some significant water level fluctuations in the lower aquifer related to pumping as well. During this time that, although the maximum and minimum measured head different between the upper and lower aquifer was between 21.7 to 26 m (23.3 m average) and 23.8 to 30.4 m (25.5 m average) at locations 16 and 90, respectively, there was very little variation in the head levels in the upper aquifer. In fact, during the periods when greater fluctuation were observed, the head levels in the upper aquifer continued to follow seasonal trends with maximum changes observed of between about 1.5 to 2 m as observed historically. Based on the current data, which shows that significant head differences are measured between the upper and lower bedrock along with only seasonal trends observed in the upper aquifer, this assessment continues to demonstrate that that the Vinemount Member (aquitard) is acting as a good barrier to minimize overall downward flow to the lower aquifer. As well, if the aquitard were less permeable, it would allow greater downward groundwater flow which would results is smaller head differences (i.e., groundwater elevations would become similar in the upper and lower aquifer).

It is recommended that ongoing water level monitoring continue to confirm the current trends continue.

Bedrock Topography and Groundwater Flow

With the completion of the replacement location 96, it was found that the bedrock topographical contact was about 6 to 7 m lower than the contact at other locations in the area (such as former 92 and 37R). As well, the water levels were also much lower at 96-II than the other shallow bedrock monitors along the western boundary, which could possibly suggest some flow to the west. To better address this, a re-evaluation of the bedrock surface topography was completed on a more regional scale using all available water wells in the area and the existing landfill bedrock locations, including the recently completed location 96. This revised bedrock topography interpretation is illustrated on Figure 11 on the regional scale and on Figure 12 on a site specific scale. As presented and discussed at a meeting with the MOECC groundwater reviewer on October 27, 2015, the topographical bedrock surface interpretation still indicates that there appears to be an incised bedrock low through the site but it now inferred to be more easterly into the site and then south easterly based on the inclusion of the bedrock contact at location 96. This incised low is inferred to continue to the southeast based on the drop in the bedrock elevation contact as observed at water wells 6701108. It was put forth by the MOECC groundwater reviewer that the bedrock topography to the west, may be just a local low in the bedrock, however, it was discussed that the current interpretation would be more viable geologically as an erosional feature.

Based on topographical interpretation, the shallow bedrock groundwater flows were re-visited to include the water level from 96-II. Figures 13 and 14 represent the revised bedrock groundwater flow in May and November 2014. As illustrated, the inferred flow pattern generally follows the bedrock topography as would be expected.

Current Water Quality Assessment Western Boundary

Background

As identified in 1994/early 1995, the chloride concentrations in former 37-I, and to a lesser degree in 50-I, began to noticeably increase. The change in water quality at these locations (i.e., chloride), was not considered to be landfill related but was most likely from another unidentified source as it was interpreted that groundwater flow was into the site in this area. As these concentrations continued to increase, and in the case of 37-I significantly increase, further investigations were completed in this area as requested by the MOECC to better address concerns that a possible alternate flow to the west could also be interpreted. The finding from these investigations was provided in the letter report "**Interim Assessment for Additional Hydrogeological Investigation on Increasing Chloride at Locations 37/50, Closed Eastview Landfill Site, City of Guelph, dated June 15, 2010".**

The major conclusions for these investigations *continue to indicate that location 37-I was upgradient of the landfill. This is also confirmed by the overall bedrock surface which indicates two incised bedrock lows which trend through the site from Speedvale Avenue to Eastview Road and from the south west along Eastview Road into the site.*

Overall water quality results in the area also indicate that the chloride appears to be coming from an off-site source as confirmed by the groundwater flow at that time. With the exception of 37-I, the highest chloride concentrations up to the end of 2009 were noted southwest of the site at residential well P13, which had been found to be slightly higher than the concentrations at the new location 95-I. Concentrations at 95-I were also found to be slightly higher than at 50-I, which is inferred to be downgradient of 95-I. Further downgradient of 50-I, at 93-I, chloride concentrations were at or just above background levels. As well, the chloride at the new location closest to the landfill and upgradient of the monitors in this area exhibits concentrations that are at background levels.

With respect to location 37-I, water quality results continued to confirm highly elevated chloride concentrations at this location, which still appear to be increasing. Based on the groundwater elevations, the highly elevated chloride is not considered to be landfill related. Based on recent water quality results from the new monitors, it appears that the concentrations observed at 37-I were highly suspect. Currently, the monitor upgradient and closest to the landfill (94-I) is exhibiting chloride concentrations at background levels. Further, monitor 95-I, inferred to be downgradient of 37-I, has significantly lower concentrations than at 37-I, albeit still elevated above background.

As part of this investigation it was recommended that location 37 should be decommissioned and replaced with proper groundwater monitors and that a shallower monitor should be completed in the shallow bedrock at location 92. As discussed earlier, location 37 was decommissioned and replaced closer to and on landfill property with MOECC approval. As for location 92, no shallower monitor was completed as this location had to be decommissioned and relocated due construction activities related to the housing development. With MOECC approval it was relocated north of the original location but still west of the landfill and was designated Location 96.

These locations have been routinely sampled since the spring of 2012. Water quality results collected at 37-IR and 37-IIR show that chloride concentrations were much lower than observed at former 37-I which peaked at 329 mg/L in 2010 compared to around 30 to 40 mg/L at the new monitors. Although these chloride concentrations were much lower, they were still higher than the background concentrations (generally less than 10 mg/L). As well, elevated chloride was also observed in the shallow bedrock in 96-II but was at background in the deeper monitor 96-I. Water quality results for the bedrock monitors, including these locations is found on Table 2, attached.

Assessment

Historically, water quality signatures at location 37/50 were assessed through piper plots, which indicated that they were trending towards a more mineralized signature and did not appear to be related to the landfill. Although these trends have continued over time, a further review of the water quality trends was undertaken at the former 37-I and 50-I with respect to other landfill indicator, most noticeably alkalinity, along with a comparison of the new and replacement locations. This assessment is provided below.

Figure 15 is a water quality trend plot for chloride and alkalinity at former monitor 37-I and the replacement monitor 37-IR. Alkalinity was selected in this assessment since, like chloride, it is also elevated to highly elevated in the landfill leachate. This figure once again shows the strong chloride increase that occurred at 37-I since the early 1990's. The abrupt change at the end of 2010 is considered related to damage of the well due to construction activities as part of the adjacent housing development as this location was within the development footprint. Although chloride was increasing, alkalinity actually began to show a decreasing trend during the same period, as well, when chloride began to increase more rapidly, alkalinity also decreased further. It would be expected that, should the change in the chloride be related to the landfill leachate, that alkalinity would also start to increase over time. Therefore, this observed trend is inconsistent with a leachate source. Further, at the replacement location, the chloride was found to be significantly lower with alkalinity higher, with no apparent trends since they were installed. Boron was also reviewed as it is considered a critical indicator. It was found at low levels with no trend observed at 37 or 37R. The only noticeable change was that the boron concentrations were even lower at 37R (<0.05 mg/L) than in former 37-I.

Figure 16 is a water quality trend plot for chloride and alkalinity at 50-I. Similar to the trend for 37-I, as chloride began to increase, alkalinity began to decrease. As well, the historical alkalinity concentrations are similar to that now being observed at location 37R. As with 37/37R, boron also showed no observable trend at 50-I. Therefore, as with the trend at 37/37R, the trend observed at 50-I also appears to be inconsistent with a leachate source.

Water quality results were also reviewed on the short term data collected at monitors 96-I and 96-II. Alkalinity at these monitors where higher when compared to former 37-I but were still similar to 37-IR and 37-IIR. With respect to chloride, low concentrations, close to background, are observed in the deep monitor 96-I, however, they were found to be elevated in the shallow monitor 96-II. Although elevated, the chloride concentrations observed were similar to those at 50-I, although concentrations have decreased slightly at 96-II since it was installed and are now slightly below those at 50-I. As observed at location 37R, boron concentrations at 96-I and 96-II where also found to be lower than at former 37-I.

Figures 17 and 18 are alkalinity and chloride trends for all western shallow bedrock monitors, including P13. P13 was added to the volunteer residential monitoring program in 2005 which the City discontinued in 2009. These plots generally show that no trends were observed at 93-I or 94-I for both alkalinity and chloride and an abrupt change in chloride at 95-I. This abrupt change was a decrease in chloride that appears to be related to the time it was decommissioned and relocated to the side of the new road allowance. Prior to this, it was showing a similar to slightly higher increasing trend for chloride then 50-I. Also, shown on these plots is the increasing trend and slightly higher concentrations that were noted at P13 further to the west of both location 50 and 95 up to 2009.

Water quality trends at locations 37/37R and 50 were also compared to the leachate quality in the outwash beneath the waste at 57-I and 58-I. These two leachate monitors are located in the western to north western area of the landfill (Figure 1) and although it is expected that groundwater in this areas is collected by the PLCCS, a comparison of the leachate quality would still be prudent. Figures 19 and 20 are the alkalinity and chloride concentration trends at 37/37R and 50 and the outwash beneath the waste at 57-I and 58-I. With respect to alkalinity, Figure 19 illustrates that the concentrations in the leachate are higher than observed in the upper bedrock. As well, while increases in alkalinity are occurring at these leachate monitors, a slight decrease or no observable trends at the new monitors were being observed in the shallow bedrock. This suggests that leachate effects do not appear to be occurring in the shallow bedrock based on alkalinity concentrations and trends. Figure 20 illustrates the chloride trends which shows that an increasing trend was observed in both the outwash beneath the waste as well as location 37/50. Although this was the case, the chloride concentrations at 37-I was increasing at a greater rate and was actually higher than in the leachate before it was decommissioned with 37-IR concentration significantly lower with no apparent trend observed since it was installed. With respect to 50-I, the increasing chloride trend appears to be similar to that observed in the outwash beneath the waste. This is considered coincidental as:

- The trends would suggest that there is a direct connection to the shallow bedrock in this areas, which was not observed at former 37-I; and
- Alkalinity show no increases related to the increasing trend in the outwash beneath the waste.

It should also be noted that based on the geological model, which maintains that vertical flow through the till is between 2 to 3 cm per year, no leachate effects in the shallow bedrock would be expected.

It is concluded that although elevated chloride over background is detected to the west of the site, they do not appear to be related to landfill effects. However, the actual source continues to be unknown. Further, current elevated chloride concentrations observed in this area are still well below the Ontario Drinking Water Quality Standards (OWDS) of 250 mg/L (Aesthetic Objective).

Water Quality Results in the Shallow and Deep Monitors at 37R and 96

Locations 37R and 96 are the only locations where there is a shallow and deep monitor in the shallow bedrock/Vinemount for water quality comparison. Water quality results in 37-IR and 37-IIR were found to be generally similar whereas chloride was found to be elevated in shallow monitor 96-II and was within background in the deep monitor. Based on earlier discussions, the deeper monitor 37- IIR is installed in the lower portion of the shallow bedrock terminating in the top of the Vinemount. The water levels from this location indicate that no discernible downward flow is occurring across the shallow bedrock, suggesting that horizontal flow appears to be occurring. However, the deeper monitor 96-I was found to be installed and sealed in the lower portion of the Vinemount close to the underlying Goat Island dolostone. At this location, water levels indicate that although downward flow appears to be occurring, the water quality is different (i.e., chloride is much lower in the deeper monitor than the shallow monitor). This would further suggest that:

- the Vinemount (aquitard) does appear to minimize downward flow; and
- Horizontal flow would then appear to be more dominant in the upper bedrock.

It is concluded that horizontal flow does appear to exist in the shallow bedrock and that the water quality was generally similar within the shallow bedrock, at least in the areas around location 37R.

Conclusions

The main conclusions based on the assessment completed are:

- The Vinemount Member (aquitard) is inferred to exist across the area with a lower contact of about 310 mASL and with a variable thickness of 3 to 5 m.
- Water levels measured at locations 16 and 90 continue to show that downward gradients are occurring between in the deep and shallow aquifer. The observed head differences observed at these locations average about 23.3 and 25.5 m, respectively at location 16 and 90. Further, although there have been significant head level variation in the lower aquifer, the head level in the upper aquifer continued to follow seasonal trends with maximum seasonal changes of between about 1.5 to 2 m as observed historically. These current data continue to demonstrate that the Vinemount Member (aquitard) is acting as a good barrier to minimize overall downward flow to the lower aquifer as should the aquitard allow higher flow (i.e., higher permeability across the aquitard) it would be expected that smaller head differences would be observed with groundwater elevations in the aquifers becoming similar.
- At the new locations, shallow and deep monitors were completed in the shallow bedrock. At 37R, the deeper monitor was installed in the lower portion of the shallow bedrock slightly into the Vinemount Member, whereas, the deeper monitor at 96 was sealed and installed into the lower portion of the Vinemount Member and possibly connected to the underlying Goat Island dolostone (upper unit of the lower aquifer). Measured water levels a 37R show that no discernible downward flow appears to be occurring, therefore, suggesting that horizontal flow would be occurring. Measured water levels at 96, however, indicate that there is a downward gradient between the shallow and deep monitors. This difference is most likely a reflection of the measured gradient across the Vinemount Member (aquitard) based on the location of the screened interval.
- The revised bedrock topographical elevation contact now suggest that, although an incised bedrock low exists below the site, it is trending more easterly into the site and then south easterly.
- The revised shallow bedrock groundwater flow also generally follows the bedrock topography as would be expected, still indicating that flow is into the site from the west. It would also suggest that some radial flow would be directed to this feature from the north and south near location 96.
- Assessment of the water quality results, specifically alkalinity and chloride, indicate that the elevated chloride observed to the west of the site is not related to the landfill leachate. However, as stated in the past, the actual source in not known. As well, although elevated chloride continues to be measure to the west, currently it is found to be well below the ODWS of 250 mg/L.
- Water quality results at the recent locations which have a shallow and deep monitor, was also reviewed. At location 37R, water quality in the shallow and deep monitor was comparable, albeit with significantly lower chloride than former location 37. At location 96, although for most parameters it was comparable, the shallow monitor exhibited elevated chloride, whereas the deeper monitor had chloride concentrations within background, even though downwards gradients were measured. The difference in concentrations at 96 are most likely related to the location of the screened interval of 96-I

at the base of the Vinemount which suggested that, although downward gradients are measured, minimal downward flow is occurring. This would further suggest that horizontal flow is predominantly occurring in the shallow bedrock.

Recommendation

No further assessments are recommended at this time. However, ongoing monitoring of the shallow bedrock water quality should continue. As well, water level measurements should also continue in both the shallow and deep bedrock, where available, to monitor that current trends continue. As requested by the MOECC, the onsite water well (P10, which has a similar to construction as the deep monitors at location 16 and 90) should be included in the monitoring program for at least one year for water quality and water levels.

We trust that this meets your requirements at this time. Should you have any question or require further clarification, please do not hesitate to contact the under signed at (905) 747-7482.

Sincerely,
AECOM Canada Ltd.

Terry La Chapelle, B.Sc., P.Geo.
Senior Geologist
Project Manager
Terry.LaChapelle@aecom.com

TLC:mm
Attached.
cc: Patty Wong, AECOM

GRAPHICS, SYMBOLS AND ABBREVIATIONS ON LOGS

SAMPLE TYPES and TESTS

▒	**SS**	Split Spoon Sample	
⌛	**SN**	Non-Standard Split Spoon Sample	
I	**ST**	Shelby Tube Sample : (unconfined compression or unconsolidated undrained test) -	◆
I	**DS**	Denision Type Sample	
[]	**PS**	Piston Type Sample	
≡	**CS**	Continuous Sample	
⌛	**GS**	Grab Sample	
▒	**WS**	Wash Sample	
▨	**BQ**	BQ Core Sample	
▨	**HQ**	HQ Core Sample	
▨	**NQ**	NQ Core Sample	
◸	**DT**	Dynamic Penetration Test	
▥	**VT**	Field Vane Test (undisturbed) -	⊙
▥	**VT**	Field Vane Test (remoulded) -	⊕

PENETRATION RESISTANCES

Standard Penetration Resistance (N Value)

The number of blows by a 63.6 kg (140 lb) hammer dropped 760 mm (30 in.) required to drive a 50 mm (2 in.) Split Spoon Sampler for a distance of 300 mm (12 in.).

ABBREVIATIONS

DTPL: Drier Than Plastic Limit
APL: About Plastic Limit
WTPL: Wetter Than Plasic Limit
K: Hydraulic Conductivity (m/s)
C_u: Undrained Shear Strength (kPa)
% REC : Percentage of Sample Recovered
% RQD : Indirect Measure of the Number of Fractures and Soundness of Rock Mass
▼ Approximate Water Table

GRAIN SIZE CLASSIFICATION

	%
trace, "eg. trace sand"	1 - 10
some, "eg. some sand"	10 - 20
adjective, "eg. sandy"	20 - 35
and, "eg. and sand"	35 - 50
noun, "eg. sand"	>50

Note: Classification Divisions Based on Modified M.I.T. Grain Size Scale

SOIL DESCRIPTIONS

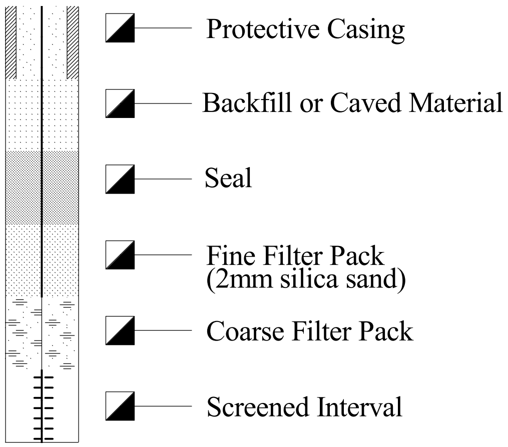
Cohesionless Soils

Relative Density	N Value
Very loose	0 to 4
Loose	4 to 10
Compact	10 to 30
Dense	30 to 50
Very Dense	over 50

Cohesive Soils

Consistency	C_u(kPa)	N Value
Very soft	0 to 12	0 to 2
Soft	12 to 25	2 to 4
Firm	25 to 50	4 to 8
Stiff	50 to 100	8 to 15
Very Stiff	100 to 200	15 to 30
Hard	over 200	over 30

MONITOR DETAILS



BOREHOLE LOG

PROJECT: 60191188

BOREHOLE: 37-IR 1 of 2

Further Drilling at Eastview Road Landfill
Guelph, Ontario
Client: City of Guelph

Northing: 4824905.76
Easting: 561886.66
Methodology: Auger/Core
Contractor: Lantech

DATE: December 22, 2011
LOGGED BY SB
GROUND ELEV 346.31 m ASL

DEPTH (m) (mASL)	STRATIGRAPHIC DESCRIPTION
0.1 346.2	**TOPSOIL**
	SAND Brown to grey silty fine sand occasional gravel, moist, compact to dense.
2.3 344.0	**SANDY SILT TILL** Light brown sandy silt till, some fine gravel, occasional coarse gravel, moist, dense to very dense. -Weathered to about 3.8 m. -Becoming sandy silt to silty sand till and becoming very dense below about 4.6 m.
8.5 337.8	Auger refusal at 8.5 m, direct drilled using tricone bit in dense till with HW casing.

SAMPLE NUMBER	INTERVAL	TYPE	N VALUE	% WATER	% REC	% RQD
1		SS	4			
2		SS	37			
3		SS	21			
4		SS	40			
5		SS	8			
6		SS	60/ 0.08m			
7		SS	93/ 0.28m			
8		SS	108/ 0.08m			
9		SS	100/0 0.15m			
10		SS	120/ 0.08m			
11		SS	107 0.08m			
12		SS	66/ 0.13m			

MONITOR DETAILS & NUMBER

RECOVERY (%) 25 50 75 100

RQD (%) 25 50 75 100

Depth scale (m): 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Printed: Jun 5, 14
File Location:

AECOM

BOREHOLE LOG

PROJECT: 60191188		**BOREHOLE:** 37-IR 2 of 2
Further Drilling at Eastview Road Landfill Guelph, Ontario	**Northing:** 4824905.76 **Easting:** 561886.66	**DATE:** December 22, 2011
Client: City of Guelph	**Methodology:** Auger/Core **Contractor:** Lantech	**LOGGED BY** SB **GROUND ELEV** 346.31 m ASL

DEPTH (m) (mASL)	STRATIGRAPHIC DESCRIPTION
	SANDY SILT TILL (Continued)
21.1 325.2	**DOLOSTONE** Grey, fine to medium crystalline, thin to medium bedded dolostone, occasional shale stringers and vugs.
30.3 316.0	Borehole terminated at 30.31 m in dolostone due to difficult drilling conditions.

SAMPLE NUMBER	TYPE	N VALUE	% WATER	% REC	% RQD	RECOVERY (%)	RQD (%)
1	HQ			100		100	
2	HQ			100		100	
3	HQ			100		100	
4	HQ			100		100	
5	HQ			100		100	
6	HQ			100		100	

Printed: Jun 5, 14
File Location:

AECOM

BOREHOLE LOG

PROJECT: 60191188

BOREHOLE: 37-IIR 1 of 2

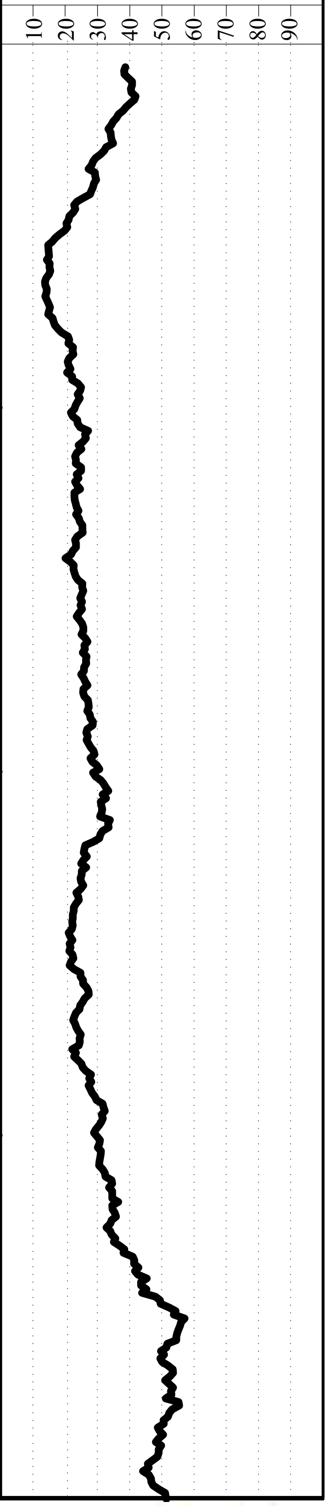
Further Drilling at Eastview Road Landfill
Guelph, Ontario
Client: City of Guelph

Northing: 4824905.76
Easting: 561886.66
Methodology: Auger/Core
Contractor: Lantech

DATE: January 11, 2012
LOGGED BY SB
GROUND ELEV 346.31 m ASL

DEPTH (m) (mASL)	STRATIGRAPHIC DESCRIPTION	MONITOR DETAILS & NUMBER	WATER LEVEL	SAMPLE NUMBER	INTERVAL	TYPE	N VALUE	% WATER	% REC
0.1 346.2	**TOPSOIL**								
	SAND Brown to grey silty fine sand occasional gravel, moist, compact to dense.								
2.3 344.0	**SANDY SILT TILL** Light brown sandy silt till, some fine gravel, occasional coarse gravel, moist, dense to very dense. -Becoming sandy silt to silty sand till and becoming very dense below about 4.6 m.								
8.5 337.8	Auger refusal at 8.5 m, direct drilled using tricone bit in dense till with HW casing.								

Gamma (cps)



Printed: Jun 5, 14
File Location:

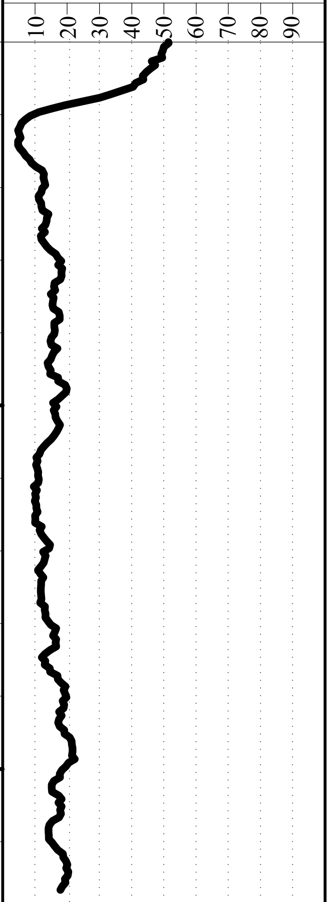
BOREHOLE LOG	**PROJECT:** 60191188	**BOREHOLE:** 37-IIR 2 of 2
Further Drilling at Eastview Road Landfill Guelph, Ontario **Client:** City of Guelph	**Northing:** 4824905.76 **Easting:** 561886.66 **Methodology:** Auger/Core **Contractor:** Lantech	**DATE:** January 11, 2012 **LOGGED BY** SB **GROUND ELEV** 346.31 m ASL

DEPTH (m) (mASL)	STRATIGRAPHIC DESCRIPTION
	SANDY SILT TILL (Continued)
21.1 325.2	**DOLOSTONE** Grey, fine to medium crystalline, thin to medium bedded dolostone, occasional shale stringers and vugs.
32.6 313.7	Borehole terminated at 32.60 m in dolostone. Drilled directly to 32.60 m without sampling. Stratigraphy inferred from adjacent borehole 37-IR.

Depth scale: 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32

STRATIGRAPHY | MONITOR DETAILS & NUMBER | WATER LEVEL | SAMPLE: NUMBER, INTERVAL, TYPE, N VALUE, % WATER, % REC

Gamma (cps)



Printed: Jun 5, 14
File Location:

BOREHOLE LOG

PROJECT: 60191188

BOREHOLE: 96-I 1 of 2

Further Drilling at Eastview Road Landfill
Guelph, Ontario
Client: City of Guelph

Northing: 4824651
Easting: 561588
Methodology: Auger/Core
Contractor: Lantech

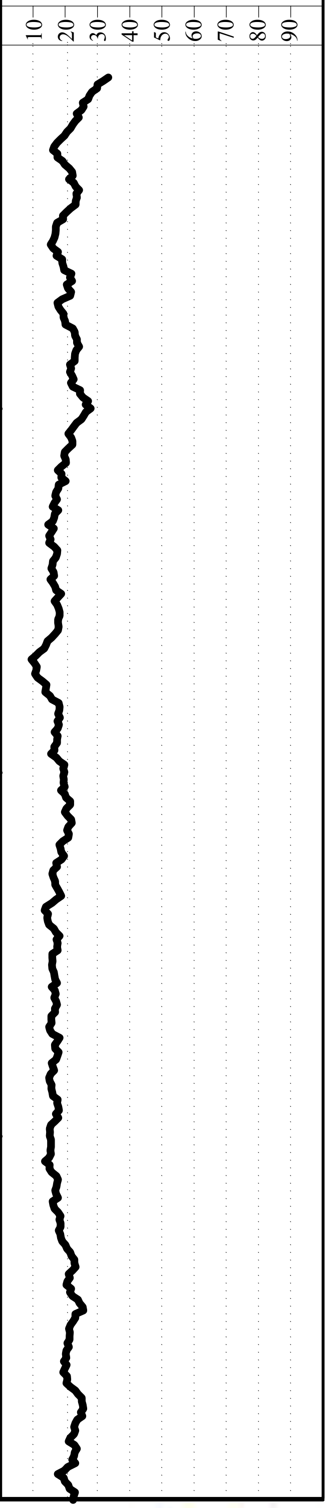
DATE: December 20, 2011
LOGGED BY SB
GROUND ELEV 347.30 m ASL

DEPTH (m) (mASL)	STRATIGRAPHIC DESCRIPTION
0.1 347.2	**TOPSOIL**
	SAND Light brown fine to medium sand with gravel, moist, dense to very dense. -Becoming wet to saturated at based of sand and gravel below about 2.3 m.
2.9 344.4	**SANDY SILT TILL** Light brown sandy silt till, some fine gravel, occasional coarse gravel, saturated, dense to very dense. -Becoming sandy silt to silty sand till and becoming very dense below about 4.6 m.
8.5 338.8	Auger refusal at 8.5 m, direct drilled using tricone bit in dense till with HW casing.

