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Harbourside Commercial Park
Sydney, NS

2013 Groundwater Monitoring Program

NS Lands
nova scotia lands

November 2014
SLR Project No.: 210.05890.00000

2013 GROUNDWATER MONITORING PROGRAM

HARBOURSIDE COMMERCIAL PARK

SYDNEY, NS

SLR Project No.: 210.05890.00000

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1.0 BACKGROUND AND PURPOSE

The former Sydney Steel Corporation (SYSCO) property, located in Sydney, Nova Scotia, is being redeveloped as the Harbourside Commercial Park (HCP). Nova Scotia Lands Inc. (NSLI) is a provincial Crown Corporation with the mandate to complete the reclamation of the former steel plant site through demolition, site remediation and redevelopment of the property. Harbourside Commercial Park Inc. (HCPI) is a provincial Crown Corporation that has a mandate to operate the commercial park. Environmental Site Assessments (ESAs) conducted to date throughout the HCP have identified several groundwater constituents of interest (COI) in excess of evaluation criteria. Some of the COI that were often detected included Polycyclic Aromatic Hydrocarbons (PAHs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and Total Petroleum Hydrocarbons (TPH). Other COI that exceeded criteria included mercury, various other metals, and vinyl chloride.

This report presents the results of a groundwater monitoring program (GWMP) conducted between November 26 and December 9, 2013, at the HCP. The program is outlined in the Environmental Management Plan (EMP) for the HCP. The program was conducted by SLR Consulting (Canada) Ltd. (SLR) at the request of NSLI in accordance with SLR's work plan dated November 1, 2013, and was the sixth round of annual groundwater sampling on the Site.

A statistical analysis (i.e. Mann-Kendall) was performed on groundwater data from wells for which a minimum of four data sets exist, including historical data from Phase II and III ESA reporting. The statistical analysis was performed to determine if concentrations at each sampling location are increasing, decreasing or stable. This information is then used to develop recommendations to discontinue monitoring of particular constituents or additional sampling.

Results from the ESA programs conducted between 2003 and 2005 tended to contain elevated levels of turbidity, likely attributed to the sampling method (Waterra foot valve method). The annual groundwater monitoring program is conducted using low-flow sampling methods to minimize sediment mobilization. Seventy-one monitor wells were monitored in November and December in 2013, of which 61 were sampled. All analytical results (TPH/BTEX, PAHs, Metals, VOCs and PCBs) were compared to the Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for Groundwater. For parameters without NSE Tier 1 EQS, Ontario Ministry of the Environment (MOE) Groundwater Standards for use Under the Environmental Protection Act was used.

The NSE EQS were released in July 2013, and were not used in previous GWMP Reports. Previously, MOE standards were used for screening. The MOE standards were updated in 2011 and evaluations of individual constituents may differ from previous GWMP Reports.

Refer to **Drawing 1**, for the Monitor Well Location Plan.

2.0 FIELD PROGRAM METHODS

Groundwater samples were collected in accordance with SLR's Standard Field Procedures, industry-accepted protocols and NSLI-approved protocols to maintain accurate and consistent collection of field data and interpretation of conditions.

Sampling was conducted via low-flow purging and sampling methods, as it is considered to be the most defensible method for the collection of representative formation water. Low-flow purging and sampling is the preferred method for all semi-volatile and non-volatile/inorganic analyses (i.e. C_{6-50} hydrocarbons, metals, PAHs and VOCs), and is defined as purging groundwater from a well at a rate of less than 1 L/min and minimizing draw-down of the static water level to less than 10 cm.

During the purging process, extracted groundwater was determined to be representative of natural formation water through geochemical parameter stabilization monitoring. Once the geochemical parameters were determined to have stabilized, groundwater samples were collected.

In the parameter stabilization method, extracted groundwater was passed continuously through a 'flow-through' cell and pH, temperature, electrical conductivity, dissolved oxygen, redox potential and turbidity were monitored to assess their stabilization as an indication that representative formation water was being extracted. Stabilization was confirmed when three subsequent readings of all of the parameters were within the Parameter Stabilization Guidelines indicated on the Groundwater Sampling Forms. Groundwater samples that were collected prior to all of the parameters being stable are indicated on the Groundwater Sampling Forms. Groundwater samples collected for metals analysis were field filtered and preserved prior to laboratory submission.

It should be noted that monitor wells SCU26-001-MW, SCU26-002-MW, SCU27-002-MW, SCU32-001-MWB, SCU32-002-MW, SCU32-003-MW, SCU32-004-MW and MCES-007-MW were purged using a submersible pump and samples were collected using a bailer due to the depth of each monitor well. As well, monitor wells SCU26-007-MW and SCU32-001-MWA were purged and sampled using a bailer due to low well water volume and the presence of free product in the well (black product drops on the oil/water interface probe and black product on the outside of the bailer), respectively.

Monitor wells SCU19-029-MW and SCU19-030-MW were found to be buried during the field program. The wells were located, uncovered and a protective cover was placed over the monitor wells.

Fifty-nine monitor wells were proposed to be sampled during the November/December 2013 GWMP based on the original work plan (November 1, 2014) and 10 monitor/recovery wells checked for product. One monitor well (SCU19-032-MW) was scheduled to be sampled, but it was observed to be damaged beyond repair and the casing had been filled with red sediment. Three monitor wells were added to the sampling program in SCU15 (SCU15-001-MWB, SCU15-008-MWB and SCU15-012-MW) after product was identified in the recovery well near Source Atlantic (SCU15-008-RW). A total of 61 monitor wells were sampled.

Groundwater sampling records are provided in **Appendix A**.

3.0 ANALYTICAL RESULTS

The following analyses were conducted in November and December 2013 as part of the GWMP:

- Sixty-five groundwater samples were submitted for PAH analysis (including six duplicates)
- Sixty-three groundwater samples were submitted for TPH/BTEX analysis (including six duplicates and two trip blanks)
- Fifty-nine groundwater samples were submitted for Metals and Mercury analyses (including six duplicates)
- One groundwater sample was submitted for VOC analysis
- Two groundwater samples were submitted for PCB analysis

All groundwater samples were submitted to Maxxam Analytics Inc (Maxxam) in Sydney, Nova Scotia.

Analytical results are provided in Tables 1 through 5 for PAHs, BTEX/TPH, Metals, VOCs, and PCBs, respectively. The tables also provide historical analytical data for all monitor wells included in this program.

3.1 PAHs

All 65 groundwater samples (including six duplicates) submitted for PAH analysis contained concentrations below NSE Tier 1 EQS. MOE standards were used for screening purposes since NSE Tier 1 EQSs are not available for all parameters. All parameters contained concentrations within MOE standards, with the following exceptions:

- Acenaphthylene (standard of 1.8 ug/L) – SCU7-006-MWA (21 ug/L), SCU10-004-MW (20 ug/L), SCU17-004-MW (20 ug/L), SCU20-013-MW (34 ug/L), SCU20-014-MW (5.7 ug/L), SCU20-016-MW (3.1 ug/L), SCU20-017-MW (3.7 ug/L), SCU32-001-MWA (1.8 ug/L). All concentrations were