SAMPLE

NUMBER	TYPE	N VALUE	% WATER	% REC
1	SS	10		
2	SS	47		
3	SS	83		
4	SS	18		
5	SS	57		
6	SS	205/ 0.25m		
7	SS	185/ 0.30m		
8	SS	132/ 0.15m		
9	SS	87/ 0.15m		
10	SS	60/ 0.13m		
11	SS	78/ 0.13m		

Gamma
(cps)



Printed: Jun 5, 14
File Location:

BOREHOLE LOG

PROJECT: 60191188

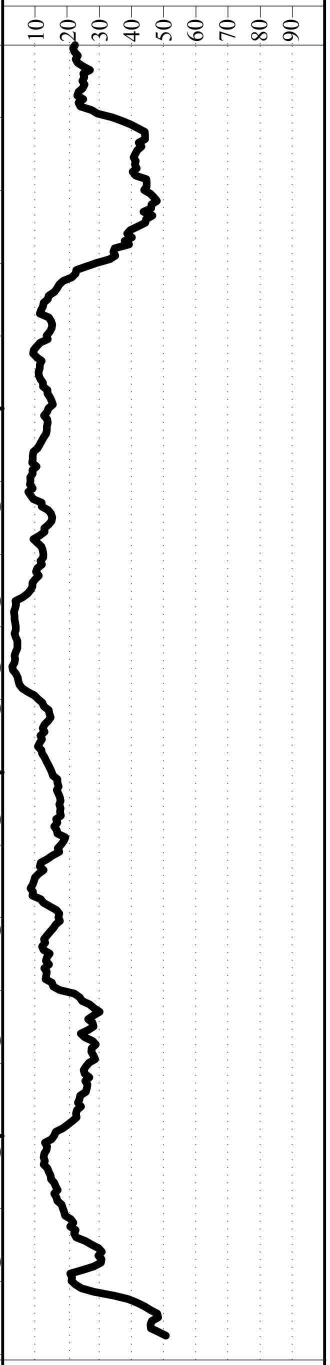
BOREHOLE: 96-I 2 of 2

Further Drilling at Eastview Road Landfill
Guelph, Ontario
Client: City of Guelph

Northing: 4824651
Easting: 561588
Methodology: Auger/Core
Contractor: Lantech

DATE: December 20, 2011
LOGGED BY SB
GROUND ELEV 347.30 m ASL

DEPTH (m) (mASL)	STRATIGRAPHIC DESCRIPTION	MONITOR DETAILS & NUMBER	WATER LEVEL	SAMPLE NUMBER	INTERVAL	TYPE	N VALUE	% WATER	% REC
	SANDY SILT TILL (Continued)								
21									
22									
23									
24									
25									
26									
	Encounter precambrian derived gravel mixed with dolostone fragments and pieces above the bedrock contact.			1		HQ			100
27									
27.6 319.7	**DOLOSTONE** Grey, fine to medium crystalline, thin to thickly bedded dolostone, occasional shale stringers and vugs. Local secondary mineralization and fossils.			2		HQ			100
28									
				3		HQ			100
29				4		HQ			100
30									
				5		HQ			100
31									
32				6		HQ			100
33									
	-Transitioning into dark grey dolostone below about 33.5 m.			7		HQ			100
34									
35.0 312.3	-becoming dark grey to black thin bedded fine crystalline shaly dolostone below about 35.0 m.			8		HQ			100
36									
37				9		HQ			100
38.1 309.2	Borehole terminated at 38.08 m in dolostone.								



BOREHOLE LOG

PROJECT: 60191188

BOREHOLE: 96-II 1 of 2

Further Drilling at Eastview Road Landfill
Guelph, Ontario
Client: City of Guelph

Northing: 4824651
Easting: 561588
Methodology: Auger/Core
Contractor: Lantech

DATE: March 1, 2012
LOGGED BY SB
GROUND ELEV 347.30 m ASL

DEPTH (m) (mASL)	STRATIGRAPHIC DESCRIPTION	MONITOR DETAILS & NUMBER	SAMPLE NUMBER	INTERVAL	TYPE	N VALUE	% WATER	% REC	% RQD	RECOVERY (%) 25 50 75 100	RQD (%) 25 50 75 100
0.1	**TOPSOIL**										
347.2	**SAND** Light brown fine to medium sand with gravel, moist, dense to very dense. -Becoming wet to saturated at based of sand and gravel below about 2.3 m.										
2.9 344.4	**SANDY SILT TILL** Light brown sandy silt till, some fine gravel, occasional coarse gravel, saturated, dense to very dense. -Becoming sandy silt to silty sand till and becoming very dense below about 4.6 m.										
8.5 338.8	Auger refusal at 8.5 m, direct drilled using tricone bit in dense till with HW casing.										

AECOM

BOREHOLE LOG

PROJECT: 60191188

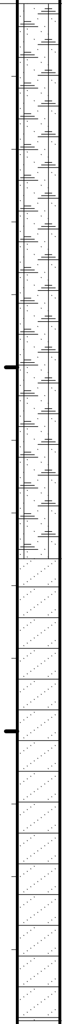
BOREHOLE: 96-II 2 of 2

Further Drilling at Eastview Road Landfill
Guelph, Ontario
Client: City of Guelph

Northing: 4824651
Easting: 561588
Methodology: Auger/Core
Contractor: Lantech

DATE: March 1, 2012
LOGGED BY SB
GROUND ELEV 347.30 m ASL

DEPTH (m) (mASL)	STRATIGRAPHY	STRATIGRAPHIC DESCRIPTION	MONITOR DETAILS & NUMBER	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE TYPE	SAMPLE N VALUE	SAMPLE % WATER	SAMPLE % REC	SAMPLE % RQD	RECOVERY (%) 25 50 75 100	RQD (%) 25 50 75 100
21–27		**SANDY SILT TILL** (Continued) Encounter precambrian derived gravel mixed with dolostone fragments and pieces above the bedrock contact.										
27.6 319.7		**DOLOSTONE** Grey, fine to medium crystalline, thin to thickly bedded dolostone, occasional shale stringers and vugs. Local secondary mineralization and fossils.										
34.0 313.3		Borehole terminated at 33.98 m in dolostone. Drilled directly to 33.98 m without sampling. Startigraphy inferred from adjacent borehole 96-I.										



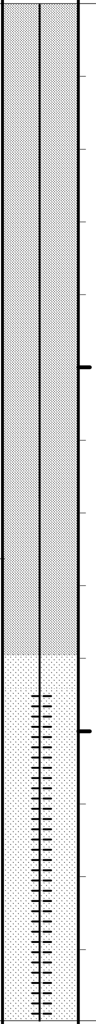


Table 1 : Selected Bedrock Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
1/13/1994							341.79					341.49	344.30									
1/20/1994	341.13	341.91		338.17			341.70	342.16	341.02		340.65	341.41	344.24									
2/17/1994	341.19	341.92		337.91			341.76	342.23	341.02		340.66	341.48	344.22									
3/16/1994	341.32	342.12		338.05			341.88	342.25	341.02		340.85	341.54	344.48									
4/12/1994	341.78	342.43		338.59			342.30	342.77	341.61		341.28	341.95	345.21									
4/20/1994	341.83	342.42		338.69			342.46	342.84	341.68		341.36	341.97	345.31									
5/16/1994	342.05	342.52		338.90			342.57	342.86	341.87		341.52	342.08	345.44									
6/18/1994	341.38	342.12		338.21			341.88	342.17	341.47		341.09	341.66	344.68									
6/21/1994	341.37	342.13		338.24			341.96	342.25	341.47		341.08	341.69	344.77									
7/18/1994	341.24	342.42		338.06			341.78	342.80	341.34		340.92	341.58	345.08									
8/15/1994	340.88	341.64		337.70			341.45	341.81	341.06		340.67	341.30	344.08									
8/24/1994	340.63	341.51		337.60			341.31	341.69	340.92		340.52	341.19	343.91									
9/23/1994	340.36	341.54		337.63			340.75	341.78	340.93		341.10	339.97	344.33									
10/19/1994	340.31	341.42		337.53			340.74	341.74	340.87		340.93	340.80	343.16									
10/26/1994	340.57	341.16		337.56			340.75	340.91	340.53		340.10	340.84	343.16									
11/16/1994	340.47	341.30		337.66			340.94	341.45	340.57		340.16	340.16	343.16									
12/19/1994	340.69	341.38		337.60			341.26	341.68	340.73		340.33	341.12	343.25									
1/18/1995	341.42	341.62		338.22			342.00	342.29	341.29		340.95	341.55	344.29									
2/15/1995	341.37	341.44		338.13			341.91	342.19	340.78		340.68	341.56	344.65									
3/13/1995	341.46	341.49		338.21			341.92	342.15	340.95		340.88	341.66	344.58									
4/11/1995	341.56	342.24		338.04			342.08	342.35	341.40		341.03	341.70	344.67									
4/18/1995	341.58	342.21		338.31			342.12	342.36	341.38		340.99	341.69	344.68									
5/11/1995	341.67	342.04		338.55			342.33	342.68	341.58		341.23	341.80	345.22									
6/16/1995	341.46	342.06		338.03			341.99	342.46	341.25		340.85	341.70	344.78									
6/21/1995	341.46	342.06		338.03			341.99	342.46	341.25		340.85	341.70	344.78									
7/17/1995	341.27	341.90		338.08			341.74	342.12	341.18		340.82	340.54	344.41									
8/15/1995	341.38	342.02		338.25			341.84	342.16	341.30		340.95	341.36	344.22									
8/21/1995	341.17	341.97		337.73			341.86	342.27	341.15		340.87	341.47	344.26									
9/23/1995	340.75	341.60		337.81			341.21	341.83	340.87		341.05	340.44	343.72									
9/28/1995																						
10/18/1995																						
10/19/1995	340.77	341.63		337.84			341.24	341.86	340.89		340.99	340.52	343.78									
11/11/1995																						
11/13/1995	341.59	342.15		338.34			342.07	342.32	341.36		341.64	341.73	344.26									
11/22/1995	341.96	342.32		338.67			342.25	342.58	341.64		341.34	341.99	344.82									
12/18/1995	341.68	342.25		338.26			342.21	342.46	341.50		341.17	341.87	344.84									

Note: All Water Level in mASL

Table 1 : Selected Bedrock Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	5-III	13-I	14-IV	15-I	16-VII	16-VIII	19-I	20-I /IR	37-I	37-IR	50-I	53-I	54-I	90-I	90-II	91-I	92-I	93-I	94-I	95-I	94-I	95-I
1/16/1996	341.12	341.91		337.83			341.72	342.08	341.13		340.78	341.43	344.39									
2/14/1996	341.33	342.15		337.93			342.06	342.43	341.39		341.03	341.63	344.87									
3/13/1996	341.28	342.14		337.94			342.03	342.39	341.37		341.02	341.62	344.86									
4/9/1996	341.62	342.28		338.34			342.30	342.63	341.59		341.27	341.79	345.27									
4/15/1996	341.62	342.28		338.34			342.30	342.63	341.59		341.27	341.79	345.27									
5/6/1996	342.00	342.57		339.00			342.58	343.01	341.97		341.59	342.08	345.57									
6/10/1996	342.05	342.44		339.00			342.47	342.82	342.04		341.65	342.13	345.31									
6/13/1996	342.05	342.44		339.00			342.47	342.82	342.04		341.65	342.13	345.31									
7/16/1996	341.77	342.35		338.87			342.22	342.64	341.94		341.52	341.96	345.07									
8/12/1996	341.40	342.09		338.51			341.96	342.41	341.59		341.27	341.72	344.75									
8/15/1996	341.40	342.09		338.51			341.96	342.41	341.59		341.27	341.72	344.75									
9/17/1996	341.80	342.32		338.67			342.12	342.49	341.75		341.34	341.92	344.79									
10/16/1996	341.80	342.39		338.66			342.24	342.63	341.78		341.39	341.91	344.91									
11/12/1996	341.82	342.45		338.75			340.40	342.42	341.79		341.46	341.90	345.01									
11/13/1996	341.82	342.45		338.75			340.40	342.42	341.79		341.46	341.90	345.01									
12/12/1996	341.75	342.41		338.49			340.26	342.41	341.71		341.45	341.85	344.92									
1/20/1997	341.78	342.45		338.56			340.26	342.55	341.88		341.61	341.92	345.01									
2/18/1997	341.67	342.32		338.32			340.17	342.42	341.76		341.48	341.83	344.80									
3/21/1997	342.09	342.64		338.94			340.62	342.83	342.20		341.92	342.12	345.44									
4/21/1997	342.07	342.66		339.04			340.90	342.86	342.29		341.97	342.06	345.48									
5/14/1997	342.03	342.64		339.04			340.97	342.80	342.28		341.88	342.16	345.41									
6/9/1997	341.66	342.43		338.74			340.53	342.37	341.86		341.51	341.84	344.98									
7/15/1997	341.33	342.06		338.52			340.17	341.90	341.61		341.26	341.63	344.47									
8/18/1997	340.87	341.47		337.72			339.69	341.21	341.51		340.71	341.20	343.80									
9/29/1997	341.00	341.71		338.25			340.08	341.57	341.21		340.88	341.33	343.64									
10/20/1997	340.75	341.44		337.91			339.91	341.35	340.99		340.66	341.15	343.21									
11/10/1997	341.20	341.89		338.25			340.26	341.65	341.24		340.91	341.50	343.54									
12/15/1997	341.36	341.96		338.08			340.57	342.01	341.26		340.99	341.59	343.88									
1/20/1998	341.78	342.33		338.37			340.94	342.49	342.03		341.40	341.91	344.87									
2/23/1998	341.77	342.37		338.45			340.98	342.54	342.04		341.42	341.67	344.98									
3/19/1998	341.81	342.47		338.50			341.10	342.68	342.18		341.52	341.89	345.34									
4/14/1998	341.89	342.50		338.72			341.01	342.60	342.29		341.61	342.03	345.32									
5/14/1998	341.69	342.33		338.51			340.73	342.31	342.05		341.37	341.82	344.91									
6/10/1998	341.04	341.91		337.81			339.98	341.74	341.59		340.89	341.45	344.21									
7/15/1998	341.06	342.03		338.22			340.03	341.82	341.52		340.83	341.47	344.14									
8/10/1998	340.58	341.42		337.36			339.30	341.16	341.20		340.54	341.05	343.51									

Note: All Water Level in mASL

Table 1 : Selected Bedrock Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
9/23/1998	340.07	340.80		337.10			338.77	340.48	340.74		340.03	340.63	342.62									
10/16/1998	340.08	340.80		337.35			338.73	340.32	340.70		340.02	340.61	342.47									
11/9/1998	340.00	340.69		337.31			338.72	340.21	340.60		339.91	340.43	342.22									
12/15/1998	340.04	341.20		337.32			339.07	340.45	340.62		339.97	340.62	342.34									
1/26/1999	339.98	341.01		336.99			339.03	340.42	340.45		339.82	340.58	342.33									
2/15/1999	340.44	341.61		337.29			339.59	341.32	343.04		340.28	340.90	343.22									
3/16/1999	340.71	341.79		337.73			340.17	341.70	341.10		340.48	341.13	343.88									
4/16/1999	340.82	341.98		337.83			340.33	341.89	341.19		340.64	341.25	344.26									
5/20/1999	340.57	341.83		337.68			339.75	341.69	341.02		340.48	341.06	344.20									
6/23/1999	340.52	341.71		337.98			339.83	341.70	340.91		340.34	341.01	344.06									
7/16/1999	340.40	341.78		337.99			339.76	341.68	340.89		340.33	341.00	344.03									
9/16/1999	340.03	341.37		337.52			339.75	341.10	340.56		339.98	340.66	343.23									
10/18/1999	340.42	341.65		337.95			340.13	341.50	340.77		340.23	340.92	343.34									
12/16/1999	341.00	341.93		337.95			339.81	342.19	341.18		340.67	341.33	344.20									
1/27/2000	340.59	341.78		337.68			340.47	341.97	341.01		340.49	341.13	344.23									
2/15/2000	340.25	341.54		337.28			340.26	341.73	340.92		340.27	340.81	343.99									
3/21/2000	340.70	341.95		337.84			340.80	342.27	341.11		340.57	341.08	344.81									
5/25/2000	341.07	342.30		338.35			341.21	342.65	341.55		340.98	341.52	345.40									
7/27/2000	341.31	342.26		338.74			340.98	342.52	341.76		341.18	341.69	345.08									
9/21/2000	340.81	341.86		338.03			340.46	341.77	341.37		340.78	341.18	344.31									
10/17/2000	340.80	341.81		338.02			340.44	341.75	341.35		340.75	341.18	344.12									
12/18/2000	340.64	341.85		337.77			340.56	341.95	341.22		340.57	341.13	344.22									
1/16/2001	340.58	341.84		337.56			340.50	342.09	341.14		340.50	341.08	344.27									
2/14/2001	340.96	342.12		337.99			341.06	342.53	341.44		340.91	341.51	345.13									
3/12/2001	340.93	342.10		337.93			341.00	342.58	341.47		340.94	341.41	345.04									
4/2/2001	341.10	342.15		338.16			341.28	342.72	341.71		341.18	341.52	345.42									
5/14/2001	340.87	342.05		338.05			340.96	342.36	341.53		340.92	341.36	345.01									
6/25/2001	340.54	341.95		337.69			340.67	342.11	341.27		340.67	341.26	344.59									
7/26/2001	340.14	341.40		337.36			340.06	341.54	340.90		340.31	340.78	344.07									
8/13/2001	339.79	341.11		337.07			339.54	341.15	N/A		339.96	340.47	343.66									
9/19/2001	339.96	341.24		337.54			339.69	340.83	N/A		340.03	340.59	343.19									
10/29/2001	340.71	341.81		337.98			340.58	341.67	N/A		340.52	341.13	343.85									
11/5/2001	340.83	341.83		338.02			340.71	341.82	N/A		340.58	341.22	344.10									
12/21/2001	341.24	342.24		338.39			341.28	342.46	N/A		341.03	341.54	345.07									
1/29/2002	341.13	342.16		338.17			341.19	342.44	N/A		340.94	341.46	345.02									
2/22/2002	341.26	342.28		338.32			341.42	342.67	N/A		341.11	341.60	345.38									

Note: All Water Level in mASL

Table 1 : Selected Bedrock Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
3/26/2002	341.13	342.22		338.31			341.25	342.63	341.64		341.08	341.52	345.36									
4/22/2002	341.37	342.38		338.60			341.46	342.79	341.96		341.41	341.68	345.52									
5/9/2002	341.62	342.46		338.88			341.58	342.78	342.09		341.48	341.82	345.51									
6/17/2002	341.47	342.34		338.67			341.38	342.62	341.99		341.39	341.75	345.19									
7/23/2002	340.62	341.65		337.78			340.51	341.79	341.30		340.69	341.07	344.36									
8/12/2002	340.43	341.49		337.68			340.29	341.59	341.11		340.48	340.92	343.92									
9/13/2002	339.93	340.93		337.27			339.70	340.96	340.69		340.06	340.53	343.33									
10/22/2002	339.88	341.00		337.20			339.92	340.97	340.59		340.01	340.50	343.07									
11/4/2002	339.99	341.10		337.36			339.98	341.07	340.57		340.06	340.57	343.05									
12/18/2002	340.11	341.31		337.41			340.06	341.23	340.77		340.08	340.61	343.12									
1/28/2003	340.19	341.39		337.45			340.26	341.32	340.72		340.05	340.64	343.37									
2/27/2003	340.08	341.31		337.33			340.23	341.27	340.68		339.93	340.55	343.36									
3/24/2003	340.61	341.75		337.64			340.74	341.70	340.87		340.35	341.07	344.08									
4/22/2003	341.06	342.09		338.34			341.20	342.30	341.24		340.64	341.35	344.99									
5/29/2003	341.22	342.36	339.28	338.52	338.81		341.33	342.50	341.41		340.90	341.49	345.11			343.04	340.92					
6/23/2003	340.87	342.16	339.32	338.16	338.63		340.74	342.20	341.12		340.56	341.21	344.72		342.03	342.70	340.54					
7/23/2003	340.56	341.66	336.71	337.67	338.64	314.51	340.73	341.91	340.85		340.33	340.94	344.32		341.71	342.31	340.31					
8/26/2003	340.13	341.29	336.09	337.15	337.51	313.52	340.36	341.47	340.53		339.99	340.64	343.75		341.34	341.87	339.96					
9/2/2003	340.11	341.24	336.07	337.11	337.42	313.51	340.31	341.46	340.52		339.98	340.60	343.75		341.30	341.83	339.94					
10/15/2003	340.15	341.44	336.17	337.36	339.01	313.74	340.49	341.49	340.52		339.99	340.66	343.58	314.01	341.37	341.83	339.93					
11/3/2003	340.60	341.65	336.59	337.79	339.45	316.43	340.92	341.85	340.81		340.31	340.88	343.93	316.76	341.82	342.23	340.27					
12/23/2003	341.44	343.23	337.79	338.53	340.10	318.60	341.55	342.52	341.53		341.03	341.61	345.11	318.98	342.38	342.97	341.00					
1/30/2004	341.08	341.94	337.10	338.08	339.62	316.07	341.12	342.19	341.37		340.84	341.49	344.65	316.40	342.19	342.53	340.75					
2/24/2004	340.90	341.70	336.38	337.57	339.20	313.58	341.21	342.21	341.29		340.63	341.22	344.53	313.83	342.12	342.65	340.66					
3/31/2004	341.53	342.29	337.53	338.56	339.84	317.15	341.83	342.79	341.92		341.38	341.78	345.61	317.50	342.59	343.28	341.51					
4/19/2004	341.44	342.27	337.56	338.47	339.66	317.47	341.68	342.74	341.92		341.38	341.69	345.41	317.89	342.48	343.22	341.55					
5/17/2004	341.60	342.40	338.19	338.91	340.27	318.77	341.64	342.75	342.07		341.50	341.79	345.43	319.28	342.53	343.22	341.64					
6/7/2004	341.17	342.12	337.66	338.45	339.60	317.81	341.21	342.23	341.78		341.21	341.55	344.85	317.94	342.12	342.67	341.32					
6/18/2004	341.30	342.27	337.77	338.63	339.72	318.10	341.33	342.31	341.90		341.30	341.68	345.03	318.14	342.25	342.87	341.40					
7/6/2004	341.17	342.12	337.66	338.45	339.60	317.81	341.21	342.23	341.78		341.21	341.55	344.85	317.94	342.12	342.67	341.32					
8/23/2004	340.87	341.84	337.91	338.23	339.65	317.95	340.80	341.88	341.44		340.84	341.38	344.36	318.00	341.79	342.23	340.92					
9/27/2004	340.53	341.78	337.97	338.12	339.61	317.45	340.35	341.66	341.19		340.68	341.17	344.15	317.96	341.30	342.06	340.78					
10/15/2004	340.43	341.78	337.91	337.99	339.37	316.99	340.48	341.64	341.19		340.63	341.13	343.52	317.11	341.47	341.99	340.69					
11/1/2004	340.41	341.73	337.74	337.84	339.23	316.18	340.66	341.58	341.17		340.57	341.09	343.25	316.63	341.63	341.95	340.64					
12/21/2004	341.41	342.21	338.36	338.45	339.80	318.35	341.36	342.38	341.67		341.15	341.63	344.82	318.94	342.35	342.80	341.20					
1/13/2005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A					

Note: All Water Level in mASL

Table 1 : Selected Bedrock Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
2/24/2005	341.63	342.36	338.49	338.59	339.39	318.76	341.59	342.52	341.58		341.48	341.82	345.17	319.31	342.51	343.01	341.56					
3/21/2005	341.61	341.79	338.42	338.58	339.23	317.27	341.64	342.73	341.80		341.52	341.82	345.35	317.93	342.54	343.12	341.65					
4/11/2005	341.55	341.27	338.36	338.56	339.17	317.05	341.67	342.69	342.09		341.52	341.82	345.47	317.27	342.57	343.19	341.69					
5/18/2005	341.44	342.22	338.39	338.36	339.99	316.83	341.64	342.61	341.92		341.37	341.73	345.27	317.18	342.48	343.08	341.46					
6/21/2005	341.15	342.04	338.16	337.73	339.58	317.05	341.25	342.21	341.55		341.00	341.47	344.73	317.55	342.14	342.62	341.00					
7/28/2005	340.64	341.56	337.72	337.66	339.25	315.47	340.67	341.64	341.15		340.60	341.13	344.09	315.78	341.71	342.06	340.63					
8/31/2005	340.63	341.49	337.65	337.51	338.99	314.96	340.51	341.38	340.91		340.33	340.92	343.68	315.32	342.72	341.77	340.44					
9/21/2005	340.15	341.33	337.57	337.62	339.34	314.96	340.42	341.26	340.74		340.19	340.75	343.42	315.34	341.29	341.60	340.16					
10/28/2005	340.30	341.54	337.55	337.49	339.38	314.63	340.63	341.55	340.78		340.25	340.85	343.42	315.03	341.54	341.86	340.22					
11/15/2005	340.51	341.65	337.50	337.48	339.37	314.57	340.86	341.48	340.84		340.35	341.04	343.63	314.99	341.75	342.08	340.21					
12/20/2005	340.99	341.87	338.16	337.87	339.42	314.51	341.21	342.18	341.16		340.61	341.35	344.63	314.88	342.20	342.60	340.62					
1/23/2006	341.06	342.17	338.40	338.14	339.77	315.34	341.33	342.41	341.40		340.95	341.34	345.21	315.66	342.10	342.86	341.02					
2/20/2006	t Comple	t Comple	t Comple	t Comple	t Comple	t Comple	t Comple	t Comple	t Comple		t Comple	t Comple	t Comple	t Comple	t Comple	t Comple	t Comple					
3/21/2006	341.51	342.35	338.60	338.53	339.98	317.11	341.79	342.77	341.98		341.40	341.81	345.54	317.42	342.62	343.27	341.52					
4/24/2006	341.48	342.31	338.49	338.53	339.95	316.81	341.84	342.75	341.91		341.48	341.74	345.42	317.68	342.71	343.22	341.81					
5/26/2006	341.44	342.27	338.72	338.61	340.13	317.14	341.74	342.70	341.90		341.34	341.76	345.28	317.50	342.53	343.14	341.44					
6/7/2006	341.43	342.24	338.95	338.58	340.07	316.98	341.56	342.71	341.89		341.33	341.76	345.41	317.29	342.62	339.60	341.45					
7/28/2006	341.18	342.13	338.54	338.35	339.92	317.11	341.25	342.34	341.61		341.05	341.53	344.89	317.49	342.26	342.75	341.14					
8/30/2006	340.81	341.88	338.46	338.16	339.70	316.39	340.96	N/A	341.40		340.81	341.25	344.43	316.66	341.97	342.34	340.98					
9/26/2006	340.96	341.97	338.30	338.24	339.93	316.06	341.11	341.99	341.36		340.82	341.34	344.35	316.45	342.04	342.37	340.90					
10/31/2006	341.62	342.36	338.59	338.40	340.16	316.91	341.86	342.76	341.95		341.45	341.86	345.34	317.27	342.71	343.21	341.58					
11/24/2006	341.63	342.37	338.61	338.41	340.13	317.13	341.93	342.84	342.02		341.50	341.91	345.39	317.50	342.73	343.29	341.60					
12/18/2006	341.71	342.38	338.87	338.63	340.46	317.67	341.97	342.94	342.16		341.63	341.95	345.47	318.08	342.81	343.40	341.77					
1/22/2007	341.54	342.34	338.76	338.52	340.32	317.44	341.58	342.81	342.10		341.62	341.79	345.32	317.82	342.44	343.28	341.74					
2/27/2007	341.35	342.06	338.36	338.28	340.02	317.06	341.36	342.44	341.88		341.25	341.74	344.74	317.49	342.38	343.13	341.37					
3/26/2007	341.74	342.39	338.44	338.47	340.21	317.06	341.93	342.84	342.16		341.62	342.00	345.46	317.45	342.82	343.34	341.77					
4/10/2007	341.72	342.42	338.60	338.51	340.28	317.49	341.96	342.95	342.18		341.69	341.97	345.56	317.91	342.84	343.42	341.85					
5/22/2007	341.62	342.34	338.63	338.62	340.41	317.38	341.72	342.74	342.07		341.52	341.87	345.33	317.76	342.66	343.20	341.63					
6/18/2007	341.14	342.16	338.24	338.20	340.10	316.81	341.11	342.25	341.57		341.11	341.50	344.86	317.19	342.18	342.63	341.25					
7/26/2007	340.59	341.52	337.82	337.75	339.86	316.12	340.50	341.49	341.16		340.60	341.05	344.15	316.49	341.67	341.87	340.72					
8/13/2007	340.33	341.35	337.63	337.59	339.67	315.81	340.01	341.18	340.96		340.41	340.88	343.85	316.14	341.34	341.52	340.49					
9/27/2007	339.93	340.99	337.30	337.23	339.35	315.04	339.78	340.62	340.55		340.05	340.52	343.09	315.43	340.98	340.92	340.09	339.91	340.33	340.08	340.33	340.08
10/22/2007	340.02	341.25	337.59	337.52	339.55	316.38	339.84	340.66	340.56		340.10	340.60	343.06	316.83	341.00	340.96	340.07	340.02	340.38	340.11	340.38	340.11
11/15/2007	340.12	341.29	337.63	337.62	339.69	316.47	340.06	340.91	340.61		340.14	340.70	343.08	316.96	341.08	341.13	340.23	340.10	340.45	340.18	340.45	340.18
12/14/2007	340.64	341.71	337.45	337.78	339.87	314.82	340.69	341.51	340.88		340.45	341.03	343.55	315.14	341.76	341.79	340.44	340.33	340.74	340.45	340.74	340.45
1/29/2008	341.21	342.08	337.73	338.18	340.09	315.03	341.48	342.39	341.50		341.06	341.50	344.81	315.32	342.40	342.82	341.13	340.75	341.30	341.09	341.30	341.09

Note: All Water Level in mASL

Table 1 : Selected Bedrock Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	5-III	13-I	14-IV	15-I	16-VII	16-VIII	19-I	20-I /IR	37-I	37-IR	50-I	53-I	54-I	90-I	90-II	91-I	92-I	93-I	94-I	95-I	94-I	95-I
2/25/2008	341.42	342.13	337.55	338.20	340.16	314.75	341.87	342.69	341.72		341.23	341.72	345.03	312.24	339.94	343.14	341.31	340.84	341.50	341.29	341.50	341.29
3/31/2008	341.43	342.12	337.30	338.15	340.12	315.20	341.92	342.81	341.84		341.35	341.76	345.16	315.47	342.74	343.26	341.48	340.84	341.58	341.41	341.58	341.41
4/29/2008	341.47	342.25	338.39	338.63	340.26	317.58	341.90	342.77	342.09		341.48	341.85	345.25	317.91	342.82	343.23	341.73	340.94	341.80	341.68	341.80	341.68
5/22/2008	341.54	342.32	338.45	338.84	340.43	317.70	341.91	342.84	342.08		341.58	341.85	345.27	318.07	342.67	343.27	341.67	340.75	341.80	341.62	341.80	341.62
6/18/2008	341.27	342.14	338.13	338.49	340.24	317.21	341.54	342.39	341.85		341.31	341.63	344.95	317.62	342.36	342.83	341.44	340.55	341.54	341.44	341.54	341.44
7/24/2008	341.42	342.10	337.99	338.23	340.18	314.90	341.61	342.45	341.88		341.41	341.82	344.86	315.22	342.62	342.83	341.41	340.72	341.57	341.42	341.57	341.42
8/20/2008	341.34	342.14	338.18	338.40	340.04	316.47	341.69	342.60	341.78		341.30	341.67	345.00	316.87	342.53	343.04	341.42	340.70	341.52	341.40	341.52	341.40
9/11/2008	341.13	341.94	338.16	338.21	339.80	316.08	341.38	342.16	341.50		341.02	341.45	344.59	316.54	342.19	342.55	341.10	340.52	341.30	341.10	341.30	341.10
10/30/2008	341.21	341.96	337.96	338.14	339.92	315.96	341.49	342.36	341.49		341.02	341.50	344.53	316.42	342.34	342.77	341.10	340.53	341.29	341.12	341.29	341.12
11/20/2008	341.57	342.05	338.23	338.32	340.02	316.84	341.86	342.23	341.66		341.32	341.75	348.11	317.43	342.69	343.18	341.35	340.73	341.55	341.49	341.55	341.49
12/27/2008	341.74	342.43	338.48	338.51	340.30	317.30	342.25	342.70	341.85		341.69	341.84	345.55	317.31	342.80	343.53	342.02	341.02	341.94	341.81	341.94	341.81
1/26/2009	341.56	342.15	338.11	338.46	340.19	316.90	341.83	342.75	341.96		341.45	341.81	344.94	317.39	342.69	342.20	341.59	340.47	341.69	341.59	341.69	341.59
2/25/2009	341.71	342.26	338.14	338.60	340.20	317.14	341.98	342.87	342.17		341.66	341.94	345.13	317.60	342.84	343.33	341.86	340.58	341.87	341.82	341.87	341.82
3/31/2009	341.76	342.33	338.18	338.73	340.02	317.57	342.03	342.91	342.34		341.77	341.95	345.31	317.52	342.89	343.34	341.99	340.62	341.95	341.92	341.95	341.92
4/27/2009	341.85	342.40	338.16	338.67	340.37	316.90	342.01	342.99			341.91	342.07	345.53	318.13	342.56	343.59	342.08	340.61	342.00	342.28	342.00	342.28
5/31/2009	341.72	342.38	338.69	338.86	340.34	318.04	341.86	Decom	342.59		341.79	341.93	345.19	318.53	342.74	343.32	341.89	341.05	341.97	341.93	341.97	341.93
6/22/2009	341.24	342.24	338.10	338.35	339.99	314.58	341.53	Decom	341.82		341.41	341.52	345.06	318.11	341.87	342.26	341.52	340.86	341.63	341.51	341.63	341.51
7/31/2009	341.08	341.95	338.12	338.02	339.83	314.40	341.18	Decom	341.48		341.11	341.43	344.43	316.52	342.18	342.46	341.23	340.72	341.35	341.26	341.35	341.26
8/24/2009	340.67	341.85	337.66	337.90	337.98	314.26	340.70	Decom	341.18		339.02	341.19	344.28	314.50	341.96	342.47	340.87	340.44	340.85	340.63	340.85	340.63
9/29/2009	340.34	341.55	336.77	337.73	339.42	313.56	340.78	Decom	341.02		340.54	340.90	343.93	313.87	341.64	341.96	340.61	340.25	340.76	340.64	340.76	340.64
10/27/2009	340.57	341.69	336.85	337.78	339.38	313.87	341.02	Decom	341.06		340.58	341.09	343.94	314.22	341.91	342.24	340.62	340.35	340.86	340.70	340.86	340.70
11/10/2009	340.51	341.55	336.66	337.64	339.64	313.67	341.06	N/A	340.85		340.49	340.92	343.90	313.40	341.90	342.24	340.56	340.29	340.79	340.61	340.79	340.61
12/8/2009	340.72	341.62	336.70	337.61	339.68	313.79	341.20		341.03		340.55	341.12	344.07	313.81	342.14	342.42	340.85	340.35	340.89	340.64	340.89	340.64
1/25/2010	340.75	341.62	336.67	337.62	339.67	313.81	341.18	345.78	341.03		340.58	341.13	344.08	313.82	342.14	342.41	340.84	340.35	340.90	340.65	340.90	340.65
2/26/2010	340.63	341.51	336.55	337.63	339.39	313.96	341.19	345.14	340.99		340.42	341.01	343.94	314.37	342.06	342.45	340.47	340.26	340.79	340.55	340.79	340.55
3/24/2010	340.80	341.66	336.66	337.78	339.54	314.18	341.34	345.76	340.99		340.23	341.11	344.06	314.59	342.20	342.55	340.59	340.32	340.88	340.63	340.88	340.63
4/18/2010	341.11	341.99	338.09	338.40	339.89	316.62	341.66	345.59	340.94		340.99	341.50	344.89	317.03	342.43	343.08	341.07	340.71	341.29	341.12	341.29	341.12
5/3/2010	341.23	341.97	336.88	338.25	340.04	314.25	341.71	345.53	341.34		340.97	341.54	344.89	312.17	342.56	343.05	341.06	340.70	341.77	341.17	341.77	341.17
6/1/2010	341.21	342.08	338.07	338.09	340.04	314.25	341.30	345.65	340.39		340.97	341.49	344.55	316.03	342.27	342.60	341.28	340.74	341.29	341.60	341.29	341.60
7/1/2010	341.19	342.01	338.05	338.06	340.01	314.31	341.31	345.62	341.34		341.00	341.51	344.52	316.04	342.25	342.56	341.30	340.75	341.26	341.56	341.26	341.56
8/1/2010	341.10	342.09	337.95	337.72	339.92	314.27	341.38	345.57	341.29		340.84	341.49	344.56	316.19	342.19	342.58	341.25	340.73	341.18	341.30	341.18	341.30
9/1/2010	341.04	342.07	337.99	338.08	339.91	314.24	341.39	345.42	341.13		340.10	341.46	344.44	316.39	342.05	342.66	341.19	340.68	341.09	341.14	341.09	341.14
10/1/2010	340.88	341.78	338.08	338.17	339.86	314.15	341.45	345.13	340.95		340.31	341.37	344.24	316.73	341.57	342.71	removed	340.50	340.72	340.79	340.72	340.79
11/10/2010	340.74	341.70	337.70	337.88	339.75	313.92	341.24	344.99	340.92		339.37	341.26	344.09	316.48	341.53	342.39	removed	340.37	340.76	340.72	340.76	340.72
12/16/2010	340.84	341.76	337.33	337.71	339.79	314.01	341.30	345.08	340.99		339.82	341.19	344.20	315.15	341.83	342.51	removed	340.40	340.82	340.74	340.82	340.74
1/24/2011	341.04	341.97	337.55	337.92	340.03	314.41	341.36	345.21	341.42		340.10	341.27	344.43	315.21	342.00	342.58	Decom	340.48	340.98	340.88	340.98	340.88

Note: All Water Level in mASL

Table 1 : Selected Bedrock Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
2/22/2011	341.23	342.10	337.61	338.10	340.14	314.60	341.59	345.44	341.68		340.24	341.49	344.64	315.69	342.21	342.81	Decom	340.56	341.19	341.04	341.19	341.04
3/14/2011	341.62	342.29	337.92	338.49	339.97	316.74	341.97	345.17	341.79		340.37	341.87	345.23	315.85	342.62	343.20	Decom	340.83	341.61	341.33	341.61	341.33
4/18/2011	341.81	342.36	338.30	338.82	339.73	317.93	342.20	345.59	341.95		341.39	342.07	345.39	317.61	342.94	343.33	Decom	340.91	341.78	341.56	341.78	341.56
5/23/2011	341.81	342.34	338.31	338.68	339.83	318.00	342.28	345.86	342.09		341.85	342.00	345.18	317.85	342.60	343.37	Decom	342.73	341.79	351.83	341.79	351.83
6/21/2011	341.59	342.28	338.22	338.37	339.96	317.97	342.02	345.77	342.14		341.97	341.78	344.99	317.64	342.14	343.53	Decom	341.13	341.81	341.76	341.81	341.76
7/18/2011	341.29	342.01	338.04	338.18	339.88	317.95	341.67	345.70	342.24		341.23	341.53	344.52	316.15	341.60	349.13	Decom	340.78	341.38	341.25	341.38	341.25
8/17/2011	340.87	341.76	337.77	338.02	339.03	317.92	341.10	345.53	341.34		340.86	341.42	344.15	315.91	341.13	343.18	Decom	340.43	341.08	340.96	341.08	340.96
9/13/2011	340.65	341.64	337.72	337.81	338.85	316.87	341.27	345.39	341.03		340.83	341.36	343.61	315.70	341.41	343.03	Decom	340.39	341.07	340.79	341.07	340.79
10/10/2011	340.89	341.67	337.94	337.90	339.01	316.45	341.39	345.06	341.13		340.89	341.40	343.55	315.57	341.57	342.89	Decom	340.46	341.11	340.85	341.11	340.85
11/1/2011	341.20	341.72	338.07	337.76		316.29	341.46	344.96	341.34		340.98	341.52	343.34	315.65	342.21	342.58	Decom	340.73	341.22	341.02	341.22	341.02
12/2/2011	341.32	341.83	338.24	337.69	339.51	316.39	341.49	344.99	341.48		341.24	341.74	343.52	315.81	342.14	342.77	Decom	340.86	341.33	341.27	341.33	341.27
1/16/2012	341.64	341.95	338.07	338.21	339.86	316.63	341.70	345.09			341.32	341.76	345.13	315.91	342.76	342.92		340.90	341.42	341.42	341.42	341.42
2/9/2012	341.66	342.01	337.93	338.09	339.67	316.70	341.84	345.25		342.38	341.17	341.73	344.77	315.83	342.58	343.01		340.74	341.38	341.54	341.38	341.54
3/19/2012	341.71	342.10	338.02	338.19	339.61	316.85	341.89	345.39		342.43	341.26	341.79	344.94	316.55	342.67	342.97		340.92	341.45	341.62	341.45	341.62
4/17/2012	341.64	342.17	338.42	338.40	340.13	317.19	341.91	345.52		342.37	341.54	341.91	345.15	317.01	342.77	343.30		340.84	341.63	341.77	341.63	341.77
5/7/2012	341.56	342.23	338.10	338.90	339.71	316.80	341.94	345.76		342.21	341.24	341.81	344.98	316.55	342.70	343.32		340.90	341.52	341.60	341.52	341.60
6/8/2012	341.24	342.11	337.97	338.14	338.25	316.23	341.79	345.80		341.97	341.08	341.54	344.57	316.94	342.32	342.95		340.52	341.40	341.38	341.40	341.38
7/12/2012	341.04	341.98	337.90	338.12	339.80	315.80	341.42	343.30		341.86	341.01	341.32	344.49	316.45	342.16	342.79		340.30	341.28	341.14	341.28	341.14
8/14/2012	340.90	341.89	337.71	338.50	339.53	315.56	341.52	343.32		341.73	340.63	341.30	344.56	315.99	342.44	342.91		340.21	341.18	340.88	341.18	340.88
9/17/2012	340.82	341.97	338.02	338.36	339.57	315.80	341.31	343.11		341.50	341.12	341.33	344.51	315.95	342.35	342.97		340.17	341.06	340.86	341.06	340.86
10/3/2012	340.71	342.00	337.75	338.19	339.62	316.41	341.34	342.98		340.89	341.37	341.17	344.69	316.19	342.75	342.86		340.47	340.78	340.82	340.78	340.82
11/21/2012	341.38	342.03	337.81	338.04	339.65	316.52		342.79		341.32	340.96	341.64	344.85	316.61	342.65	342.75		340.78	341.29	341.20	341.29	341.20
12/19/2012	341.51	342.09	337.94	337.87	339.67	316.61	341.38	342.70		341.39	340.84	341.69	344.70	316.39	342.50	342.55		340.69	341.20	341.11	341.20	341.11
1/15/2013	341.39	342.04	337.84	337.94	339.60	316.33	341.46	342.65		341.47	341.03	341.64	344.75	316.23	342.44	342.51		340.66	341.24	341.16	341.24	341.16
2/11/2013	341.36	342.08	337.70	337.88	339.34	316.04	341.53	342.70		341.53	341.21	341.59	344.72	316.41	342.33	342.56		340.58	341.36	341.12	341.36	341.12
3/11/2013	341.41	342.15	337.67	337.99	339.26	315.97	341.65	342.81		341.50	341.28	341.67	344.84	316.62	342.42	342.63		340.70	341.50	341.29	341.50	341.29
4/17/2013	341.45	342.18	337.88	338.22	339.29	316.30	341.77	342.88		340.62	341.31	341.75	344.93	316.95	342.50	342.87		340.76	341.52	341.43	341.52	341.43
5/25/2013	341.48	342.26	338.09	338.60	339.31	316.30	341.98	342.96		341.70	341.33	341.80	345.11	317.46	342.62	343.15		340.94	341.54	341.67	341.54	341.67
6/25/2013	341.61	342.31	338.27	339.13	339.39	316.84	341.94	342.99		341.72	341.28	341.78	345.15	317.38	342.66	343.18		340.91	341.61	341.65	341.61	341.65
7/9/2013	341.70	342.27	338.23	338.54	339.47	316.72	341.80	342.94		341.62	341.21	341.74	345.18	317.32	342.62	343.15		340.88	341.59	341.70	341.59	341.70
7/30/2013	341.50									341.73	341.47	341.81						341.08	341.60	341.78	341.60	341.78
8/20/2013	341.63	342.12	338.16	338.45	339.80	316.61	341.84	342.89		341.51	341.22	341.71	345.21	317.25	342.59	343.09		340.84	341.65	341.75	341.65	341.75
9/11/2013	341.72	342.08	338.10	338.52	339.76	316.63	341.73	342.81		340.66	341.31	341.75	345.17	317.41	342.69	343.03		340.88	341.71	341.72	341.71	341.72
9/26/2013	341.67									341.74	341.35							341.01	341.59	341.68	341.59	341.68
10/16/2013	341.77	341.99	338.21	338.34	339.92	316.56	341.70	342.68		340.75	341.43	341.84	345.07	317.46	342.77	343.15		340.94	341.76	341.78	341.76	341.78
11/18/2013	341.83	341.82	338.34	338.43	340.07	316.42	341.55	342.64		341.93	341.62	342.06	345.14	317.78	342.98	343.43		341.00	341.82	341.86	341.82	341.86

Note: All Water Level in mASL

Table 1 : Selected Bedrock Groundwater Elevations - Eastview Road Landfill Site

	Bedrock Locations																					
Monitor Date	**5-III**	**13-I**	**14-IV**	**15-I**	**16-VII**	**16-VIII**	**19-I**	**20-I /IR**	**37-I**	**37-IR**	**50-I**	**53-I**	**54-I**	**90-I**	**90-II**	**91-I**	**92-I**	**93-I**	**94-I**	**95-I**	**94-I**	**95-I**
12/23/2013	341.62	341.87	338.05	338.16	339.96	316.31	341.49	342.48		341.78	341.47	341.99	344.99	317.31	342.82	343.17		340.86	341.72	341.69	341.72	341.69
1/9/2014	341.55	341.92	337.97	338.09	339.81	316.27	341.31	342.43		341.67	341.35	341.68	344.89	317.15	342.36	342.65		340.76	341.21	341.39	341.21	341.39
2/10/2014	341.52	342.17	338.20	338.04	339.59	316.23	341.46	342.50		341.84	341.40	341.81	344.82	317.12	342.48	342.84		340.84	341.35	341.61	341.35	341.61
3/14/2014	341.69	342.36	338.39	338.22	339.66	316.39	341.77	342.74		342.09	341.22	342.09	344.93	317.27	337.64	343.07		340.99	341.71	341.78	341.71	341.78
4/8/2014	341.85	342.39	338.46	338.49	339.45	316.42	341.90	343.03		342.30	341.31	342.24	345.25	317.41	343.00	343.35		341.05	341.83	341.90	341.83	341.90
5/2/2014	342.11	342.57	338.68	339.21	339.28	316.51	342.34	343.16		342.71	341.25	342.41	345.60	317.70	343.16	343.52		341.35	342.10	342.15	342.10	342.15
6/13/2014	341.98	342.48	338.57	339.12	339.52	316.67	342.17	343.20		342.52	341.30	342.31	345.70	317.73	343.31	343.56		341.32	342.03	342.24	342.03	342.24
7/15/2014	341.80	342.36	338.55	339.04	339.59	316.71	342.09	343.12		342.27	341.38	342.20	345.65	317.60	343.13	343.49		341.23	341.73	342.00	341.73	342.00
8/8/2014	341.49	342.19	338.32	338.90	339.47	316.59	342.04	343.01		341.71	341.46	342.00	345.38	317.36	343.20	343.36		341.01	341.65	341.64	341.65	341.64
9/3/2014	341.53	342.21	338.30	338.85	339.45	316.50	341.85	342.98		341.79	341.42	341.76	345.25	317.42	343.25	343.34		340.97	341.57	341.59	341.57	341.59
10/6/2014	341.49	342.13	338.22	338.88	339.54	316.42	341.72	342.82		341.76	341.46	341.85	345.17	317.31	343.17	343.15		341.05	341.69	341.42	341.69	341.42
11/12/2014	341.54	342.08	338.05	338.79	339.67	316.48	341.64	342.67		341.50	341.42	341.78	344.91	317.20	343.06	343.35		341.03	341.55	341.50	341.55	341.50
12/4/2014	341.47	342.05	337.94	338.57	339.60	316.40	341.52	342.69		341.57	341.37	341.66	345.03	317.09	342.85	343.20		340.94	341.41	341.59	341.41	341.59

Note: All Water Level in mASL

Table 2: Bedrock Groundwater Quality - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 4-IR Bedrock 19.4 - 20.9 m	4/30/2009	Maxx	7.6	663	259	360	41	0.035	< 1	73	12	43	1	0.55	0.011	0.15	54	< 0.01	< 0.1
	6/24/2009	Maxx	8	670	244	340	44	0.026	< 1	69	11	41	0.9	0.53	0.01	0.2	57	< 0.01	< 0.1
	8/26/2009	Maxx	8	665	249	330	39	0.031	< 1	68	10	38	0.96	0.47	0.01	0.18	54	< 0.01	< 0.1
	11/16/2009	Maxx	8	680	243	350	42	0.027	< 1	72	11	41	0.97	0.4	0.01	0.16	53	< 0.01	< 0.1
	5/18/2010	Maxx	8	680	242	320	49	0.033	< 1	68	10	37	1	0.5	0.018	0.28	60	< 0.01	< 0.1
	7/27/2010	Maxx	8	680	244	340	42	0.03	< 1	72	11	40	0.94	0.26	0.011	0.06	60	< 0.01	< 0.1
	10/26/2010	Maxx	8.13	658	246	340	33	0.022	< 1	71	9.7	38	0.91	< 0.1	0.002	< 0.05	55	< 0.01	< 0.1
	12/6/2010	Maxx	7.97	677	240	340	42	0.027	< 1	70	11	40	0.92	0.54	0.01	0.14	55	< 0.01	< 0.1
	4/27/2011	Maxx	8.04	695	243	380	43	0.034	< 1	75	13	46	1.1	0.46	0.01	0.18	57	0.05	< 0.1
	7/20/2011	Maxx	8.03	703	234	340	45	0.03	< 1	70	12	40	0.97	0.48	0.01	0.2	57	0.02	< 0.1
	9/30/2011	Maxx	8.1	689	247	330	43	0.027	< 1	70	11	38	1	0.51	0.01	0.24	59	< 0.01	< 0.1
	11/1/2011	Maxx	8.09	689	240	330	41	0.029	< 1	71	11	37	1	0.53	0.011	0.2	56	0.04	< 0.1
	5/8/2012	Maxx	8.07	690	250	330	47	0.032	< 1	70	11	37	0.96	0.44	0.011	0.11	60	< 0.01	< 0.1
	8/15/2012	Maxx	8.03	690	240	350	43	0.03	< 1	73	12	41	1	0.54	0.01	0.17	56	< 0.01	< 0.1
	10/3/2012	Maxx	8.1	690	250	330	46	0.023	< 1	68	12	39	0.98	0.5	0.01	0.25	57	< 0.01	< 0.1
	11/21/2012	Maxx	8.08	690	250	340	45	0.028	< 1	71	12	41	0.96	0.5	0.011	0.18	55	< 0.01	< 0.1
	5/24/2013	MAX	8.07	700	240	350	46	0.039	< 1	75	12	41	0.96	0.42	0.012	0.26	58	< 0.01	< 0.1
	7/30/2013	MAX	7.99	690	240	350	48	0.027	< 1	75	12	39	0.95	0.49	0.011	0.19	60	< 0.01	< 0.1
	9/27/2013	MAX	8.21	690	240	360	45	0.03	< 1	75	12	41	1	0.52	0.011	0.18	57	< 0.01	< 0.1
	11/13/2013	MAX	8.09	700	240	340	45	0.023	< 1	72	12	40	0.95	0.5	0.011	0.17	57	< 0.01	< 0.1
	5/6/2014	MAX	8.14	700	240	350	46	0.032	< 1	73	12	40	0.97	0.46	0.012	0.22	57	< 0.01	< 0.1
	8/1/2014	MAX	8.04	690	240	340	45	0.028	< 1	69	12	40	0.89	0.46	0.011	0.23	60	< 0.01	< 0.1
	10/2/2014	MAX	8.02	690	250	340	44	0.03	< 1	71	12	40	0.95	0.5	0.011	0.22	57	< 0.01	< 0.1
	11/18/2014	MAX	8.04	720	240	360	46	0.034	< 1	75	13	41	1	0.56	0.011	0.17	58	< 0.01	< 0.1
Monitor 9A-I Bedrock 25.1 - 25.9 m	4/30/2009	Maxx	7.8	355	183	110	12	0.13	< 1	22	43	13	0.83	0.22	0.01	0.36	5	< 0.01	< 0.1
	8/27/2009	Maxx	8.2	355	167	98	11	0.13	< 1	22	39	11	0.64	0.36	0.016	0.35	6	< 0.01	< 0.1
	10/27/2010	Maxx	8.3	329	153	80	10	0.11	< 1	15	44	10	0.99	0.13	0.02	0.18	2	< 0.01	< 0.1
	4/28/2011	Maxx	8.21	366	169	100	10	0.12	< 1	22	39	11	0.81	0.22	0.01	0.41	10	< 0.01	< 0.1
	5/10/2012	Maxx	8.37	350	170	94	9.7	0.12	< 1	19	40	11	0.79	0.2	0.0096	0.27	8.5	< 0.01	< 0.1
	5/30/2013	MAX	8.29	360	160	97	9.5	0.12	< 1	21	40	11	0.95	0.19	0.0087	0.54	8.1	< 0.01	< 0.1
	5/13/2014	MAX	8.24	360	170	94	9.2	0.13	< 1	19	39	11	0.88	0.19	0.0089	0.51	9.9	< 0.01	< 0.1
Monitor 13-I Bedrock 24.4 - 25.62 m	4/28/2009	Maxx	8.2	282	154	80	< 1	0.1	< 1	18	41	8.7	0.85	0.14	0.007	0.34	1	< 0.01	< 0.1
	8/28/2009	Maxx	8	281	158	72	1	0.093	< 1	16	36	7.5	0.76	0.16	0.006	0.32	1	< 0.01	< 0.1
	10/27/2010	Maxx	8.14	284	147	77	< 1	0.11	< 1	17	33	8.5	0.75	< 0.1	0.008	0.3	1	< 0.01	< 0.1
	4/26/2011	Maxx	8.21	283	150	79	1	0.11	< 1	18	35	8.4	0.76	0.14	0.007	0.36	1	< 0.01	< 0.1
	5/14/2012	Maxx	7.99	280	150	81	< 1	0.11	< 1	18	37	8.6	0.82	0.11	0.0075	0.21	1	< 0.01	< 0.1
	5/29/2013	MAX	8.25	280	150	77	< 1	0.1	< 1	17	36	8.2	0.75	< 0.1	0.0079	0.4	1	< 0.01	< 0.1
	5/13/2014	MAX	8.18	280	150	71	< 1	0.12	< 1	16	36	7.6	0.78	0.2	0.0079	0.44	1	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

Table 2: Bedrock Groundwater Quality - Closed Eastview Road Landfill Site

AECOM

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor	4/30/2009	Maxx	7.8	304	169	82	1	0.1	< 1	20	48	7.7	1.7	< 0.1	< 0.002	0.12	1	< 0.01	< 0.1
14-IV	6/26/2009	Maxx	8	303	159	82	1	0.094	< 1	19	43	8.2	1.2	< 0.1	< 0.002	0.17	1	< 0.01	< 0.1
Bedrock	8/28/2009	Maxx	8.2	296	159	77	1	0.09	< 1	18	39	7.5	1.1	< 0.1	< 0.002	0.14	1	< 0.01	< 0.1
25.63 - 27.15 m	11/18/2009	Maxx	8.1	302	158	76	3	0.085	< 1	18	39	7.3	1.2	< 0.1	< 0.002	0.21	2	< 0.01	< 0.1
	5/19/2010	Maxx	8.2	302	156	76	< 1	0.094	< 1	18	39	7.7	1.2	< 0.1	< 0.002	0.14	2	< 0.01	< 0.1
	11/2/2010	Maxx	8.23	300	158	83	1	0.085	< 1	20	40	7.8	1.2	< 0.1	0.003	< 0.05	1	< 0.01	< 0.1
	5/3/2011	Maxx	8	302	158	78	< 1	0.096	< 1	19	40	7.7	1.2	< 0.1	< 0.002	0.16	1	< 0.01	< 0.1
	11/3/2011	Maxx	8.33	308	159	83	< 1	0.099	< 1	20	44	8.3	1.3	< 0.1	< 0.002	0.18	1	< 0.01	< 0.1
	5/14/2012	Maxx	8.11	300	160	75	1.4	0.089	< 1	18	40	7.3	1.1	< 0.1	0.003	0.063	1	< 0.01	< 0.1
	11/26/2012	Maxx	7.91	300	160	77	1.2	0.093	< 1	19	41	7.5	1.3	< 0.1	< 0.002	0.21	1	< 0.01	< 0.1
	6/3/2013	MAX	8.13	300	160	73	1.1	0.098	< 1	18	41	7	1.1	< 0.1	< 0.002	0.24	1	< 0.01	< 0.1
	11/20/2013	MAX	8.05	300	160	71	1.4	0.093	< 1	17	38	6.9	1.1	< 0.1	0.0022	0.18	1	< 0.01	< 0.1
	5/15/2014	MAX	8.19	300	160	79	< 1	0.089	< 1	19	40	7.4	1.1	< 0.1	0.0034	0.23	1	< 0.01	< 0.1
	11/21/2014	MAX	8.2	300	160	75	1.2	0.11	< 1	18	43	7.2	1.3	< 0.1	< 0.002	0.21	1	< 0.01	< 0.1
Monitor	4/29/2009	Maxx	7.8	313	182	92	1	0.09	< 1	20	39	9.9	1.2	< 0.1	< 0.002	0.26	1	< 0.01	< 0.1
15-I	8/25/2009	Maxx	8.2	304	170	79	1	0.094	< 1	19	36	7.7	0.9	< 0.1	< 0.002	0.25	1	< 0.01	< 0.1
Bedrock	10/25/2010	Maxx	8.25	303	161	73	2	0.095	1	17	44	7.2	1.1	< 0.1	< 0.002	0.19	1	< 0.01	< 0.1
25.92 - 27.14 m	4/19/2011	Maxx	8.17	306	161	78	2	0.091	< 1	18	40	7.9	1.1	< 0.1	< 0.002	0.25	1	< 0.01	< 0.1
	5/7/2012	Maxx	8.19	310	160	78	1.3	0.09	< 1	18	41	7.9	1.1	< 0.1	< 0.002	0.12	1	< 0.01	< 0.1
	5/27/2013	MAX	8.21	320	160	85		0.081		19	40	8.8	1.1	< 0.1	< 0.002	0.33			
	5/8/2014	MAX	8.12	310	160	79	1.3	0.096	< 1	19	41	7.9	1.1	< 0.1	< 0.002	0.26	1	< 0.01	< 0.1
Monitor	4/29/2009	Maxx	7.5	308	177	89	< 1	0.11	< 1	21	42	8.9	1.7	< 0.1	0.002	0.29	1	< 0.01	< 0.1
16-VII	6/22/2009	Maxx	8.2	310	167	85	2	0.11	< 1	20	38	8.4	1.3	< 0.1	0.003	0.4	1	< 0.01	< 0.1
Bedrock	8/25/2009	Maxx	8.2	311	172	79	1	0.11	< 1	19	38	7.9	1.5	< 0.1	0.002	0.38	1	< 0.01	< 0.1
25.48 - 27 m	11/16/2009	Maxx	8.2	308	166	89	1	0.1	< 1	21	40	8.9	1.6	< 0.1	0.003	0.39	1	< 0.01	< 0.1
	5/18/2010	Maxx	8.3	306	162	78	< 1	0.098	< 1	19	36	7.7	1.6	< 0.1	0.003	0.38	1	< 0.01	< 0.1
	10/25/2010	Maxx	8.13	306	164	85	< 1	0.11	< 1	20	39	8.3	1.7	0.13	0.004	0.33	1	< 0.01	< 0.1
	4/19/2011	Maxx	8.2	307	163	85	1	0.1	< 1	20	38	8.3	1.4	< 0.1	0.003	0.37	1	< 0.01	< 0.1
	11/2/2011	Maxx	8.3	313	164	86	< 1	0.11	< 1	20	42	8.9	1.6	0.12	0.004	0.49	1	< 0.01	< 0.1
	5/14/2012	Maxx	7.98	310	170	80	1.2	0.09	< 1	19	38	8	1.5	< 0.1	0.0037	0.25	5	< 0.01	< 0.1
	11/21/2012	Maxx	7.94	310	180	84	< 1	0.1	< 1	20	39	8.3	1.7	0.15	0.0041	0.35	1	< 0.01	< 0.1
	5/22/2013	MAX	8.24	310	160	99	< 1	0.12	< 1	24	45	9.5	1.8	< 0.1	0.0038	0.39	1.5	< 0.01	< 0.1
	11/14/2013	MAX	8.01	300	170	82	1	0.12	< 1	19	38	8.1	1.5	< 0.1	0.0037	0.38	1	0.014	< 0.1
	5/7/2014	MAX	8.24	310	170	82	< 1	0.11	< 1	20	39	7.9	1.6	< 0.1	0.0038	0.5	1	< 0.01	< 0.1
	11/19/2014	MAX	8.17	310	170	84	1.6	0.11	< 1	20	40	8.4	1.6	0.17	0.005	0.39	1	< 0.01	< 0.1

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	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 17-I Bedrock 24.39 - 25.61 m	4/30/2009	Maxx	7.5	299	175	93	< 1	0.089	< 1	22	35	9.1	0.81	0.6	0.006	0.41	1	< 0.01	< 0.1
	8/27/2009	Maxx	8.2	294	161	90	1	0.17	< 1	21	35	9.3	0.87	0.51	0.005	0.42	1	< 0.01	< 0.1
	10/27/2010	Maxx	8.21	302	160	88	< 1	0.088	< 1	20	35	9.3	0.74	0.49	0.006	0.39	1	< 0.01	< 0.1
	4/28/2011	Maxx	8.01	300	156	84	1	0.08	< 1	20	32	8.5	0.72	0.51	0.005	0.42	2	< 0.01	< 0.1
	5/10/2012	Maxx	8.4	290	160	84	< 1	0.089	< 1	19	32	9.1	0.65	0.5	0.0061	0.35	1.1	< 0.01	< 0.1
	5/29/2013	MAX	8.19	300	160	94	< 1	0.087	< 1	22	35	9.6	0.75	0.46	0.0057	0.48	1	< 0.01	< 0.1
	5/13/2014	MAX	8.17	300	160	95	1	0.078	< 1	22	36	9.8	0.77	0.52	0.0083	0.55	1	< 0.01	< 0.1
Monitor 19-I Bedrock 24.63 - 25.84 m	5/1/2009	Maxx	8	432	229	220	4	0.035	< 1	38	11	31	0.99	0.17	0.005	0.2	16	< 0.01	< 0.1
	8/26/2009	Maxx	7.9	393	202	170	7	0.057	< 1	28	15	24	0.72	< 0.1	0.003	0.21	12	< 0.01	< 0.1
	10/26/2010	Maxx	8.21	441	217	230	4	0.035	< 1	38	12	32	0.98	0.12	0.005	0.19	17	< 0.01	< 0.1
	5/5/2011	Maxx	8.11	437	217	210	3	0.031	< 1	36	11	30	0.97	0.1	0.005	0.21	18	0.01	< 0.1
	5/9/2012	Maxx	8.19	440	220	210	3.3	0.033	< 1	34	11	29	0.92	0.16	0.0053	0.13	18	< 0.01	< 0.1
	5/24/2013	MAX	8.14	440	210	220	4.4	0.033	< 1	37	11	31	0.91	< 0.1	0.0065	0.28	19	< 0.01	< 0.1
	5/6/2014	MAX	8.27	440	220	220	2.8	0.036	< 1	37	11	30	0.93	0.13	0.0059	0.25	16	< 0.01	< 0.1
Monitor 20-I Bedrock 17.61 - 18.83 m	5/1/2009	Maxx	7.6	389	217	200	2	0.033	< 1	30	13	29	0.92	0.11	0.002	0.18	12	< 0.01	< 0.1
	5/19/2009	Maxx	7.9	392	209	200	< 1	0.035	< 1	30	12	29	0.92	0.12	0.002	0.21	11	< 0.01	< 0.1
	8/26/2009	N/A																	
	1/21/2010	Maxx	8.1	480	219	210	11	0.66	< 1	33	20	31	2.2	< 0.1	0.01	0.16	24	< 0.01	< 0.1
	5/17/2010	Maxx	8.3	423	212	210	2	0.17	< 1	32	13	32	1.4	< 0.1	0.004	0.16	16	< 0.01	< 0.1
	10/28/2010	Maxx	8.05	416	210	200	2	0.11	< 1	31	12	31	1.1	0.17	0.007	0.16	13	< 0.01	< 0.1
	5/2/2011	Maxx	8.18	420	213	190	< 1	0.13	< 1	30	11	29	0.99	0.26	0.004	0.26	14	0.01	< 0.1
	5/15/2012	Maxx	8.06	680	230	300	62	0.03	< 1	59	22	37	1.3	< 0.1	0.019	0.062	34	< 0.01	0.16
	5/22/2013	N/A																	
	5/8/2014	MAX	7.91	720	230	300	79	0.075	< 1	60	26	36	1.2	< 0.1	0.023	0.13	33	< 0.01	< 0.1
Monitor 37-I Bedrock 23 - 27.5 m	4/29/2009	Maxx	7.5	1170	129	390	282	0.061	< 1	64	65	57	1.2	0.34	0.007	0.45	15	< 0.01	< 0.1
	6/23/2009	Maxx	8	1210	123	400	309	0.066	< 1	65	65	58	1.2	1.4	0.017	0.49	17	< 0.01	< 0.1
	8/28/2009	Maxx	8	1220	118	400	297	0.064	< 1	65	68	58	1.1	0.3	0.007	0.45	15	< 0.01	< 0.1
	11/18/2009	Maxx	8	1240	113	410	305	0.057	1	67	69	58	1.2	0.29	0.007	0.43	15	< 0.01	< 0.1
	5/19/2010	Maxx	8.1	1300	99	400	359	0.066	< 1	60	72	62	1.2	0.28	0.008	0.41	13	< 0.01	< 0.1
	7/27/2010	Maxx	7.7	1260	81	400	329	0.065	< 1	49	78	67	1.3	< 0.1	0.004	0.47	8	< 0.01	< 0.1
	10/28/2010	Maxx	8.79	470	28	93	121	0.03	2	9.6	45	17	1.9	0.13	0.032	0.98	1	< 0.01	< 0.1
	12/6/2010	Maxx	7.63	1020	348	520	97	< 0.01	< 1	130	20	48	1.1	< 0.1	0.005	< 0.05	45	< 0.01	< 0.1
	5/9/2011	Maxx	7.83	491	32	100	127	0.029	< 1	11	44	18	1.9	< 0.1	0.045	0.9	1	< 0.01	< 0.1
	7/20/2011	Maxx	7.62	591	25	130	152	0.035	1	14	49	23	1.8	< 0.1	0.046	0.78	4	< 0.01	< 0.1
	9/30/2011	Maxx	7.56	573	26	130	149	0.032	1	14	53	23	1.7	0.23	0.071	0.76	1	< 0.01	< 0.1
	11/8/2011	Maxx	8.15	574	24	130	148	0.027	3	14	48	22	1.8	< 0.1	0.045	0.74	1	< 0.01	< 0.1
	8/2/2014	MAX																	
	11/20/2014	MAX																	

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			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard. as CaCO3 mg/L	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 37-IR Bedrock 23.7 - 27.28 m	2/14/2012	Maxx	7.99	625	248	290	24	0.025	< 1	65	28	31	3	< 0.1	0.035	0.39	61	0.02	0.1
	5/9/2012	Maxx	8.1	510	230	250	13	0.028	< 1	54	15	27	1.4	< 0.1	0.015	0.14	34	< 0.01	< 0.1
	8/15/2012	Maxx	8.04	510	220	250	16	0.028	< 1	55	13	28	1.1	0.15	0.01	0.17	30	< 0.01	< 0.1
	10/4/2012	Maxx	8.06	520	220	250	17	0.022	< 1	54	13	29	1.1	0.16	0.011	0.21	28	< 0.01	< 0.1
	11/22/2012	Maxx	7.85	750	290	260	31	0.041	< 1	60	55	26	4.6	< 0.1	0.013	0.11	56	< 0.01	0.32
	5/23/2013	MAX	7.97	610	240	290	29	0.038	< 1	71	18	28	1.6	< 0.1	0.023	0.12	33	< 0.01	< 0.1
	7/30/2013	MAX	7.97	570	230	270	29	0.034	< 1	63	18	28	1.3	< 0.1	0.018	0.11	31	0.017	< 0.1
	9/26/2013	MAX	8.2	560	220	280	29	0.031	< 1	62	16	30	1.3	< 0.1	0.017	0.14	29	< 0.01	< 0.1
	11/13/2013	MAX	8.05	560	230	270	29	0.027	< 1	59	16	29	1.2	< 0.1	0.015	0.12	29	< 0.01	< 0.1
	5/7/2014	MAX	8.03	600	240	270	28	0.033	< 1	66	18	27	1.5	< 0.1	0.015	0.16	29	< 0.01	< 0.1
	8/2/2014	MAX	7.98	580	230	260	32	0.03	< 1	57	17	28	1.1	< 0.1	0.02	0.18	26	0.013	< 0.1
	10/1/2014	MAX	7.87	590	240	270	32	0.043	< 1	62	20	28	1.4	0.21	0.025	0.25	26	0.028	< 0.1
	11/20/2014	MAX	8.06	580	240	250	31	0.031	< 1	56	16	26	1.1	0.18	0.019	0.17	28	0.03	< 0.1
Monitor 37-IIR Bedrock 31.08 - 32.6 m	2/14/2012	Maxx	7.93	796	259	350	48	0.018	< 1	92	41	30	2.1	< 0.1	0.095	0.05	93	< 0.01	1.5
	5/7/2012	NA																	
	8/15/2012	Maxx	8.04	700	240	280	32	0.02	< 1	69	40	25	2.1	< 0.1	0.069	0.061	75	< 0.01	0.66
	10/4/2012	Maxx	8.03	630	230	250	24	0.013	< 1	60	37	26	1.6	< 0.1	0.05	0.17	61	0.068	0.18
	11/22/2012	Maxx	7.92	580	230	230	18	0.02	< 1	56	35	23	1.4	0.33	0.063	0.12	35	0.033	< 0.1
	5/23/2013	MAX	8.07	520	220	240	13	0.022	< 1	56	22	24	1.2	0.21	0.029	0.23	30	< 0.01	< 0.1
	7/30/2013	MAX	8.03	510	220	240	14	0.019	< 1	55	24	24	1.3	< 0.1	0.011	< 0.05	30	< 0.01	0.12
	9/26/2013	MAX	8.23	520	220	240	15	0.017	< 1	55	22	25	1.4	< 0.1	0.02	< 0.05	27	< 0.01	< 0.1
	11/13/2013	MAX	8.09	530	230	220	22	0.019	< 1	50	29	23	1.4	0.21	0.034	< 0.05	27	< 0.05	< 0.5
	5/14/2014	MAX	8.08	580	210	240	42	< 0.01	< 1	55	23	26	1.5	0.48	0.029	0.23	22	0.03	< 0.1
	8/2/2014	MAX	8.02	550	220	230	32	0.019	< 1	52	24	25	1.5	0.39	0.029	0.25	23	0.012	< 0.1
	10/1/2014	MAX	7.96	540	230	240	26	0.023	< 1	54	23	25	1.6	0.43	0.032	0.22	24	< 0.01	< 0.1
	11/20/2014	MAX	8.11	550	220	230	31	0.016	< 1	55	21	23	1.4	0.4	0.03	0.17	26	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

Table 2: Bedrock Groundwater Quality - Closed Eastview Road Landfill Site

Monitor

50-I
Bedrock
39.8 - 41.2 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Conductivity	Alk.	Hard.	Cl	B	Phenol	Ca	Na	Mg	K	Fe	Mn	NH3-N	SO4	NO2-N	NO3-N
				as CaCO3 mg/L		mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
5/1/2009	Maxx	7.8	625	213	300	61	0.042	< 1	65	17	33	1.1	0.46	0.04	0.26	25	< 0.01	< 0.1
6/22/2009	Maxx	8	646	208	290	71	0.045	< 1	61	17	34	1.1	0.44	0.035	0.31	28	< 0.01	< 0.1
8/27/2009	Maxx	7.9	627	211	270	63	0.048	< 1	59	17	30	0.76	0.43	0.029	0.28	24	< 0.01	< 0.1
11/16/2009	Maxx	7.9	616	199	290	59	0.045	< 1	59	20	35	1.1	0.49	0.034	0.35	25	< 0.01	< 0.1
5/19/2010	Maxx	8.1	645	198	270	76	0.047	< 1	55	18	33	1	0.47	0.032	0.33	27	< 0.01	< 0.1
7/27/2010	Maxx	8	575	190	220	58	0.061	< 1	47	26	26	0.88	0.34	0.033	0.19	21	< 0.01	< 0.1
10/21/2010	Maxx	7.96	601	195	250	61	0.06	< 1	53	22	30	0.99	0.4	0.037	0.3	22	< 0.01	< 0.1
12/6/2010	Maxx	7.99	655	198	290	74	0.046	< 1	60	21	35	1	0.51	0.036	0.32	24	< 0.01	< 0.1
4/27/2011	Maxx	8.04	672	193	290	78	0.051	< 1	59	20	34	0.96	0.51	0.042	0.31	26	0.06	< 0.1
7/20/2011	Maxx	8.06	674	192	280	81	0.057	< 1	57	23	32	0.98	0.5	0.037	0.3	20	0.05	< 0.1
9/30/2011	Maxx	8.11	563	189	220	55	0.064	< 1	46	29	25	0.96	0.42	0.034	0.3	18	< 0.01	< 0.1
10/31/2011	Maxx	8.15	668	194	290	76	0.053	< 1	59	23	36	1.1	0.49	0.036	0.41	24	< 0.01	< 0.1
5/7/2012	Maxx	8.07	690	200	300	84	0.051	< 1	61	23	35	1.1	0.55	0.037	0.26	23	< 0.01	< 0.1
8/15/2012	Maxx	8.03	620	190	270	68	0.054	< 1	54	22	32	1	0.51	0.031	0.35	22	< 0.01	< 0.1
10/3/2012	Maxx	8.06	590	200	250	61	0.052	1	50	24	30	0.99	0.45	0.031	0.4	19	< 0.01	< 0.1
11/20/2012	Maxx	8.03	640	200	280	73	0.055	< 1	57	23	33	1.1	0.52	0.033	0.42	20	< 0.01	< 0.1
5/21/2013	MAX	8.01	750	190	320	100	0.057	< 1	66	24	37	1.1	0.56	0.04	0.43	27	< 0.01	< 0.1
7/30/2013	MAX	8.07	740	190	330	110	0.053	< 1	69	24	38	1.1	0.57	0.041	0.43	25	< 0.01	< 0.1
9/26/2013	MAX	8.31	750	190	320	100	0.052	< 1	66	24	38	1.1	0.55	0.04	0.39	24	< 0.01	< 0.1
11/13/2013	MAX	8.06	780	200	330	110	0.047	< 1	69	23	39	1.1	0.53	0.042	0.37	24	< 0.01	< 0.1
5/5/2014	MAX	7.96	750	190	320	100	0.047	< 1	66	23	37	1.1	0.58	0.039	0.35	24	< 0.01	< 0.1
8/1/2014	MAX	7.96	800	200	330	120	0.042	< 1	67	23	40	1	0.53	0.037	0.43	24	0.012	< 0.1
10/1/2014	MAX	8	780	200	340	120	0.058	< 1	68	24	40	1.1	0.56	0.039	0.43	23	< 0.01	< 0.1
11/17/2014	MAX	7.98	800	190	340	120	0.061	< 1	71	25	40	1.2	0.58	0.038	0.4	24	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

Table 2: Bedrock Groundwater Quality - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 53-I Bedrock 21 - 22.6 m	4/30/2009	Maxx	7.9	424	228	220	6	0.044	< 1	41	14	28	1	0.48	0.005	0.41	7	< 0.01	< 0.1
	6/24/2009	Maxx	8	432	221	210	6	0.035	< 1	39	14	27	0.94	0.48	0.004	0.44	9	< 0.01	< 0.1
	8/27/2009	Maxx	8	421	228	200	5	0.038	< 1	39	12	24	0.74	0.55	0.004	0.43	9	< 0.01	< 0.1
	11/17/2009	Maxx	8	421	216	210	4	0.037	< 1	39	12	26	0.96	0.54	0.003	0.45	8	< 0.01	< 0.1
	5/17/2010	Maxx	8.2	421	216	220	3	0.039	< 1	40	13	28	1	0.55	0.003	0.41	9	< 0.01	< 0.1
	7/27/2010	Maxx	8	421	217	200	3	0.041	< 1	38	12	26	0.91	0.46	0.002	0.45	8	< 0.01	< 0.1
	10/26/2010	Maxx	8.09	422	214	210	3	0.044	< 1	39	12	27	0.98	0.56	0.003	0.43	8	< 0.01	< 0.1
	12/6/2010	Maxx	8.02	420	214	210	3	0.039	< 1	39	13	26	0.96	0.53	0.003	0.42	8	< 0.01	< 0.1
	4/26/2011	Maxx	8.17	419	214	210	4	0.043	< 1	40	13	27	0.98	0.52	0.003	0.47	8	< 0.01	< 0.1
	7/20/2011	Maxx	8.04	427	209	200	3	0.044	< 1	37	13	26	0.96	0.4	0.002	0.4	7	0.04	< 0.1
	9/30/2011	Maxx	8.15	419	223	200	3	0.041	< 1	37	13	26	1	0.51	0.003	0.47	8	< 0.01	< 0.1
	10/31/2011	Maxx	8.21	418	212	200	3	0.044	< 1	38	13	26	1	0.55	0.003	0.53	8	0.06	< 0.1
	5/9/2012	Maxx	8.11	420	220	190	2.9	0.044	< 1	36	14	25	0.95	0.48	0.004	0.36	7.2	< 0.01	< 0.1
	8/16/2012	Maxx	8.01	410	210	200	2.7	0.047	< 1	37	14	26	1	0.52	0.0035	0.45	7.6	< 0.01	< 0.1
	10/4/2012	Maxx	8.1	410	210	190	2.8	0.042	< 1	35	14	26	0.97	0.46	0.0039	0.51	6.6	< 0.01	< 0.1
	11/23/2012	Maxx	7.88	410	210	190	2.5	0.046	< 1	36	14	24	0.95	0.47	0.0039	0.51	6.3	< 0.01	< 0.1
	5/27/2013	MAX	8.12	420	210	200		0.042	< 1	37	14	26	0.99	0.54	0.0036	0.58			
	7/30/2013	MAX	8.11	410	210	200	3	0.047	< 1	37	14	25	0.96	0.54	0.0033	0.51	7.3	< 0.01	< 0.1
	9/26/2013	MAX	8.3	410	210	200	3.6	0.045	< 1	37	14	26	1	0.54	0.0034	0.51	7	< 0.01	< 0.1
	11/18/2013	MAX	8	410	210	190	2.7	0.045	< 1	35	14	24	0.94	0.49	0.0038	0.49	5.5	< 0.01	< 0.1
	5/6/2014	MAX	8.25	410	210	190	3	0.051	< 1	36	15	25	0.96	0.46	0.004	0.47	6.4	< 0.01	< 0.1
	8/1/2014	MAX	8.1	410	210	190	2.9	0.044	< 1	34	14	25	0.87	0.46	0.0033	0.51	6.2	0.011	< 0.1
	10/2/2014	MAX	8.05	400	210	190	2.6	0.05	< 1	34	14	24	0.98	0.48	0.0031	0.51	6.1	< 0.01	< 0.1
	11/20/2014	MAX	8.15	410	210	180	4.1	0.046	< 1	33	14	23	0.84	0.44	0.0034	0.47	6	< 0.01	< 0.1
Monitor 54-I Bedrock 25.9 - 27.4 m	5/1/2009	Maxx	7.6	561	245	280	25	0.11	< 1	57	17	35	1.7	0.12	0.016	0.09	35	< 0.01	< 0.1
	6/22/2009	Maxx	8.1	588	240	250	27	0.12	< 1	53	28	29	2.6	< 0.1	0.011	0.11	35	< 0.01	0.2
	8/26/2009	Maxx	8	472	223	230	11	0.078	< 1	46	11	27	1.1	< 0.1	0.01	0.13	23	< 0.01	< 0.1
	11/16/2009	Maxx	8.1	459	216	230	8	0.062	< 1	43	11	30	1.2	< 0.1	0.009	0.14	21	< 0.01	< 0.1
	5/17/2010	Maxx	8.2	452	214	240	8	0.067	< 1	43	12	31	1.3	< 0.1	0.01	0.11	21	< 0.01	< 0.1
	10/25/2010	Maxx	8.03	448	211	220	8	0.06	< 1	40	11	28	1.1	< 0.1	0.007	0.1	20	< 0.01	< 0.1
	5/5/2011	Maxx	8.11	435	211	220	5	0.06	< 1	40	10	28	1.1	< 0.1	0.008	0.16	19	0.04	< 0.1
	11/8/2011	Maxx	8.11	445	212	220	6	0.066	1	40	10	30	1.1	< 0.1	0.008	0.12	20	< 0.01	< 0.1
	5/8/2012	Maxx	8.13	440	210	200	6.8	0.056	< 1	37	9	26	1	< 0.1	0.0076	0.093	20	< 0.01	< 0.1
	11/29/2012	Maxx	7.97	460	220	230	13	0.059	< 1	41	12	32	1.1	< 0.1	0.0097	0.29	20	< 0.01	< 0.1
	5/27/2013	MAX	8.05	590	220	270		0.074		51	14	34	1.2	< 0.1	0.011	0.25			
	11/19/2013	MAX	7.95	450	220	210	7.8	0.045	< 1	37	9.8	28	0.97	< 0.1	0.0061	0.14	18	0.067	< 0.1
	5/7/2014	MAX	8.11	610	230	270	42	0.08	< 1	52	17	33	1.2	< 0.1	0.011	0.21	30	< 0.01	< 0.1
	11/24/2014	MAX	8.07	510	220	230	23	0.033	< 1	45	13	29	0.98	< 0.1	0.0087	0.19	22	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

Table 2: Bedrock Groundwater Quality - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond- uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 90-II bedrock 31.42 - 32.94 m	5/1/2009	Maxx	7.8	735	354	400	16	0.014	< 1	110	12	31	0.58	< 0.1	0.01	< 0.05	39	< 0.01	< 0.1
	6/24/2009	Maxx	7.7	750	351	400	17	< 0.01	< 1	110	13	33	0.56	< 0.1	0.01	< 0.05	40	< 0.01	< 0.1
	8/26/2009	Maxx	7.9	685	331	350	15	0.026	1	92	9.8	29	0.61	< 0.1	0.011	< 0.05	36	< 0.01	< 0.1
	11/16/2009	Maxx	7.9	604	284	320	9	0.016	< 1	78	10	32	0.76	0.11	0.01	0.24	32	< 0.01	< 0.1
	5/17/2010	Maxx	8.1	772	362	420	21	< 0.01	< 1	110	11	33	0.6	< 0.1	0.005	0.07	42	< 0.01	< 0.1
	7/27/2010	NA																	
	10/25/2010	Maxx	7.85	763	332	410	31	0.013	< 1	110	12	34	0.83	< 0.1	0.011	< 0.05	39	< 0.01	< 0.1
	12/6/2010	NA																	
	5/5/2011	Maxx	7.89	746	344	370	17	0.01	< 1	100	11	28	0.62	< 0.1	0.005	< 0.05	35	< 0.01	< 0.1
	11/1/2011	Maxx	7.92	622	286	310	11	0.015	< 1	77	10	28	0.67	0.12	0.01	0.15	31	< 0.01	< 0.1
	5/8/2012	Maxx	7.89	690	320	320	16	0.017	< 1	84	10	27	0.6	< 0.1	0.0075	< 0.05	30	< 0.01	< 0.1
	11/23/2012	Maxx	7.83	610	270	300	17	0.018	< 1	70	10	30	0.77	< 0.1	0.0095	0.055	29	< 0.01	< 0.1
	5/24/2013	MAX	7.97	640	290	340	15	0.037	< 1	86	12	30	0.67	< 0.1	0.0082	0.11	30	< 0.01	< 0.1
	11/14/2013	MAX	7.73	640	300	310	13	0.018	< 1	78	9.9	29	0.7	< 0.1	0.0065	< 0.05	26	< 0.01	< 0.1
	5/5/2014	MAX	7.73	790	370	420	17	< 0.01	< 1	120	13	32	0.59	< 0.1	0.0079	< 0.05	28	< 0.01	< 0.1
	11/19/2014	MAX	7.92	590	280	300	10	0.02	< 1	71	9.7	30	0.78	0.14	0.0078	0.054	27	< 0.01	< 0.1
Monitor 91-I Bedrock 25.47 - 26.99 m	5/1/2009	Maxx	7.6	414	213	180	13	0.045	< 1	31	21	26	0.84	< 0.1	0.004	0.19	12	< 0.01	< 0.1
	6/22/2009	Maxx	8.2	407	198	190	10	0.046	< 1	30	21	27	0.88	< 0.1	0.004	0.23	12	< 0.01	< 0.1
	8/26/2009	Maxx	8.1	434	224	220	3	0.037	< 1	35	11	31	0.93	0.12	0.005	0.21	17	< 0.01	< 0.1
	11/16/2009	Maxx	8.1	400	187	190	9	0.039	< 1	29	20	27	0.83	< 0.1	0.003	0.21	12	< 0.01	< 0.1
	5/17/2010	Maxx	8.1	437	194	190	18	0.037	< 1	32	23	28	0.85	< 0.1	0.003	0.16	16	< 0.01	< 0.1
	7/27/2010	Maxx	8.1	543	204	210	40	0.043	< 1	36	39	28	0.82	< 0.1	0.004	< 0.05	15	< 0.01	0.2
	10/25/2010	Maxx	8.18	439	195	190	17	0.04	< 1	32	23	27	0.82	< 0.1	0.004	0.15	14	< 0.01	< 0.1
	12/6/2010	Maxx	8.07	415	191	180	11	0.038	< 1	29	21	27	0.76	< 0.1	0.004	0.17	13	< 0.01	< 0.1
	5/5/2011	Maxx	8.14	403	192	190	8	0.038	< 1	30	20	27	0.81	< 0.1	0.006	0.21	13	0.02	< 0.1
	7/20/2011	Maxx	8.1	414	189	180	7	0.045	1	28	18	26	0.81	< 0.1	0.004	0.32	11	0.02	< 0.1
	9/30/2011	Maxx	8.17	395	197	180	7	0.036	< 1	27	19	27	0.79	< 0.1	0.005	0.27	12	< 0.01	< 0.1
	11/1/2011	Maxx	8.16	404	190	180	8	0.041	< 1	29	19	26	0.86	< 0.1	0.005	0.38	12	0.07	< 0.1
	5/8/2012	NA																	
	5/14/2012	Maxx	8.09	470	200	170	27	0.039	< 1	30	26	24	0.73	< 0.1	0.0047	0.096	13	< 0.01	< 0.1
	11/29/2012	Maxx	8.21	420	200	180	12	0.044	< 1	28	21	26	0.78	< 0.1	0.0047	0.29	12	< 0.01	< 0.1
	5/27/2013	MAX	8.14	480	190	190		0.034		32	28	26	0.81	< 0.1	0.0052	0.36			
	11/19/2013	MAX	7.96	410	200	180	8.5	0.039	< 1	28	17	26	0.72	< 0.1	0.0059	0.22	13	0.075	< 0.1
	5/15/2014	MAX	8.17	400	190	170	7.5	0.046	< 1	28	18	25	0.73	< 0.1	0.0049	0.26	12	< 0.01	< 0.1
	8/1/2014	MAX	8.14	400	190	170	7.9	0.041	< 1	26	18	26	0.69	< 0.1	0.0052	0.27	11	0.013	< 0.1
	10/2/2014	MAX	8.11	390	190	170	7.5	0.045	< 1	27	18	25	0.78	< 0.1	0.0048	0.26	11	< 0.01	< 0.1
	11/24/2014	MAX	8.08	400	190	170	7.3	0.027	< 1	28	18	25	0.71	< 0.1	0.0057	0.24	12	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

Table 2: Bedrock Groundwater Quality - Closed Eastview Road Landfill Site

AECOM

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk.	Hard.	Cl	B	Phenol	Ca	Na	Mg	K	Fe	Mn	NH3-N	SO4	NO2-N	NO3-N
					as CaCO3 mg/L		mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 92-I Bedrock 31.98 - 33.5 m	4/29/2009	Maxx	7.7	443	243	220	2	0.03	< 1	49	14	23	1.1	< 0.1	0.011	0.09	12	< 0.01	< 0.1
	6/23/2009	Maxx	8.1	423	219	200	2	0.025	2	43	15	21	0.67	< 0.1	0.01	0.13	12	< 0.01	< 0.1
	8/28/2009	Maxx	7.9	423	229	200	3	0.022	< 1	47	12	19	0.67	< 0.1	0.009	0.05	10	< 0.01	< 0.1
	11/18/2009	Maxx	7.9	412	210	200	2	0.021	< 1	46	10	21	0.87	< 0.1	0.01	0.1	9	< 0.01	< 0.1
	5/19/2010	Maxx	8.2	406	207	200	1	0.023	< 1	45	8.6	21	0.83	< 0.1	0.011	0.07	10	< 0.01	< 0.1
	10/20/2010	Dec																	
	12/6/2010	Dec																	
	4/19/2011	Dec																	
	7/20/2011	Dec																	
	9/30/2011	Dec																	
	11/1/2011	Dec																	
Monitor 93-I Bedrock 24.16 - 28.73 m	4/28/2009	Maxx	7.8	346	186	140	3	0.059	< 1	29	30	16	0.91	< 0.1	0.005	0.29	4	< 0.01	< 0.1
	6/22/2009	Maxx	7.9	347	182	140	3	0.067	< 1	30	30	15	1	0.11	0.004	0.32	3	< 0.01	< 0.1
	8/25/2009	Maxx	8.1	351	188	120	4	0.065	< 1	28	26	13	0.73	< 0.1	0.005	0.28	4	< 0.01	< 0.1
	11/16/2009	Maxx	8	351	180	140	3	0.059	< 1	30	30	15	0.95	< 0.1	0.004	0.29	4	< 0.01	< 0.1
	5/18/2010	Maxx	8.1	346	181	120	3	0.062	< 1	27	26	13	0.83	0.1	0.004	0.29	4	< 0.01	< 0.1
	7/27/2010	Maxx	8	348	179	120	3	0.059	< 1	26	30	14	0.83	< 0.1	0.005	0.32	3	< 0.01	< 0.1
	10/20/2010	Maxx	8.1	347	179	130	3	0.067	< 1	28	30	14	0.84	< 0.1	0.005	0.26	3	< 0.01	< 0.1
	12/6/2010	Maxx	8.07	342	179	130	3	0.059	< 1	27	29	14	0.84	< 0.1	0.005	0.25	2	< 0.01	< 0.1
	4/19/2011	Maxx	8.21	346	180	130	5	0.063	< 1	30	30	14	1	< 0.1	0.006	0.3	4	0.02	< 0.1
	7/20/2011	Maxx	8.18	349	176	120	2	0.066	< 1	27	28	13	0.83	< 0.1	0.004	0.33	3	0.07	< 0.1
	9/30/2011	Maxx	8.16	355	184	130	4	0.06	< 1	29	29	14	0.91	< 0.1	0.005	0.31	4	< 0.01	< 0.1
	11/1/2011	Maxx	8.21	353	179	130	4	0.066	< 1	28	29	14	0.9	0.1	0.004	0.38	3	< 0.01	< 0.1
	5/7/2012	Maxx	8.2	340	180	120	2.4	0.062	< 1	27	30	13	0.83	< 0.1	0.0045	0.19	2.7	< 0.01	< 0.1
	8/15/2012	Maxx	8.12	340	180	130	3.1	0.065	< 1	28	31	14	0.94	0.11	0.0046	0.3	2.5	< 0.01	< 0.1
	10/3/2012	Maxx	8.1	340	180	120	3.6	0.062	< 1	26	30	14	0.85	< 0.1	0.0051	0.34	1.5	< 0.01	< 0.1
	11/20/2012	Maxx	8.03	350	190	130	3.9	0.06	< 1	28	29	14	0.9	< 0.1	0.0047	0.35	2.8	< 0.01	< 0.1
	5/21/2013	MAX	8.19	350	180	130	2.7	0.072	< 1	28	29	14	0.89	0.11	0.0046	0.34	3.8	< 0.01	< 0.1
	7/30/2013	MAX	8.13	350	180	130	3.2	0.066	< 1	29	30	15	0.88	< 0.1	0.005	0.34	4.2	< 0.01	< 0.1
	9/26/2013	MAX	8.3	350	180	140	3.9	0.065	< 1	30	29	15	0.91	< 0.1	0.0047	0.31	3.8	< 0.01	< 0.1
	11/13/2013	MAX	8.13	350	180	130	3	0.058	< 1	27	29	14	0.84	< 0.1	0.0047	0.29	3.1	< 0.01	< 0.1
	5/5/2014	MAX	8.05	340	180	130	2	0.062	< 1	27	28	14	0.9	0.12	0.0047	0.32	3.1	< 0.01	< 0.1
	7/31/2014	MAX	8.12	350	180	120	3.1	0.061	< 1	27	29	14	0.79	< 0.1	0.0046	0.35	4.2	< 0.01	< 0.1
	10/1/2014	MAX	8.13	350	190	130	3.5	0.072	< 1	27	29	14	0.9	0.1	0.005	0.37	2.9	0.012	< 0.1
	11/17/2014	MAX	7.91	360	170	200	4	0.065	< 1	47	29	19	1.2	0.88	0.049	0.3	12	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

Table 2: Bedrock Groundwater Quality - Closed Eastview Road Landfill Site

Monitor

94-I

Bedrock

20.86 - 25.2 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
4/30/2009	Maxx	8	320	172	110	2	0.067	< 1	23	31	12	0.84	0.15	0.006	0.17	5	< 0.01	< 0.1
6/22/2009	Maxx	8.2	318	168	120	< 1	0.071	< 1	24	33	14	0.87	0.14	0.006	0.18	4	< 0.01	< 0.1
8/27/2009	Maxx	8	317	175	100	< 1	0.051	< 1	22	29	12	0.77	0.14	0.007	0.19	4	< 0.01	< 0.1
11/17/2009	Maxx	8.1	316	164	100	1	0.062	< 1	20	32	12	0.73	0.12	0.006	0.19	5	< 0.01	< 0.1
5/18/2010	Maxx	8.2	309	156	83	< 1	0.076	< 1	17	35	9.8	0.72	< 0.1	0.004	0.05	7	< 0.01	< 0.1
7/27/2010	Maxx	8.1	307	157	83	1	0.075	< 1	17	37	9.8	0.71	< 0.1	0.005	< 0.05	6	< 0.01	< 0.1
10/20/2010	Maxx	8.11	310	161	97	< 1	0.072	< 1	20	34	12	0.66	< 0.1	0.007	0.12	5	< 0.01	< 0.1
12/6/2010	Maxx	8.11	311	164	100	< 1	0.064	< 1	21	33	13	0.74	0.11	0.007	0.14	4	< 0.01	< 0.1
4/27/2011	Maxx	8.12	309	159	100	< 1	0.078	< 1	20	37	12	0.8	< 0.1	0.004	0.11	5	< 0.01	< 0.1
7/20/2011	Maxx	8.17	311	159	94	< 1	0.072	< 1	19	32	11	0.71	0.11	0.005	0.13	3	0.08	< 0.1
9/30/2011	Maxx	8.16	312	167	100	< 1	0.075	< 1	21	33	12	0.82	0.13	< 0.002	0.17	4	< 0.01	< 0.1
10/31/2011	Maxx	8.27	311	162	110	< 1	0.07	< 1	21	35	13	0.8	0.13	0.007	0.28	4	0.03	< 0.1
5/9/2012	Maxx	8.17	300	160	86	< 1	0.078	< 1	17	36	10	0.7	< 0.1	0.004	< 0.05	4.8	0.023	< 0.1
8/15/2012	Maxx	8.07	310	160	96	< 1	0.07	< 1	20	34	11	0.78	0.14	0.005	0.12	4.2	< 0.01	< 0.1
10/3/2012	Maxx	7.95	310	170	100	< 1	0.068	< 1	20	34	12	0.77	0.12	0.0074	0.21	3.6	0.011	< 0.1
11/22/2012	Maxx	7.87	310	170	96	1.3	0.075	< 1	19	35	12	0.72	< 0.1	0.0078	0.12	4.5	< 0.01	< 0.1
5/27/2013	MAX	8.2	310	160	98		0.058		20	34	12	0.73	0.1	0.0047	0.2			
7/30/2013	MAX	8.19	300	160	98	< 1	0.069	< 1	20	33	12	0.72	0.13	0.0051	0.28	3.9	< 0.01	< 0.1
9/26/2013	MAX	8.3	310	160	110	1	0.072	< 1	21	34	13	0.79	0.15	0.0065	0.14	3.5	< 0.01	< 0.1
11/13/2013	MAX	8.18	310	170	100	< 1	0.062	< 1	20	31	12	0.7	0.11	0.0068	0.15	2.7	< 0.01	< 0.1
5/6/2014	MAX	8.27	300	160	100	< 1	0.071	< 1	21	32	12	0.84	0.12	0.0049	0.19	3	< 0.01	< 0.1
8/1/2014	MAX	8.13	310	160	90	1.1	0.066	< 1	18	33	11	0.63	< 0.1	0.0046	0.16	3	0.021	< 0.1
10/2/2014	MAX	8.11	300	160	99	1.3	0.075	< 1	20	31	12	0.76	0.14	0.007	0.19	2.6	< 0.01	< 0.1
11/19/2014	MAX	8.17	310	160	94	< 1	0.076	< 1	19	30	11	0.67	0.16	0.0077	0.21	1.9	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

Table 2: Bedrock Groundwater Quality - Closed Eastview Road Landfill Site

			General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
	Date		pH	Cond-uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
	ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
Monitor 95-I Bedrock 36.47 - 41.4 m	5/1/2009	Maxx	7.6	772	243	370	88	0.026	< 1	81	17	41	1.4	0.25	0.022	0.17	40	< 0.01	< 0.1
	6/22/2009	Maxx	8	765	233	360	88	0.02	< 1	78	16	39	1.3	0.23	0.022	0.17	41	< 0.01	< 0.1
	8/27/2009	Maxx	8	733	229	330	76	0.017	< 1	78	14	34	0.96	0.23	0.02	0.16	40	< 0.01	< 0.1
	11/17/2009	Maxx	7.9	741	231	350	74	0.015	< 1	78	15	38	1.4	0.24	0.021	0.21	38	< 0.01	< 0.1
	5/18/2010	Maxx	8.1	790	226	360	102	0.02	< 1	79	14	39	1.2	0.28	0.025	0.12	44	< 0.01	< 0.1
	7/27/2010	Maxx	7.9	791	226	360	90	0.02	< 1	79	15	41	1.1	0.21	0.026	0.12	39	< 0.01	< 0.1
	10/21/2010	Maxx	7.92	760	230	350	82	0.017	< 1	77	14	39	1.2	0.14	0.022	0.11	39	< 0.01	< 0.1
	12/6/2010	Maxx	7.89	784	229	370	100	0.018	< 1	82	15	40	1.2	0.22	0.024	0.12	44	< 0.01	< 0.1
	4/20/2011	Maxx	8.09	803	226	380	100	0.017	< 1	84	15	41	1.2	0.19	0.022	0.18	40	< 0.01	< 0.1
	7/20/2011	Maxx	8	807	225	370	98	0.019	< 1	80	15	41	1.2	0.22	0.025	0.16	38	< 0.01	< 0.1
	9/30/2011	Maxx	8.07	779	235	360	84	0.013	< 1	77	15	41	1.2	0.18	0.023	0.16	39	< 0.01	< 0.1
	10/31/2011	Maxx	7.99	772	228	360	79	0.018	< 1	81	14	40	1.2	0.22	0.023	0.17	37	< 0.01	< 0.1
	5/16/2012	Maxx	8.01	570	240	280	22	0.022	< 1	60	14	33	1.5	< 0.1	0.0069	0.16	33	< 0.01	< 0.1
	8/15/2012	Maxx	8.03	570	230	290	25	0.025	< 1	61	9.4	34	1.1	0.11	0.0056	0.18	35	< 0.01	< 0.1
	10/3/2012	Maxx	8.1	580	230	300	28	0.017	< 1	63	9	35	1	0.62	0.03	0.23	33	< 0.01	< 0.1
	11/20/2012	Maxx	8.05	580	230	290	30	0.023	< 1	62	9.4	34	1.1	0.11	0.0049	0.2	33	< 0.01	< 0.1
	5/21/2013	MAX	8.07	600	230	300	35	0.03	< 1	63	9.5	34	1	0.1	0.0039	0.24	35	< 0.01	< 0.1
	7/30/2013	MAX	8.07	600	220	310	38	0.023	< 1	65	9.6	35	0.99	< 0.1	0.0043	0.21	35	< 0.01	< 0.1
	9/26/2013	MAX	8.23	600	230	320	38	0.023	< 1	67	9.7	36	1.1	< 0.1	0.004	0.18	34	< 0.01	< 0.1
	11/13/2013	MAX	8.12	610	230	300	38	0.024	< 1	63	10	34	0.96	< 0.1	0.0074	0.16	35	< 0.01	< 0.1
	5/5/2014	MAX	7.96	610	230	300	38	0.022	< 1	63	9.4	35	1.1	< 0.1	0.004	0.23	33	< 0.01	< 0.1
	7/31/2014	MAX	8.05	610	220	290	40	0.022	< 1	59	9.4	34	0.9	0.12	0.0071	0.25	34	0.017	< 0.1
	10/1/2014	MAX	8.03	600	230	300	39	0.028	< 1	62	8.8	34	1	< 0.1	0.0036	0.21	33	< 0.01	< 0.1
	11/19/2014	MAX	8.06	610	230	300	41	0.028	< 1	63	9.5	35	1	< 0.1	0.0038	0.18	36	0.01	< 0.1
Monitor 96-I Bedrock 36.3 - 36.56 m	5/16/2012	MAX							<					<				<	<
	5/16/2012	MAX																	
	5/16/2012	Maxx	8.01	430	220	210	2.9	0.043	< 1	47	12	21	1.5	< 0.1	0.0037	0.17	15	< 0.01	< 0.1
	5/16/2012	Maxx	8.01	430	220	210	2.9	0.043	1	47	12	21	1.5	0.1	0.0037	0.17	15	0.01	0.1
	10/4/2012	Maxx	8.02	460	220	220	4.2	0.035	< 1	51	11	23	1.5	< 0.1	0.0044	0.35	17	< 0.01	< 0.1
	11/29/2012	Maxx	7.74	460	220	230	5.6	0.042	< 1	54	15	23	1.8	< 0.1	0.006	0.25	18	0.034	0.21
	6/3/2013	MAX	7.92	460	220	220	4.3	0.046	< 1	51	11	23	1.4	< 0.1	0.0038	0.41	18	< 0.01	< 0.1
	7/31/2013	MAX	8.04	450	220	230	3.3	0.04	< 1	54	10	23	1.5	< 0.1	0.0028	0.33	19	< 0.01	< 0.1
	9/26/2013	MAX	8.24	460	220	240	4	0.035	< 1	55	10	25	1.5	< 0.1	0.0028	0.31	17	< 0.01	< 0.1
	9/27/2013	MAX																	
	11/20/2013	MAX	8.09	460	230	220	4.6	0.034	< 1	50	9	22	1.3	< 0.1	0.0033	0.29	19	< 0.01	< 0.1
	5/15/2014	MAX	8.08	460	220	230	3.4	0.038	1.1	53	9.4	23	1.3	< 0.1	0.0035	0.35	18	< 0.01	< 0.1
	8/1/2014	MAX	8.04	440	220	220	4.2	0.034	1.1	49	9.7	23	1.3	< 0.1	0.0026	0.34	18	< 0.01	< 0.1
	10/2/2014	MAX	7.99	450	220	220	3.4	0.039	< 1	51	9.2	23	1.4	< 0.1	0.0022	0.33	18	< 0.01	< 0.1
	11/20/2014	MAX	8.11	460	220	230	5.3	0.042	< 1	53	10	24	1.5	< 0.1	0.0027	0.34	17	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards

a - Aesthetic Reletaed Objective, h - Heath Related Objective

Table 2: Bedrock Groundwater Quality - Closed Eastview Road Landfill Site

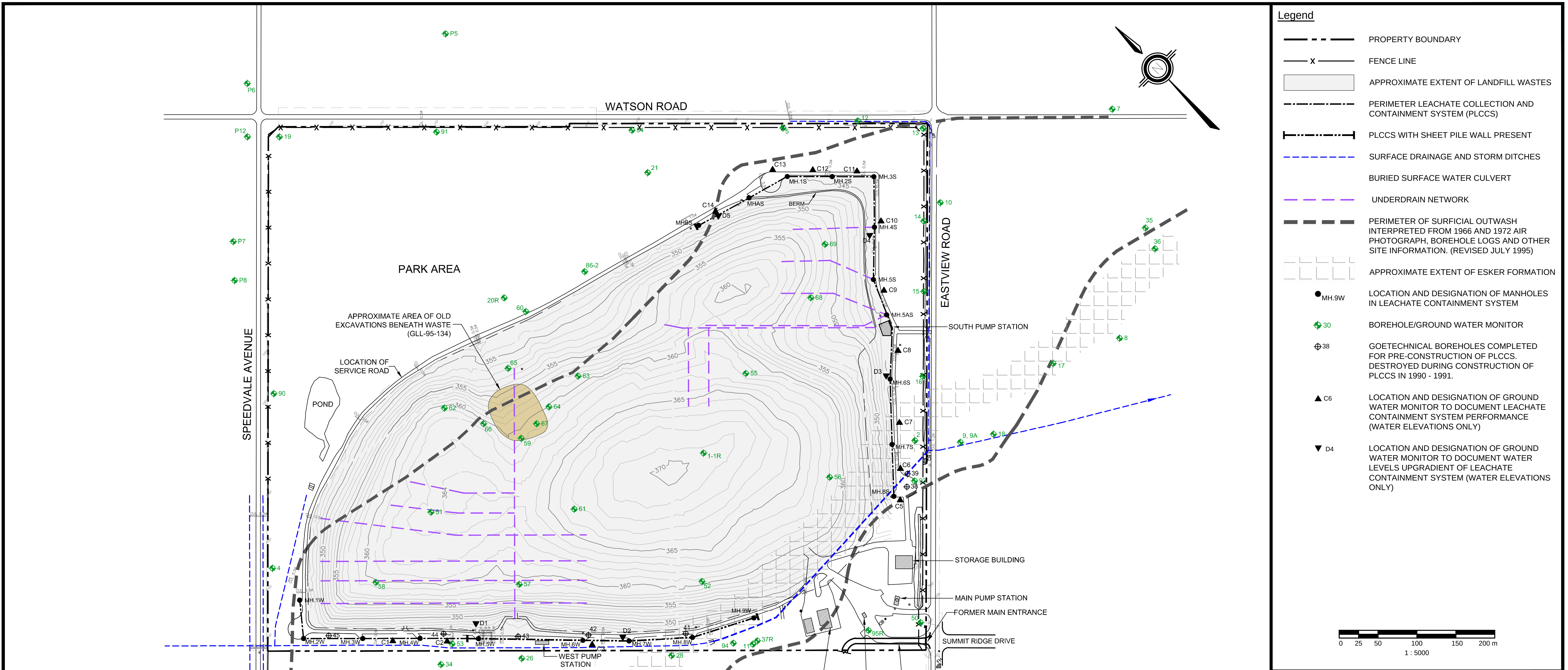
Monitor

96-II
Bedrock
29.41 - 33.98 m

		General Parameters				Critical Leachate Indicator			Leachate Indicator Parameters							Other Constituents		
Date		pH	Cond- uctivity	Alk. as CaCO3 mg/L	Hard.	Cl mg/L	B mg/L	Phenol ug/L	Ca mg/L	Na mg/L	Mg mg/L	K mg/L	Fe mg/L	Mn mg/L	NH3-N mg/L	SO4 mg/L	NO2-N mg/L	NO3-N mg/L
ODWS	Lab	6.5-8.5(a		30-500 a	80-100 a	250 a	5.0 h			200 a			0.30 a	0.05 a		500 a	1.0 h	10 h
5/16/2012	MAX																	
5/16/2012	MAX							<					<					
5/16/2012	Maxx	7.79	1100	280	390	100	0.022	1	98	81	37	2.1	0.1	0.053	0.073	110	0.024	0.63
5/16/2012	Maxx	7.79	1100	280	390	100	0.022	< 1	98	81	37	2.1	< 0.1	0.053	0.073	110	0.024	0.63
10/4/2012	Maxx	7.9	1100	280	400	140	0.013	< 1	95	71	39	1.5	< 0.1	0.038	0.12	67	0.012	0.35
11/29/2012	Maxx	7.72	1000	270	380	130	0.021	< 1	93	59	36	1.4	< 0.1	0.028	0.17	65	0.026	0.19
6/3/2013	MAX	7.86	1000	260	395	130	0.022	< 1	94	67	36	1.3	< 0.1	0.028	0.1	63	< 0.01	0.16
7/31/2013	MAX	7.86	1000	270	380	130	0.02	< 1	94	62	35	1.4	< 0.1	0.038	0.085	65	< 0.01	0.15
9/26/2013	MAX	8.12	1000	270	400	130	0.02	< 1	97	64	38	1.4	< 0.1	0.036	0.22	62	< 0.01	0.14
9/27/2013	MAX																	
11/20/2013	MAX	7.96	990	270	350	120	0.018	< 1	85	55	33	1.3	< 0.1	0.025	< 0.05	59	< 0.01	0.11
5/15/2014	MAX	7.86	960	260	360	120	0.024	< 1	90	56	34	1.2	< 0.1	0.024	0.078	58	< 0.01	< 0.1
8/1/2014	MAX	7.92	910	260	330	99	0.019	< 1	79	50	32	1.2	< 0.1	0.031	0.1	55	0.011	< 0.1
10/2/2014	MAX	7.84	830	260	330	86	0.023	< 1	79	43	32	1.3	< 0.1	0.022	0.12	51	< 0.01	< 0.1
11/20/2014	MAX	7.99	830	250	340	82	0.025	< 1	81	44	33	1.4	< 0.1	0.02	0.22	50	< 0.01	< 0.1

NOTE: ODWS - Ontario Drinking Water Standards
a - Aesthetic Reletaed Objective, h - Heath Related Objective

B SIZE 11" x 17" (279.4mm x 431.8mm)
PLOT: 11/25/2015 12:02:02 PM
BY:----
FILE NAME: 60339708-2015AMR-F01.DWG



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AECOM

Closed Eastview Road Landfill
City of Guelph

Leachate and Groundwater Monitor Site Locations

PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	1

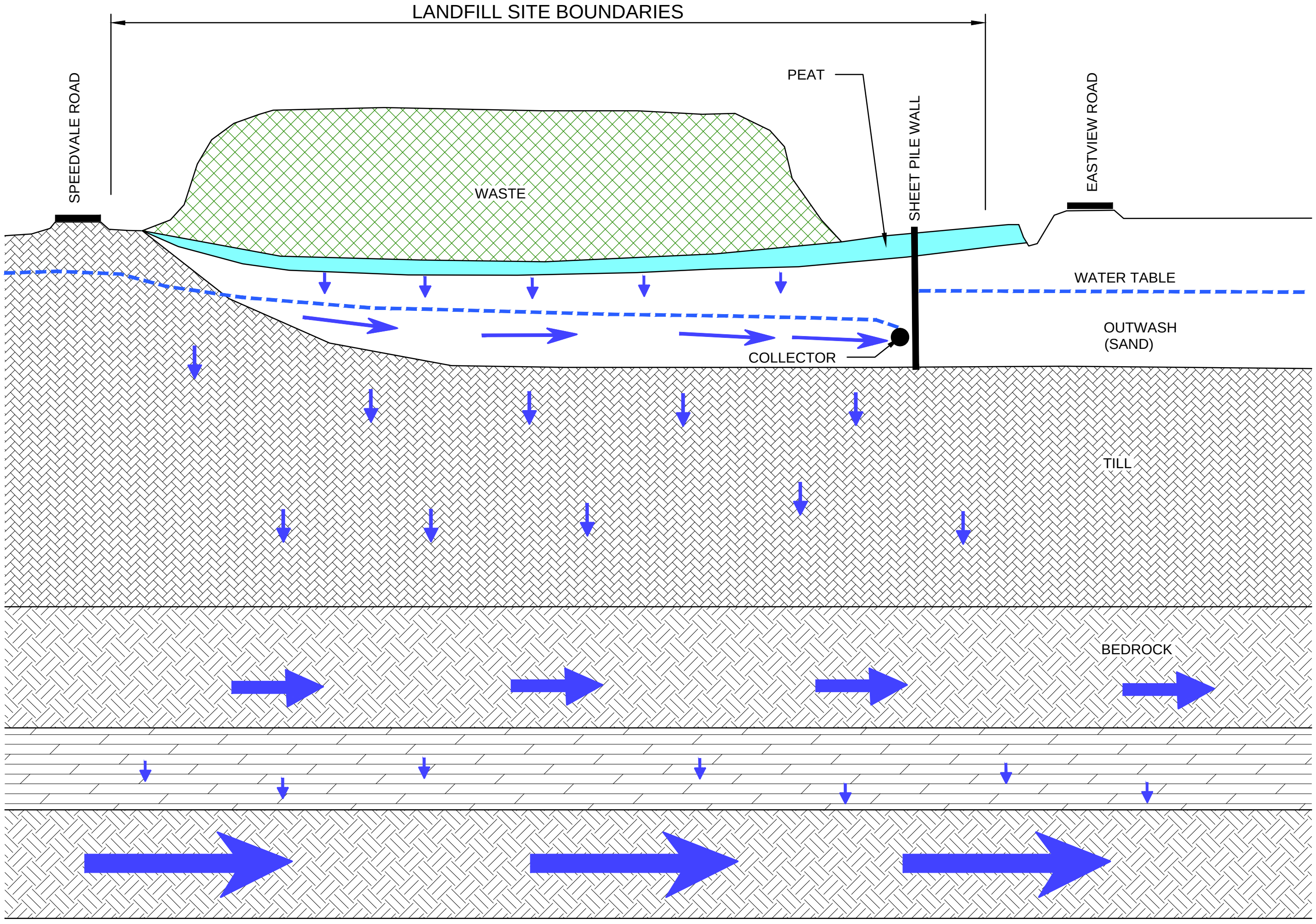
P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-F01.dwg Layout:1 Plotted: Nov 25, 2015 @ 12:02pm by WangV

FILE NAME: 60339708-2015AMR-F02.DWG

BY:----

PLOT: 11/24/2015 1:21:27 PM

SIZE 8.5" x 11" (215.9mm x 279.4mm)



NOTE: BLUE ARROW INDICATE GROUNDWATER FLOW DIRECTIONS

Legend

AECOM

Eastview Road Landfill
City of Guelph

Schematic Cross Section Through Eastview Landfill

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PROJECT NUMBER	DATE	FIGURE
60339708	**November, 2015**	**2**

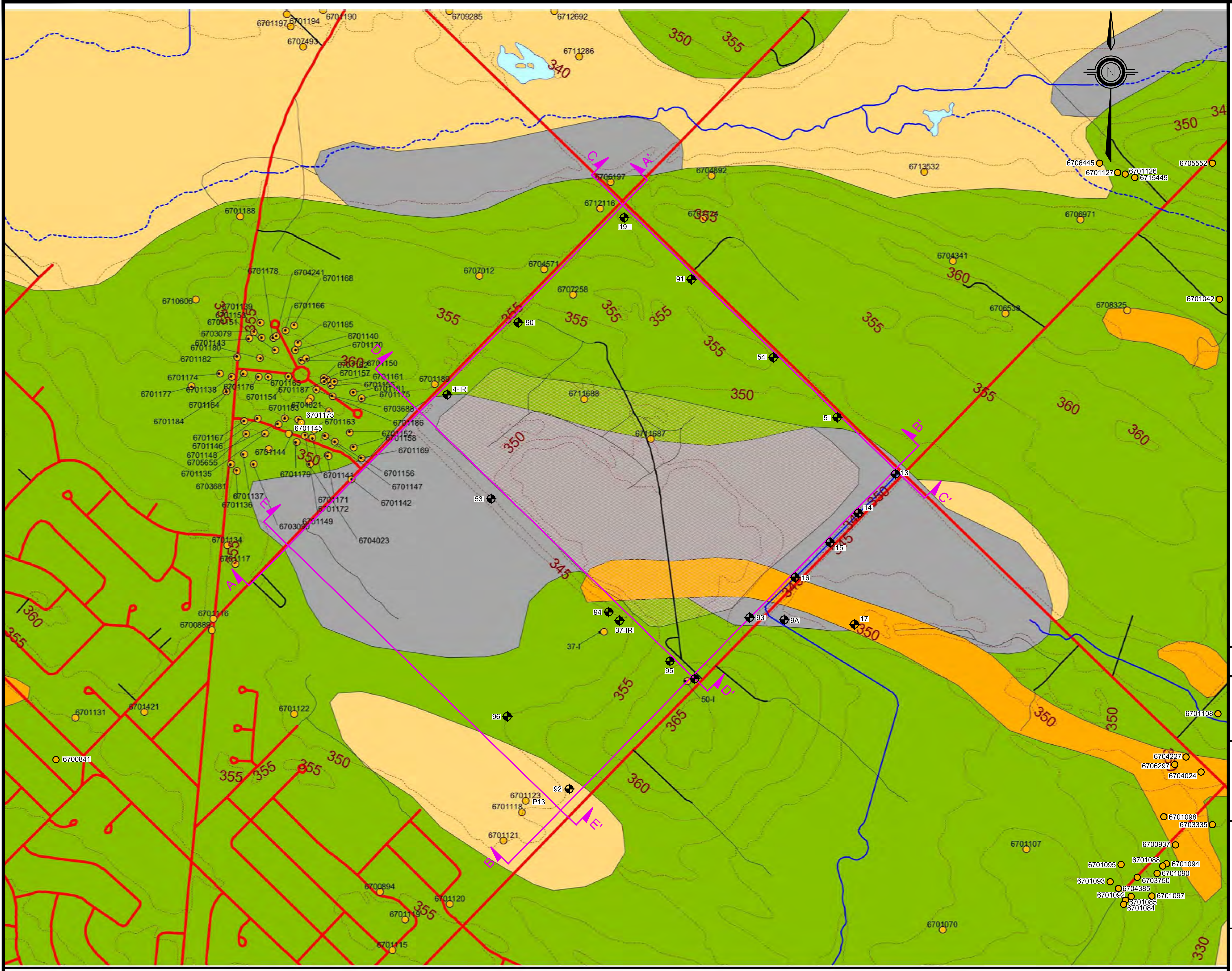
P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-F02.dwg Layout:Fig 02 Plotted: Nov 24, 2015 @ 1:21pm by WangV

B SIZE 11" x 17" (279.4mm x 431.8mm)

PLOT: 12/8/2015 10:21:51 AM

BY:----

FILE NAME: 60339708-2015AMR-F03.DWG



Legend

- ⊕ Monitoring Well Locations
- ● Well Locations
- ▭ Approximate footprint of landfill

Quaternary Geology

- 🟩 5b: Stone-poor, carbonate-derived silty to sandy till
- 🟧 6a: Ice Contact Stratified Deposits in moraines, kames, eskers and crevasse fills
- 🟨 7a: Sandy deposits
- 🟨 7b: Gravelly deposits
- 🟫 19: Modern alluvial deposits
- ⬜ 20: Organic deposits

E ⌐⌙ E' CROSS SECTION LOCATION

0 50 100 200 300 400 m

1 : 10,000

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AECOM

Eastview Road Landfill
City of Guelph

Regional Site Plan Bedrock
Monitor and Water Well Locations

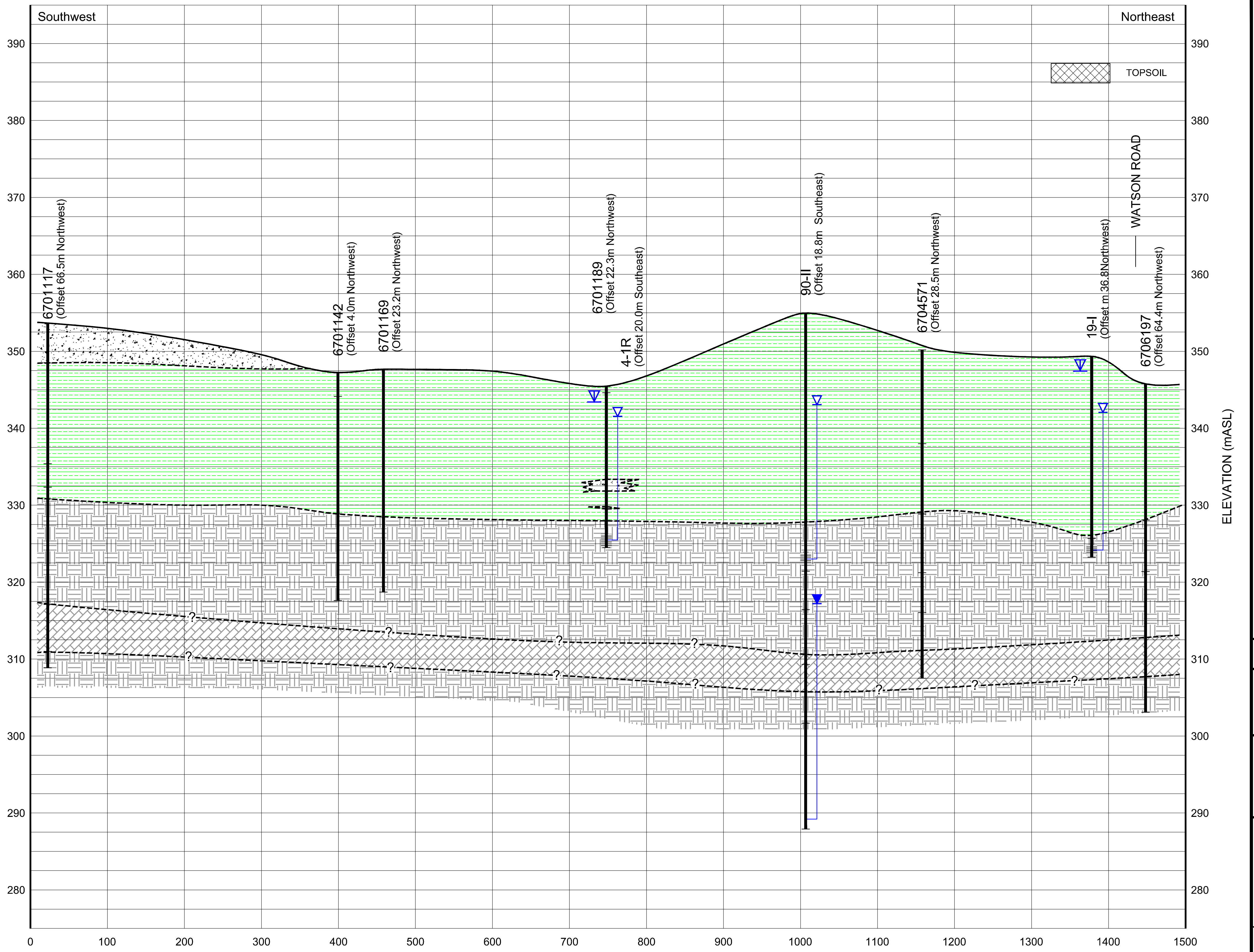
PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	3

P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-F03.dwg Layout:x Plotted: Dec 08, 2015 @ 10:21am by WangV

B SIZE 11" x 17" (279.4mm x 431.8mm)

BY:----PLOT: 11/25/2015 12:07:21 PM

FILE NAME: 60339708-2015AMR-CROSS SECTIONS.DWG



Legend

▨	FILL
▤	TILL
░	OUTWASH (SAND, GRAVELLY SAND, SILTY SAND)
▒	SANDY GRAVEL
▦	DOLOSTONE BEDROCK
▩	SHALEY DOLOSTONE (VINEMOUNT MEMBER)
▽	WATER TABLE (NOVEMBER 2014)
90-II	MONITOR LOCATION AND IDENTIFICATION
	ORIGINAL GROUND
▽	WATER LEVEL IN UPPER BEDROCK MONITOR (NOVEMBER 2014)
▼	WATER LEVEL IN LOWER BEDROCK MONITOR (NOVEMBER 2014)
	INFERRED STRATIGRAPHIC CONTACT
	MONITOR SCREEN SECTION

Horizontal 1 : 5000
0 25 50 100 150 200 m
0 5 10 15 20 m
Vertical 1 : 500

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AECOM

Eastview Road Landfill
City of Guelph

SECTION A-A'

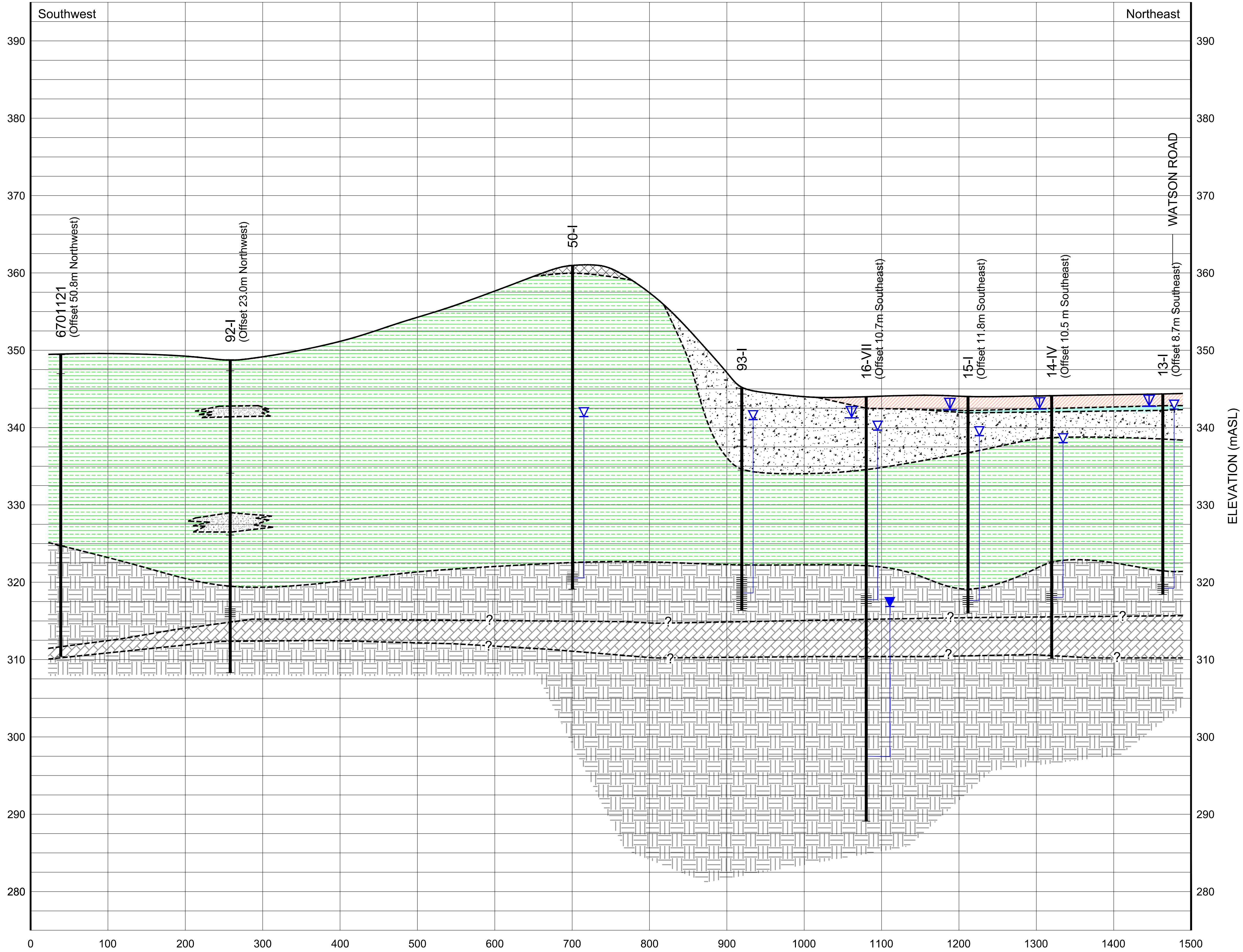
PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	4

P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-Cross Sections.dwg Layout:A-A' Plotted: Nov 25, 2015 @ 12:07pm by WangV

B SIZE 11" x 17" (279.4mm x 431.8mm)

BY:----PLOT: 12/8/2015 10:24:13 AM

FILE NAME: 60339708-2015AMR-CROSS SECTIONS.DWG



Legend

▨ TOPSOIL

▨ FILL

🟩 PEAT

▤ TILL

▨ OUTWASH (SAND, GRAVELLY SAND, SILTY SAND)

▨ SANDY GRAVEL

▦ DOLOSTONE BEDROCK

▨ SHALEY DOLOSTONE (VINEMOUNT MEMBER)

▽ WATER TABLE (NOVEMBER 2014)

16-II — MONITOR LOCATION AND IDENTIFICATION

— ORIGINAL GROUND

▽ WATER LEVEL IN UPPER BEDROCK MONITOR (NOVEMBER 2014)

▼ WATER LEVEL IN LOWER BEDROCK MONITOR (NOVEMBER 2014)

— INFERRED STRATIGRAPHIC CONTACT

MONITOR SCREEN SECTION

Horizontal 1 : 5000
0 25 50 100 150 200 m
0 5 10 15 20 m
Vertical 1 : 500

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Eastview Road Landfill
City of Guelph

SECTION B-B'

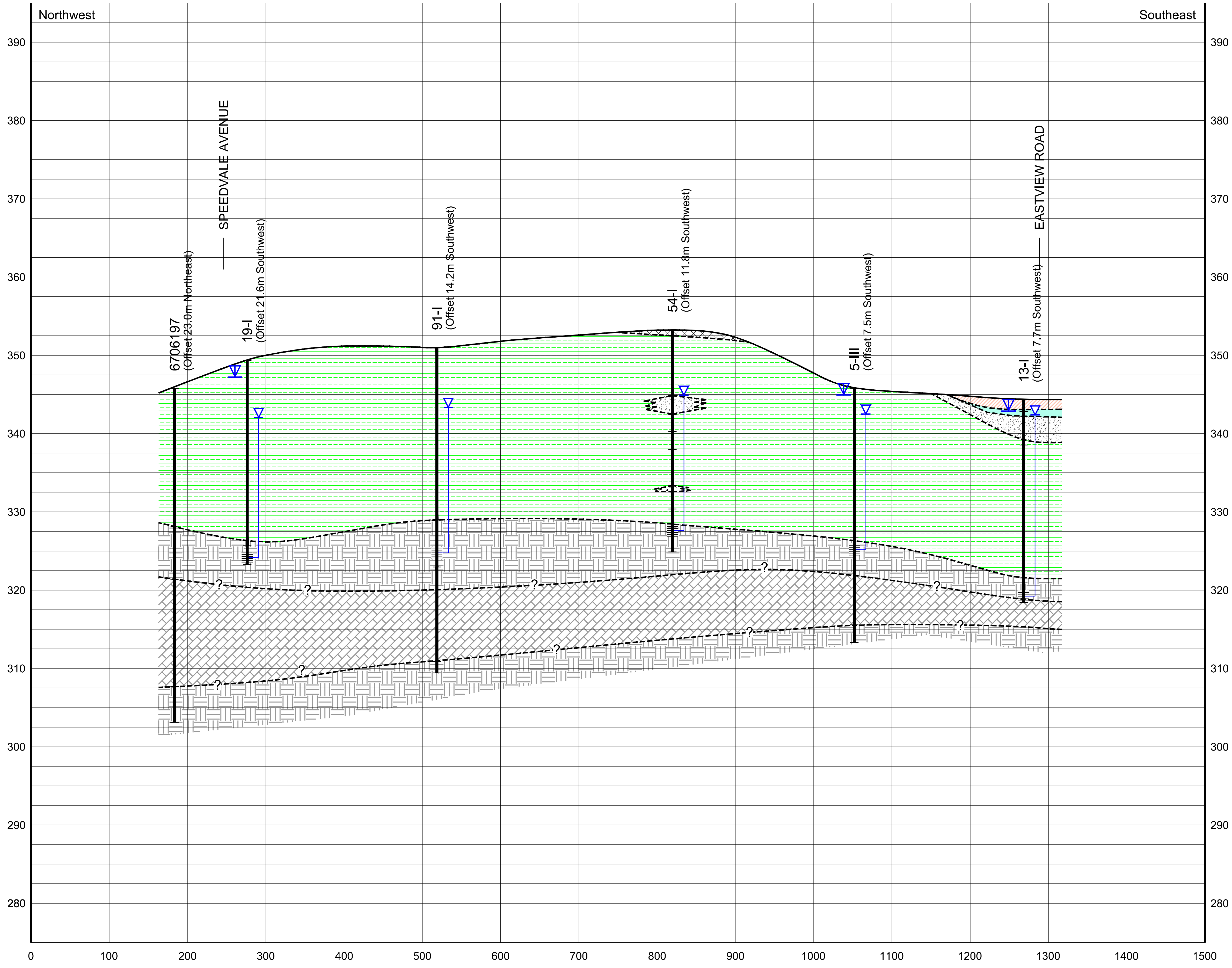
PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	5

P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-Cross Sections.dwg Layout:B-B' Plotted: Dec 08, 2015 @ 10:24am by WangV

B SIZE 11" x 17" (279.4mm x 431.8mm)

BY:---PLOT: 11/25/2015 12:06:54 PM

FILE NAME: 60339708-2015AMR-CROSS SECTIONS.DWG



Legend

- ▨ TOPSOIL
- 🟥 FILL
- 🟦 PEAT
- 🟩 TILL
- ▨ OUTWASH (SAND, GRAVELLY SAND, SILTY SAND)
- ▨ SANDY GRAVEL
- ▨ DOLOSTONE BEDROCK
- ▨ SHALEY DOLOSTONE (VINEMOUNT MEMBER)
- ▽ WATER TABLE (NOVEMBER 2014)
- 92-II MONITOR LOCATION AND IDENTIFICATION
- ORIGINAL GROUND
- ▽ WATER LEVEL IN UPPER BEDROCK MONITOR (NOVEMBER 2014)
- WATER LEVEL IN LOWER BEDROCK MONITOR (NOVEMBER 2014)
- INFERRED STRATIGRAPHIC CONTACT
- MONITOR SCREEN SECTION

Horizontal 1 : 5000
0 25 50 100 150 200 m
0 5 10 15 20 m
Vertical 1 : 500

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AECOM

Eastview Road Landfill
City of Guelph

SECTION C-C'

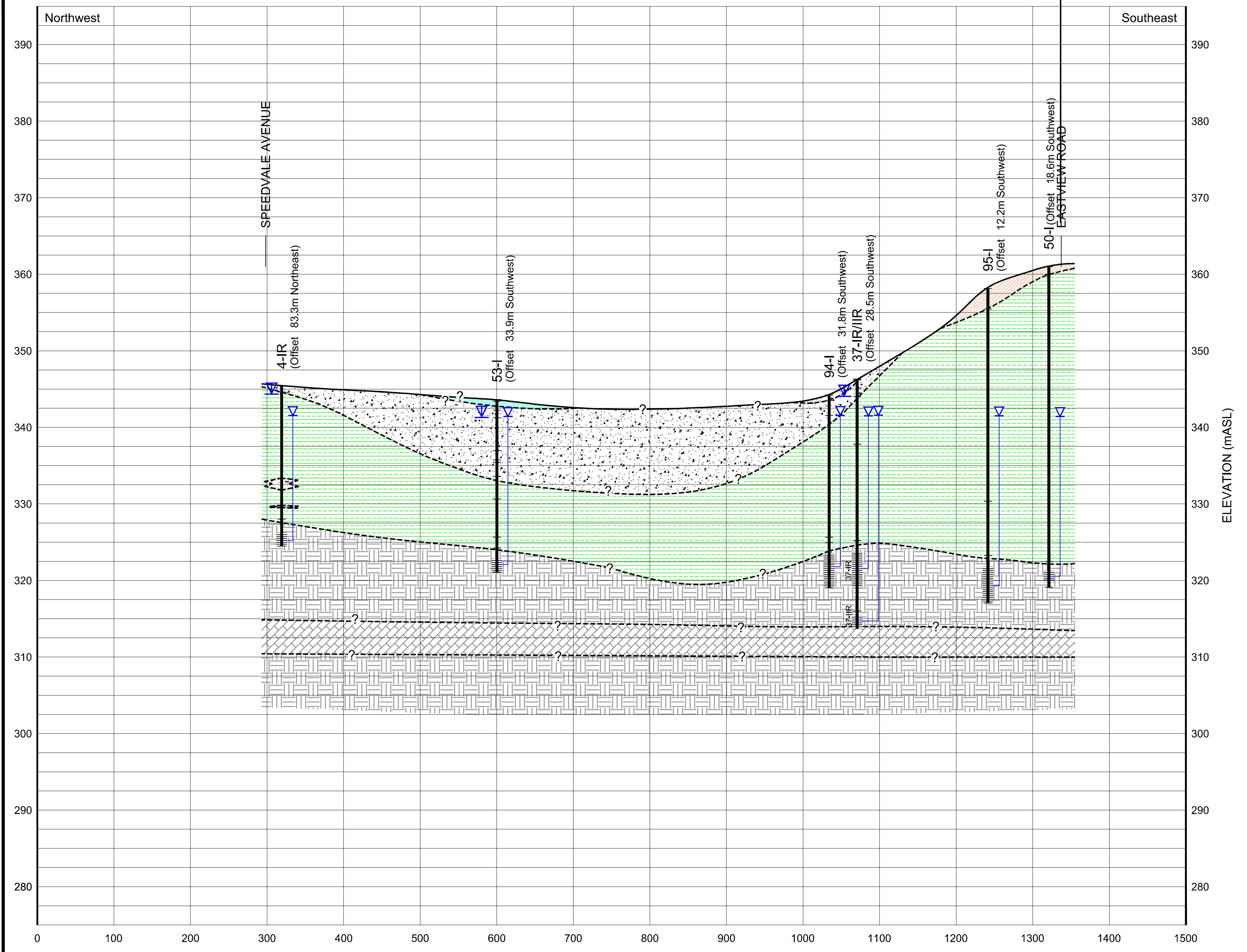
PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	6

P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-Cross Sections.dwg Layout:C-C' Plotted: Nov 25, 2015 @ 12:06pm by WangV

B SIZE 11" x 17" (279.4mm x 431.8mm)

BY:----PLOT: 11/25/2015 12:06:41 PM

FILE NAME: 60339708-2015AMR-CROSS SECTIONS.DWG



Legend

▨ FILL

🟦 PEAT

🟩 TILL

▨ OUTWASH (SAND, GRAVELLY SAND, SILTY SAND)

▨ SANDY GRAVEL

▨ DOLOSTONE BEDROCK

▨ SHALEY DOLOSTONE (VINEMOUNT MEMBER)

▽ WATER TABLE (NOVEMBER 2014)

37-RI/II — MONITOR LOCATION AND IDENTIFICATION

— ORIGINAL GROUND

▽ WATER LEVEL IN UPPER BEDROCK MONITOR (NOVEMBER 2014)

▼ WATER LEVEL IN LOWER BEDROCK MONITOR (NOVEMBER 2014)

— INFERRED STRATIGRAPHIC CONTACT

— MONITOR SCREEN SECTION

Horizontal 1 : 5000
0 25 50 100 150 200 m
0 5 10 15 20 m
Vertical 1 : 500

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Eastview Road Landfill
City of Guelph

SECTION D-D'

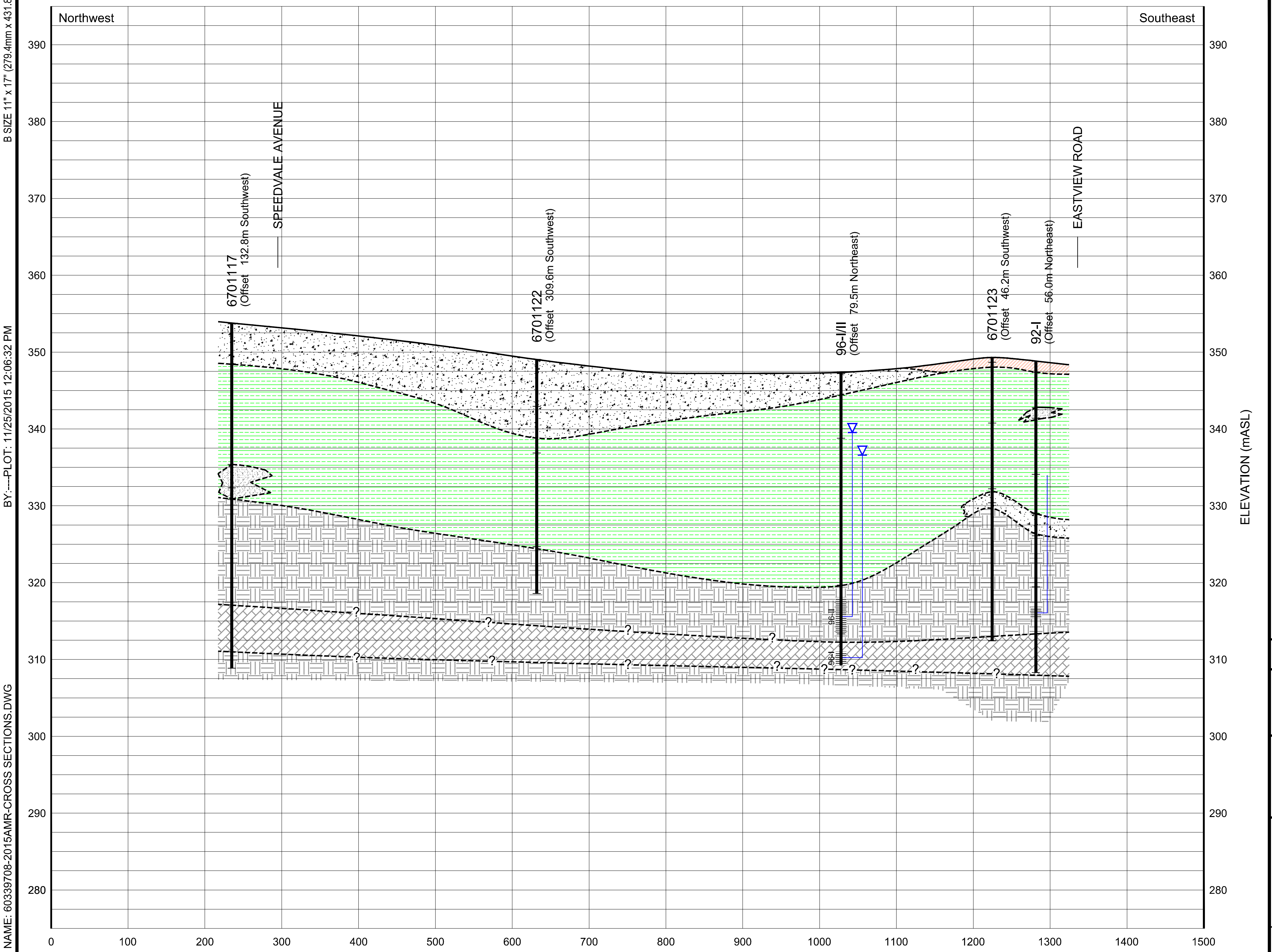
PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	7

P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-Cross Sections.dwg Layout:D-D' Plotted: Nov 25, 2015 @ 12:06pm by WangV

B SIZE 11" x 17" (279.4mm x 431.8mm)

BY:----PLOT: 11/25/2015 12:06:32 PM

FILE NAME: 60339708-2015AMR-CROSS SECTIONS.DWG



Legend

- ▨ FILL
- ▤ TILL
- ░ OUTWASH (SAND, GRAVELLY SAND, SILTY SAND)
- ░ SANDY GRAVEL
- ▦ DOLOSTONE BEDROCK
- ▩ SHALEY DOLOSTONE (VINEMOUNT MEMBER)

96-I/II — MONITOR LOCATION AND IDENTIFICATION

— ORIGINAL GROUND

▽ — WATER LEVEL IN UPPER BEDROCK MONITOR (NOVEMBER 2014)

▼ — WATER LEVEL IN LOWER BEDROCK MONITOR (NOVEMBER 2014)

— INFERRED STRATIGRAPHIC CONTACT

— MONITOR SCREEN SECTION

Horizontal 1 : 5000
0 25 50 100 150 200 m
0 5 10 15 20 m
Vertical 1 : 500

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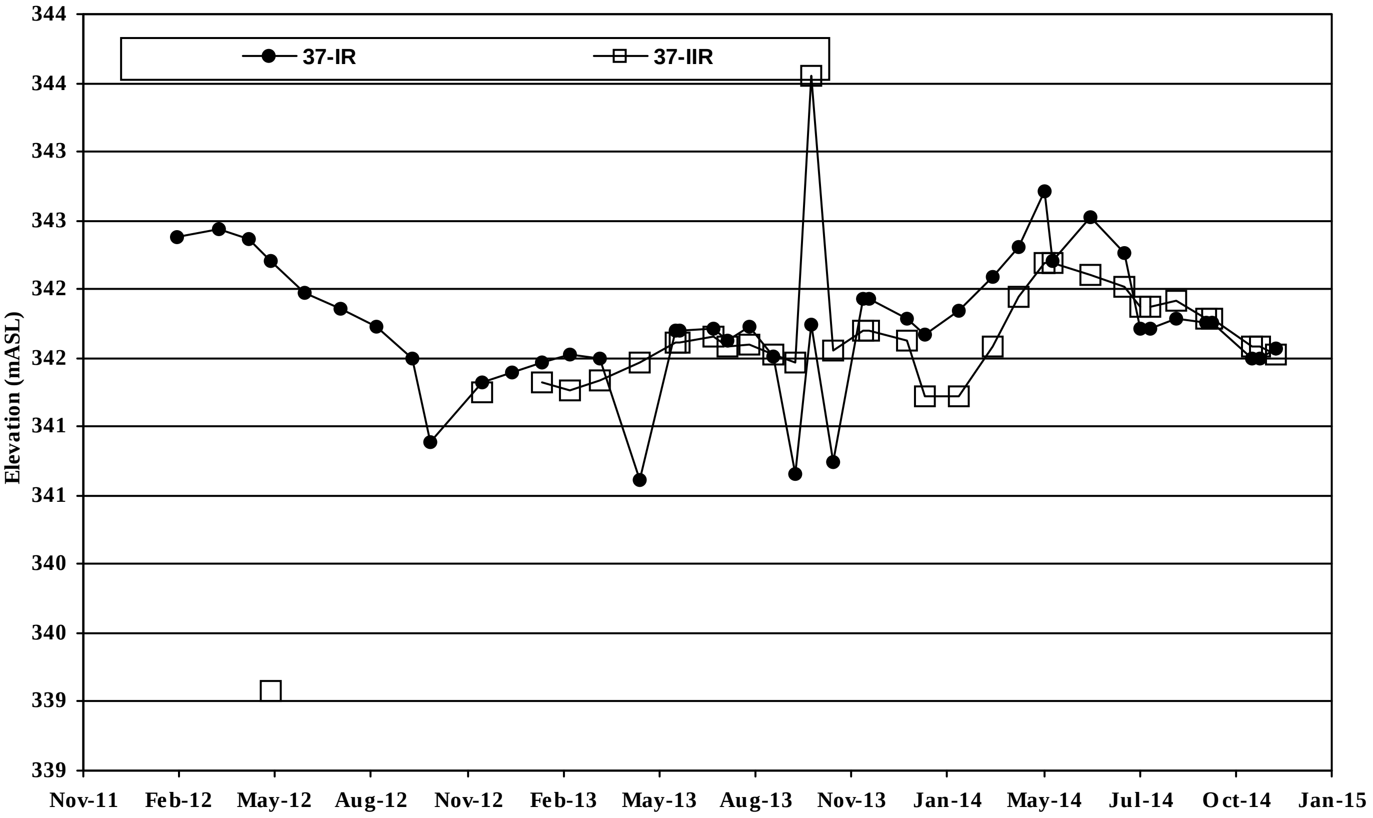
AECOM

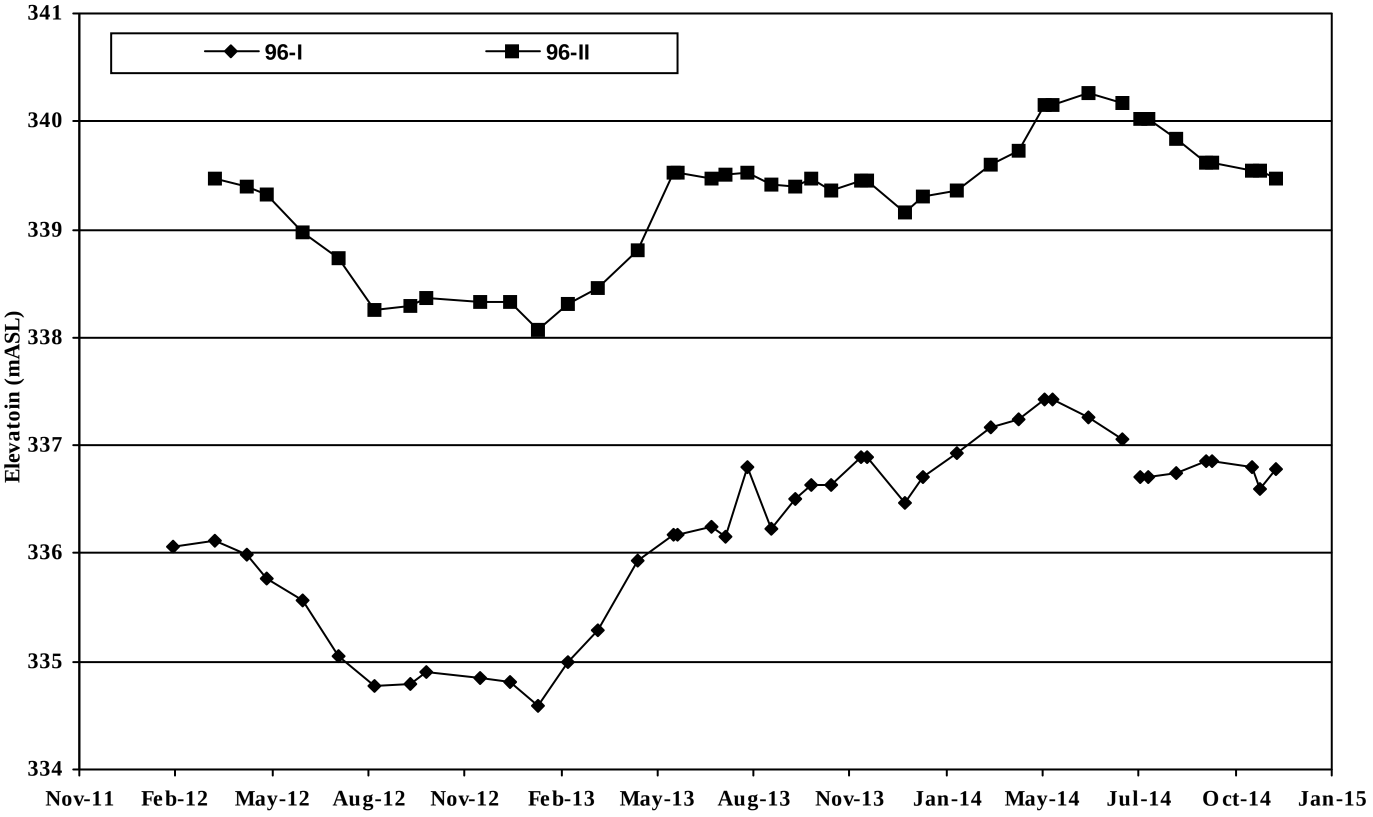
Eastview Road Landfill
City of Guelph

SECTION E-E'

PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	8

P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-Cross Sections.dwg Layout:E-E' Plotted: Nov 25, 2015 @ 12:06pm by WangV





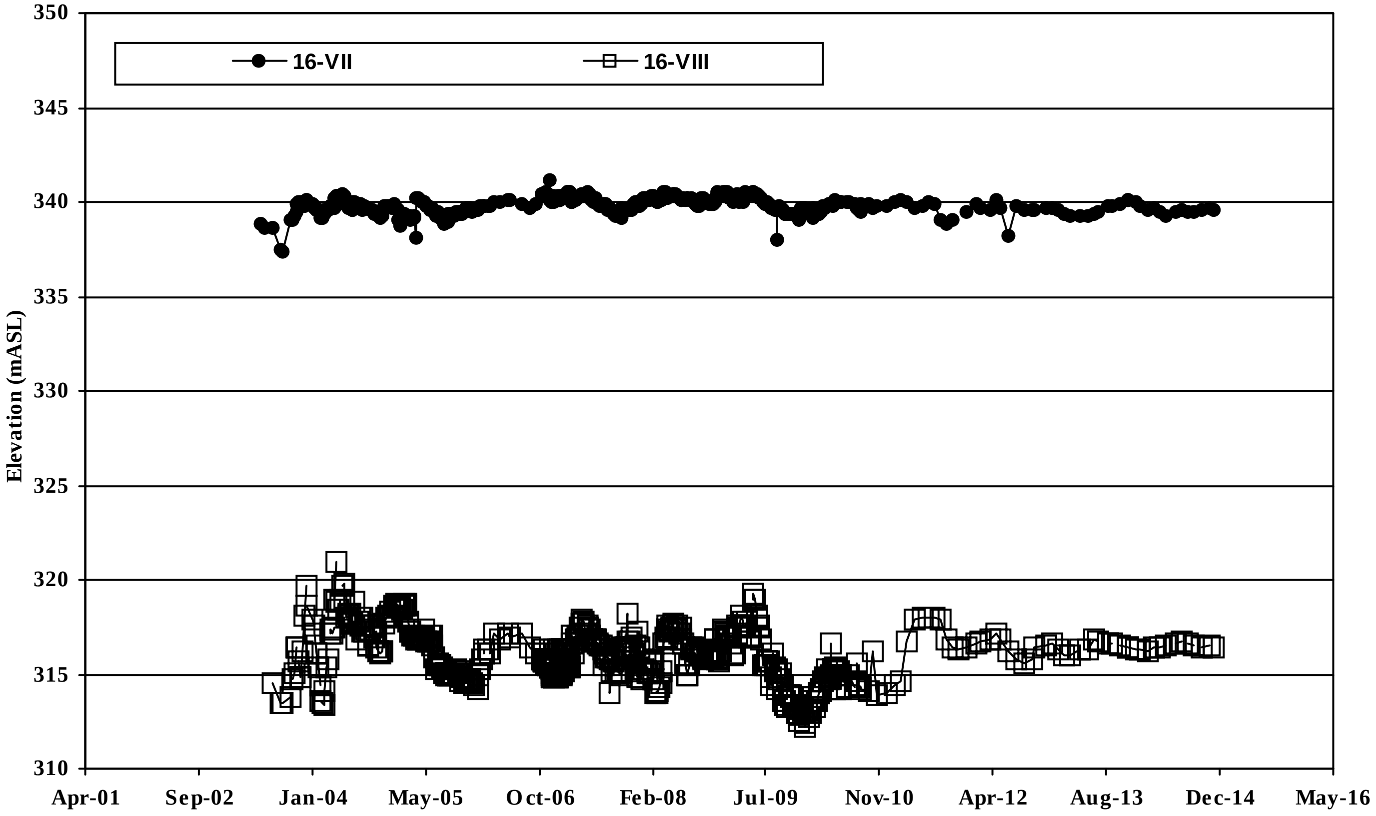
AECOM

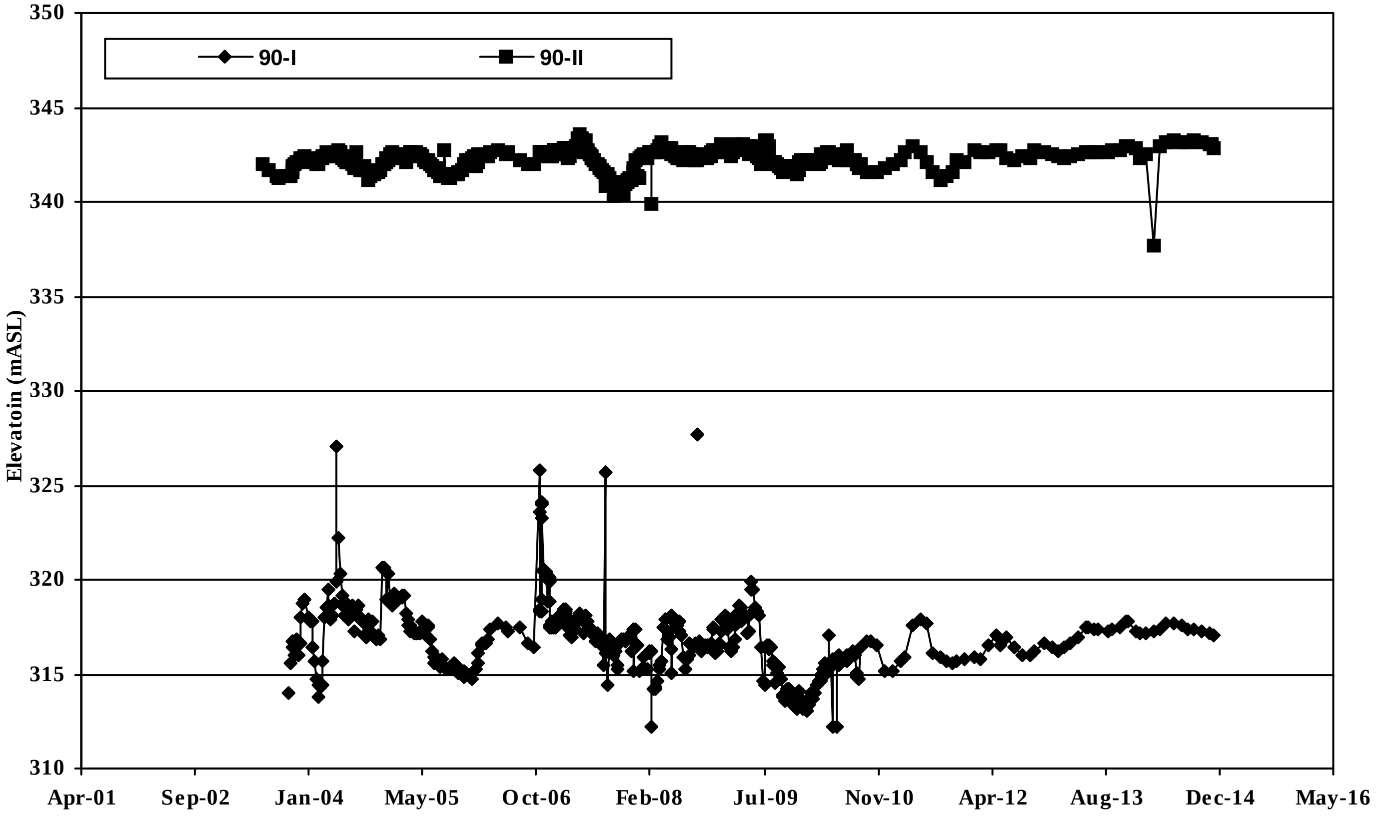
Closed Eastview Road Landfill Site

Groundwater Elevation Trends
Location 37R and 96

FIGURE
9

60339708
TLC-Location 96-37RBedrock WL





AECOM

Closed Eastview Road Landfill Site

Groundwater Elevation Trends
Location 16 and 90 (Upper and Lower Aquifer)

FIGURE
10

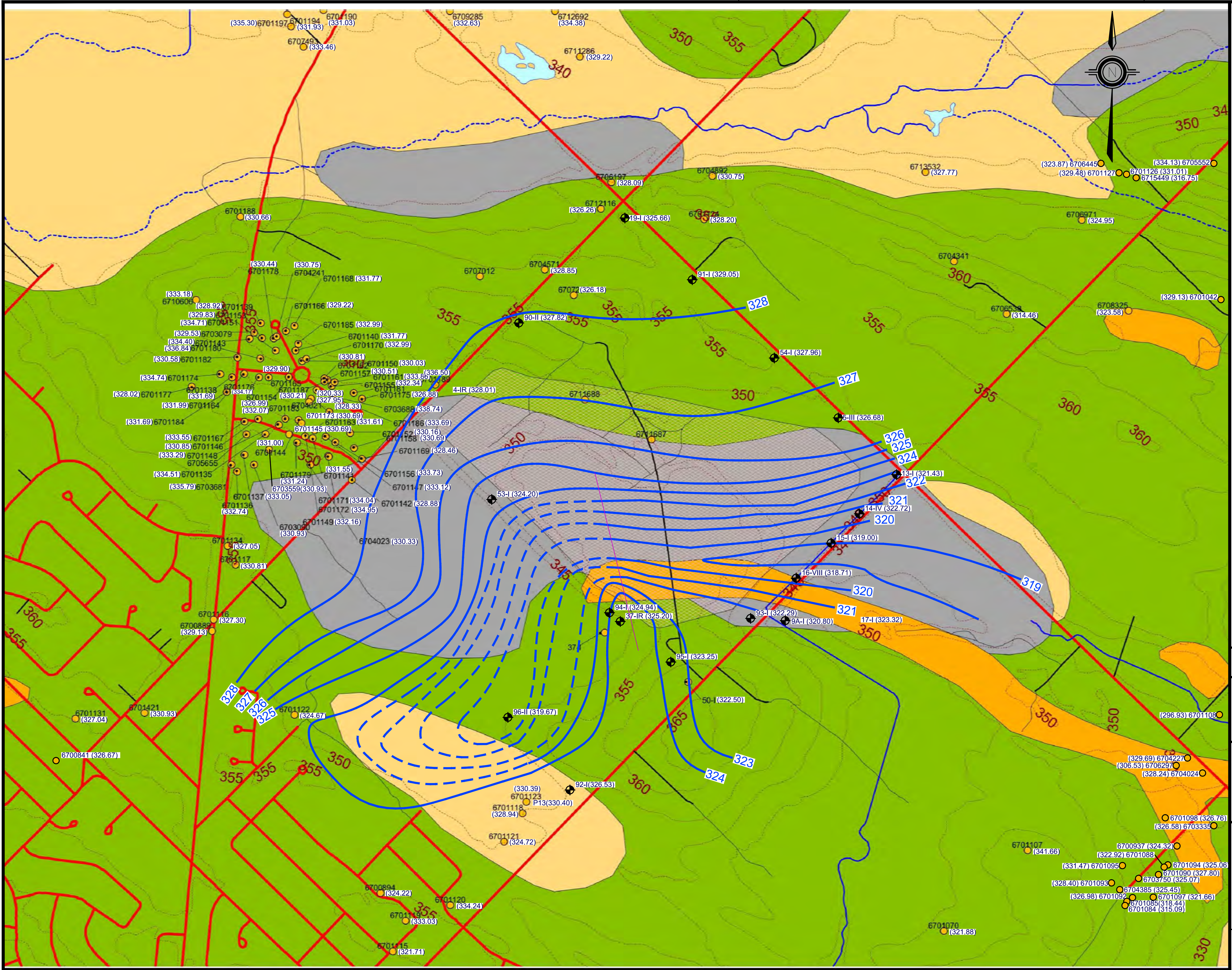
60339708
TLC-Location16-90Bedrock WL

B SIZE 11" x 17" (279.4mm x 431.8mm)

PLOT: 12/8/2015 10:27:33 AM

BY:----

FILE NAME: 60339708-2015AMR-F11.DWG



Legend

⊕ Monitoring Well Locations

● Well Locations

☐ Approximate footprint of landfill

Quaternary Geology

🟩 5b: Stone-poor, carbonate-derived silty to sandy till

🟧 6a: Ice Contact Stratified Deposits in moraines, kames, eskers and crevasse fills

🟨 7a: Sandy deposits

🟨 7b: Gravelly deposits

🟫 19: Modern alluvial deposits

⬜ 20: Organic deposits

(338.05) BEDROCK CONTACT ELEVATION (mASL)

343 ELEVATION CONTOUR OF BEDROCK CONTACT

0 50 100 200 300 400 m

1 : 10,000

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Eastview Road Landfill
City of Guelph

Inferred Regional Bedrock Topography

PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	11

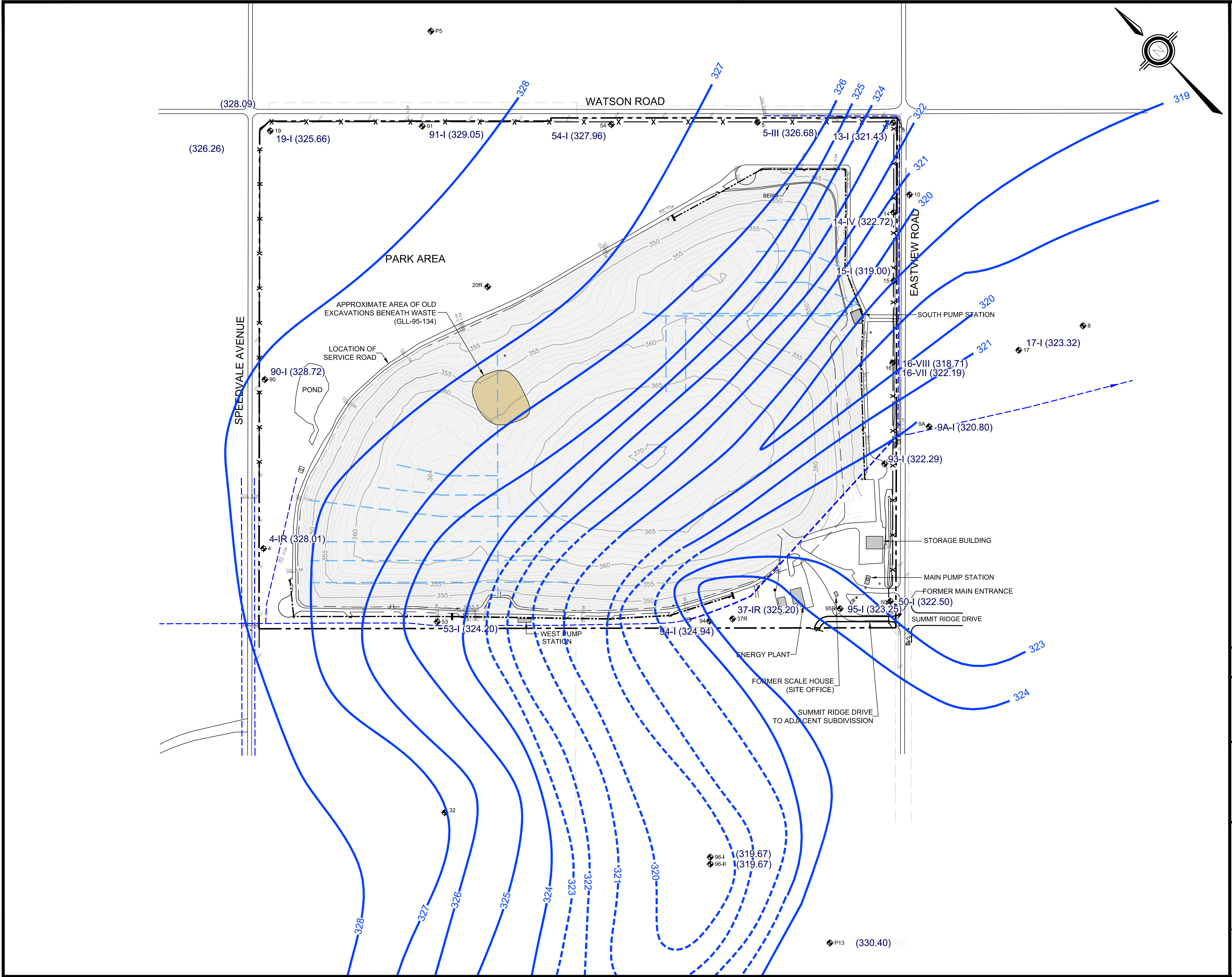
P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-F11.dwg Layout:11 Plotted: Dec 08, 2015 @ 10:27am by WangV

B SIZE 11" x 17" (279.4mm x 431.8mm)

PLOT: 12/8/2015 10:32:00 AM

BY:----

FILE NAME: 60339708-2015AMR-F12.DWG



Legend

─ · ─	PROPERTY BOUNDARY
─ x ─	FENCE LINE
▨	APPROXIMATE EXTENT OF LANDFILL WASTES
─·─·─	PERIMETER LEACHATE COLLECTION AND CONTAINMENT SYSTEM (PLCCS)
├·─·┤	PLCCS WITH SHEET PILE WALL PRESENT
- - -	SURFACE DRAINAGE AND STORM DITCHES
- - -	BURIED SURFACE WATER CULVERT
◆ 7	GROUND WATER MONITOR LOCATION
(338.05)	BEDROCK GROUNDWATER ELEVATION (mASL)
─343	ELEVATION CONTOUR OF WATER LEVEL IN BEDROCK
←	INFERRED DIRECTION OF BEDROCK GROUNDWATER FLOW

0 30 60 120 180 240 m

1 : 6000

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Eastview Road Landfill
City of Guelph

Inferred Site Bedrock Topography

PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	12

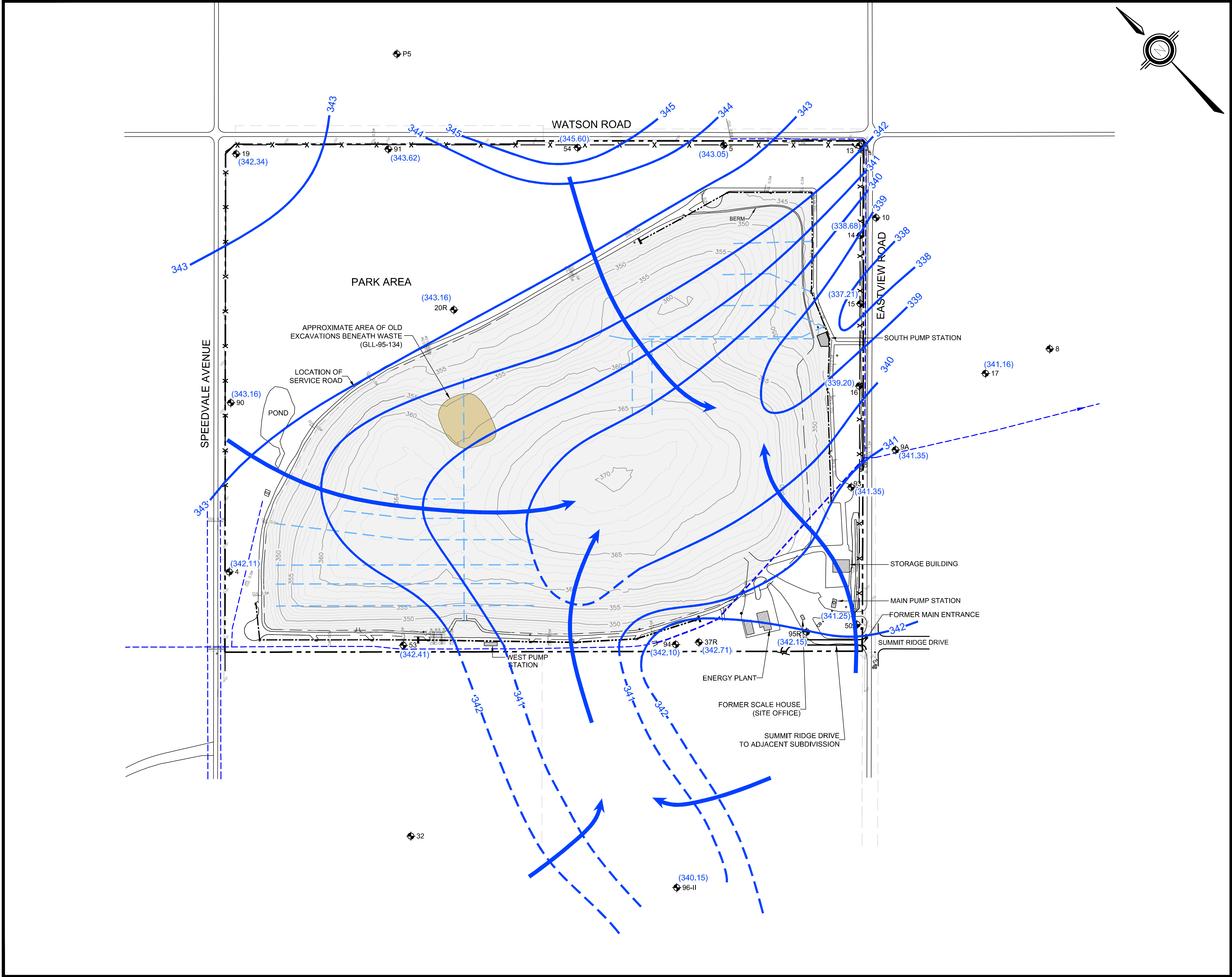
P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-F12.dwg Layout:Fig 13 Plotted: Dec 08, 2015 @ 10:32am by WangV

B SIZE 11" x 17" (279.4mm x 431.8mm)

PLOT: 11/24/2015 3:09:19 PM

BY:----

FILE NAME: 60339708-2015AMR-F13.DWG



Legend	
— · —	PROPERTY BOUNDARY
—x—	FENCE LINE
▭	APPROXIMATE EXTENT OF LANDFILL WASTES
—·—·—	PERIMETER LEACHATE COLLECTION AND CONTAINMENT SYSTEM (PLCCS)
⊢·—·⊣	PLCCS WITH SHEET PILE WALL PRESENT
- - -	SURFACE DRAINAGE AND STORM DITCHES
- - -	BURIED SURFACE WATER CULVERT
◈ 7	GROUND WATER MONITOR LOCATION
(338.68)	BEDROCK GROUNDWATER ELEVATION (mASL)
—343	ELEVATION CONTOUR OF WATER LEVEL IN BEDROCK
←	INFERRED DIRECTION OF BEDROCK GROUNDWATER FLOW

0 30 60 120 180 240 m
1 : 6000

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AECOM

Eastview Road Landfill
City of Guelph

Piezometric Heads and Groundwater Flow in Shallow Bedrock (May 2014)

PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	13

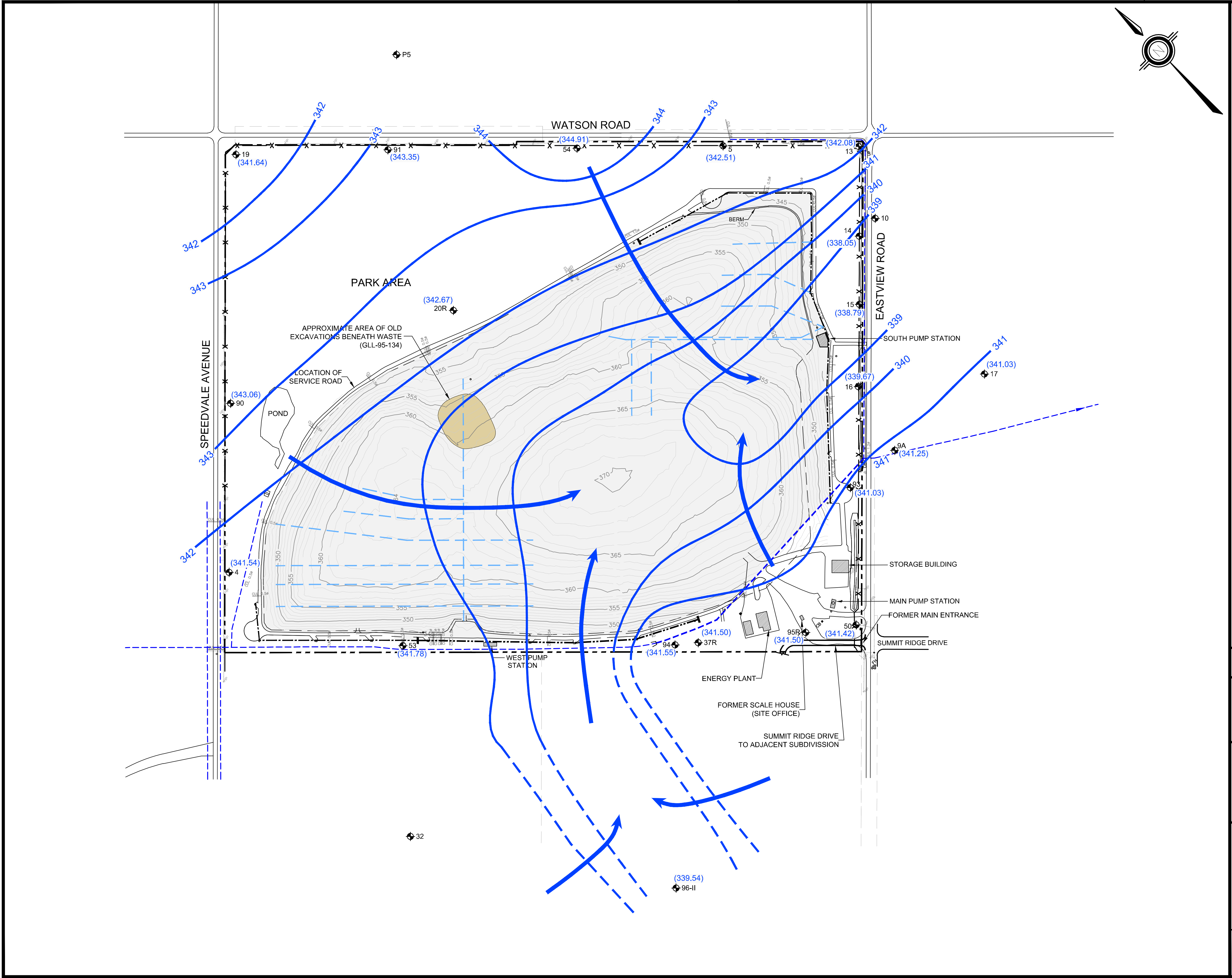
P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-F13.dwg Layout:Fig 14 Plotted: Nov 24, 2015 @ 3:09pm by WangV

B SIZE 11" x 17" (279.4mm x 431.8mm)

PLOT: 11/24/2015 3:08:30 PM

BY:----

FILE NAME: 60339708-2015AMR-F14.DWG



Legend

— · —	PROPERTY BOUNDARY
— x —	FENCE LINE
▨	APPROXIMATE EXTENT OF LANDFILL WASTES
— · · —	PERIMETER LEACHATE COLLECTION AND CONTAINMENT SYSTEM (PLCCS)
⊢ · · ⊣	PLCCS WITH SHEET PILE WALL PRESENT
- - -	SURFACE DRAINAGE AND STORM DITCHES
- - -	BURIED SURFACE WATER CULVERT
⊕ 7	GROUND WATER MONITOR LOCATION
(338.79)	BEDROCK GROUNDWATER ELEVATION (mASL)
343	ELEVATION CONTOUR OF WATER LEVEL IN BEDROCK
←	INFERRED DIRECTION OF BEDROCK GROUNDWATER FLOW

0 30 60 120 180 240 m

1 : 6000

DO NOT SCALE THIS DOCUMENT.
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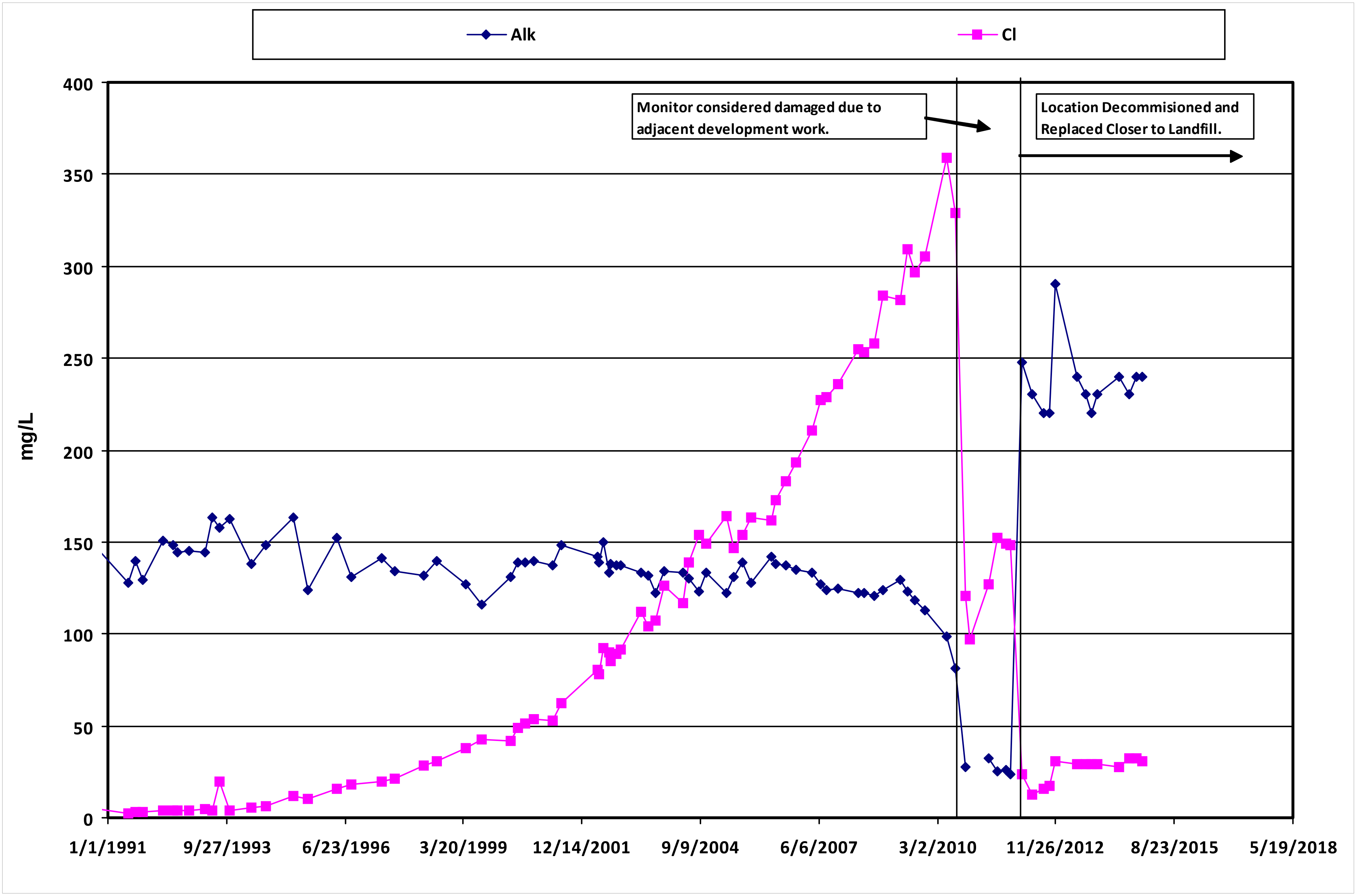
Eastview Road Landfill
City of Guelph

Piezometric Heads and Groundwater Flow in Shallow Bedrock (Nov 2014)

PROJECT NUMBER	DATE	FIGURE
60339708	November, 2015	14

P:\60339708\900-Work\910-CAD\25-SKETCHES\1-Figures\2015AMR\60339708-2015AMR-F14.dwg Layout:Fig 14 Plotted: Nov 24, 2015 @ 3:08pm by WangV



AECOM

Closed Eastview Road Landfill Site

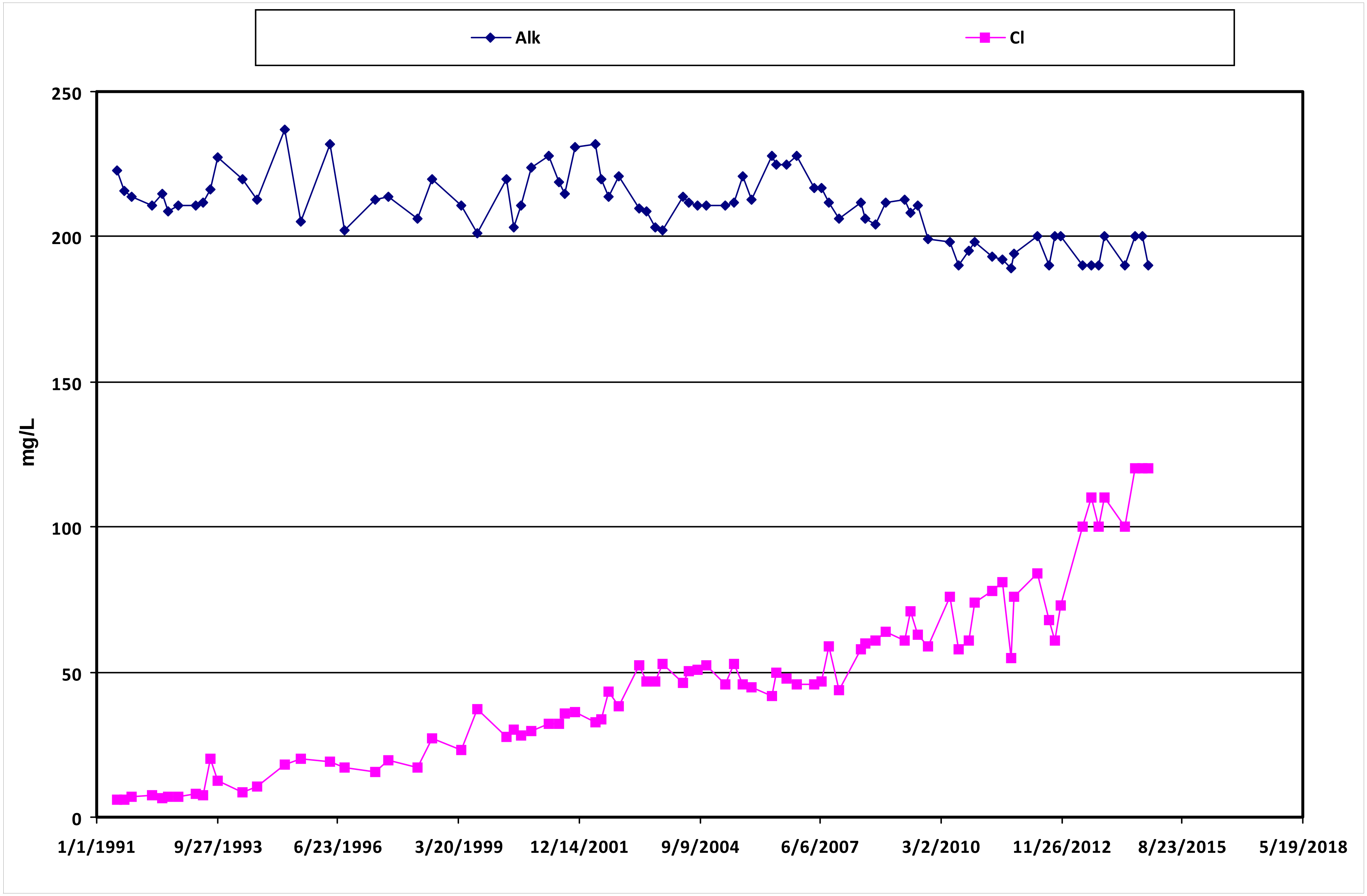
Groundwater Quality Trends

Comparison of Chloride and Chloride at Location 37/37R

FIGURE
15

60339708

TLC-Graph37-I-37--IR_ALK_CLtrend



AECOM

Closed Eastview Road Landfill Site

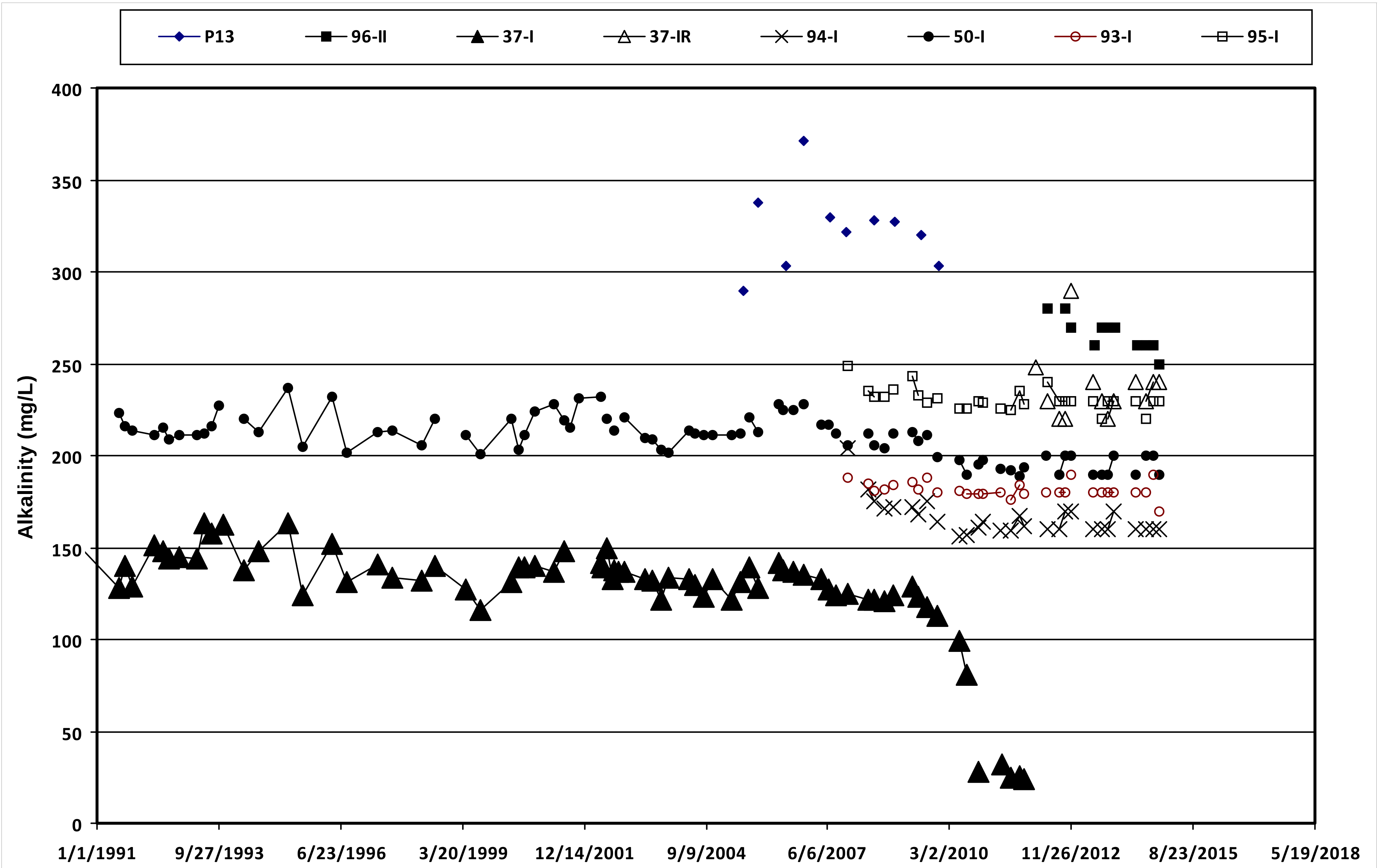
Groundwater Quality Trends

Comparison of Chloride and Alkalinity at Location 50

FIGURE
16

60339708

TLC-Graph50-I_ALK_CLtrend



AECOM

Closed Eastview Road Landfill Site

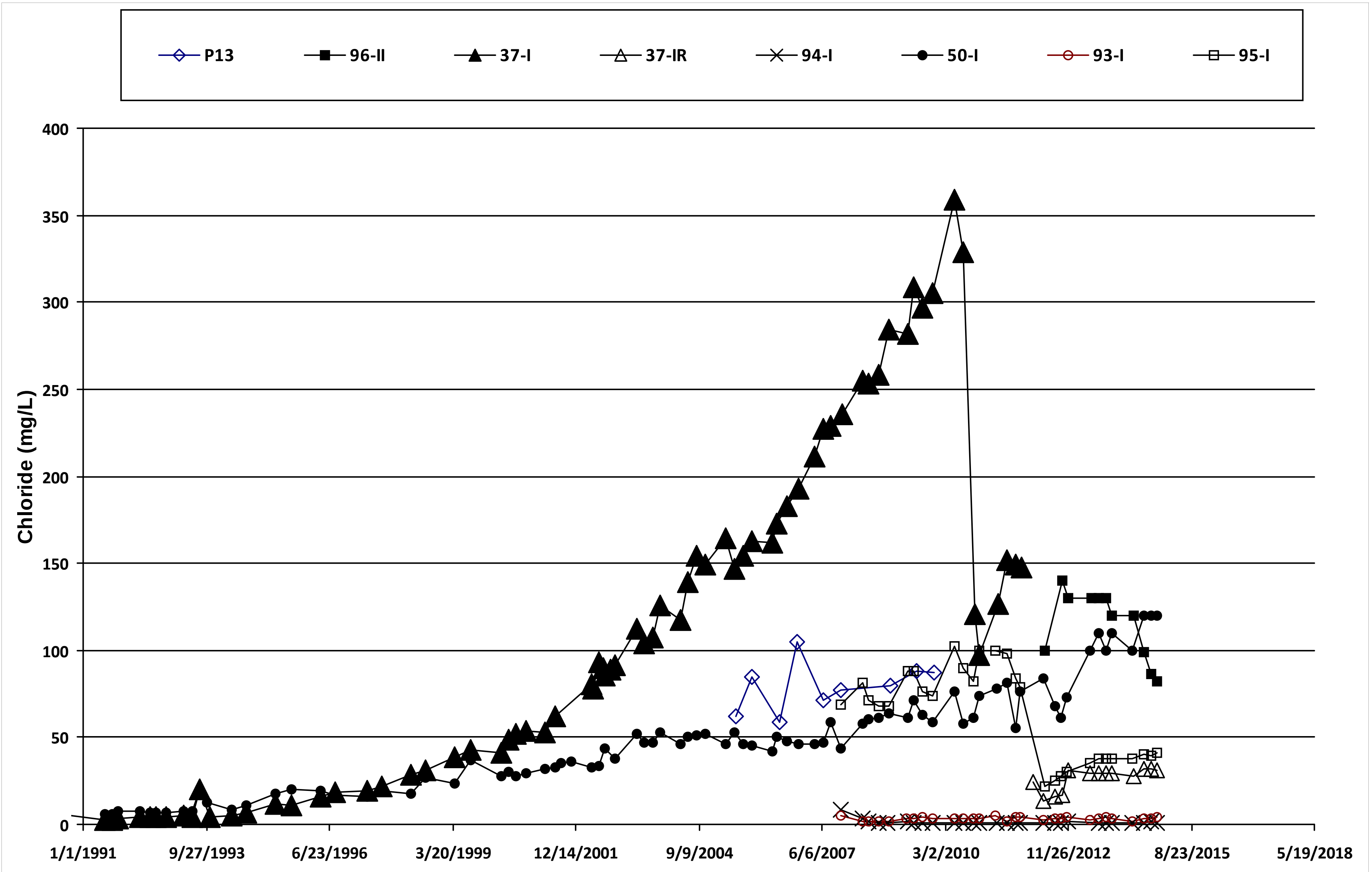
Groundwater Quality Trends

Comparison of Alkalinity at Western Bedrock Locations

FIGURE
17

60339708

TLC-GraphWesternBedrock Alk and Decom



Closed Eastview Road Landfill Site

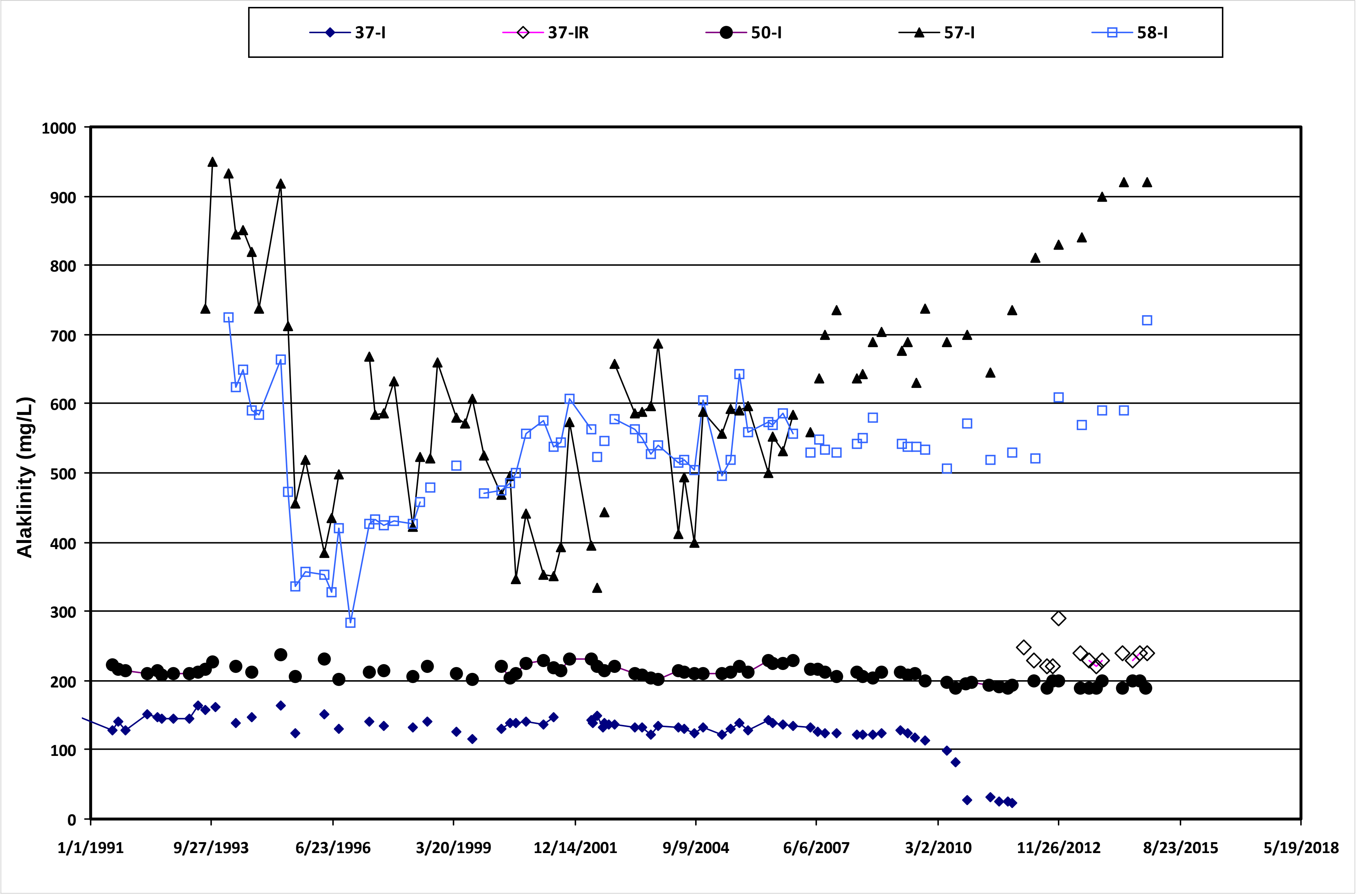
Groundwater Quality Trends

Comparison of Chloride at Western Bedrock Locations

FIGURE
18

60339708

TLC-GraphWesternBedrock Cl and Decom



AECOM

Closed Eastview Road Landfill Site

Comparison of Alkalinity between Leachate in Outwash Beneath the Waste in Western Area of Landfill and 37/50

FIGURE 19

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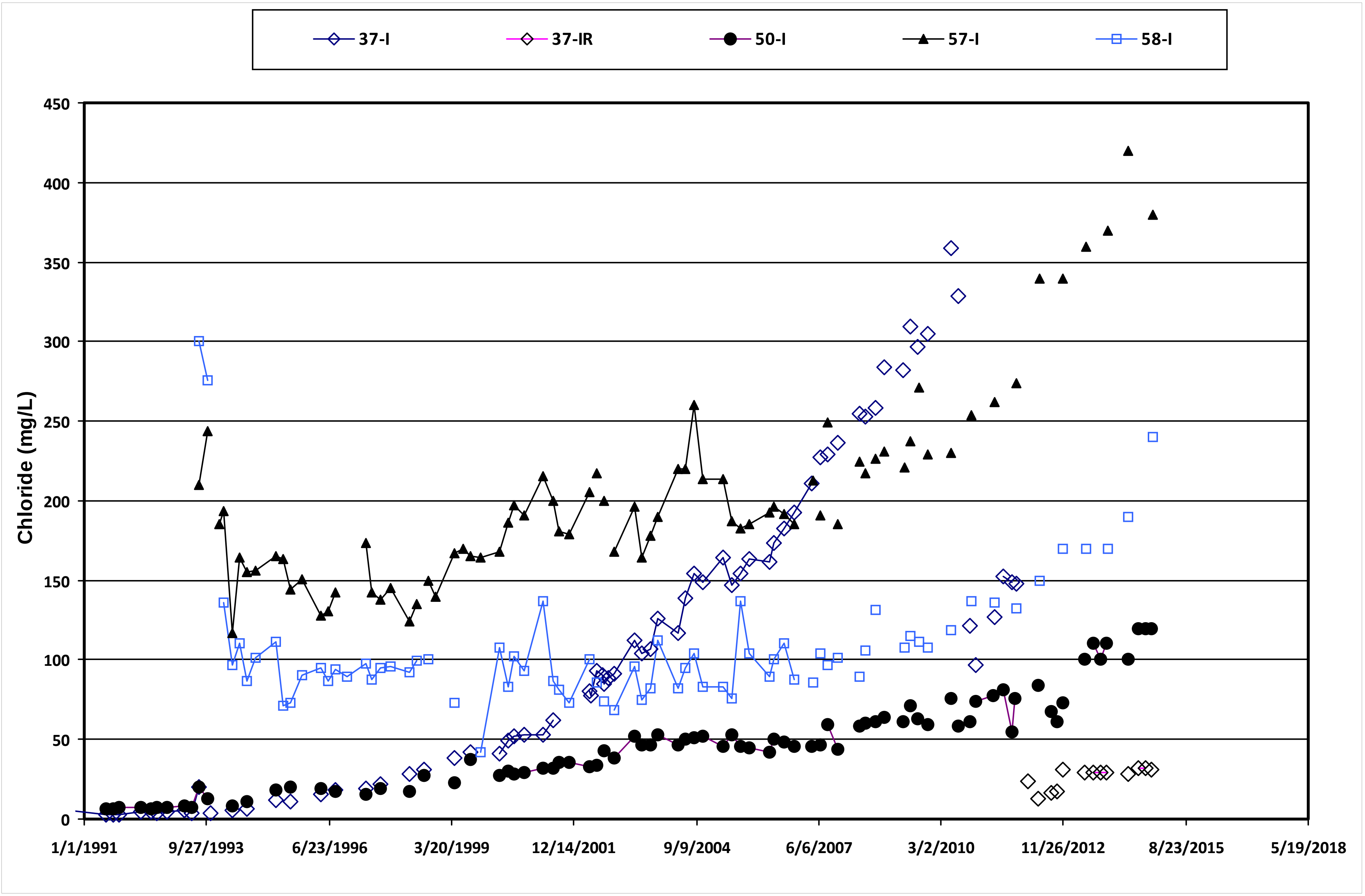
TLC-Graph57-58vrs37 Alk and Decom



AECOM

Closed Eastview Road Landfill Site

Comparison of Chloride between Leachate in Outwash Beneath the Waste in Western Area of Landfill and 37/50

FIGURE
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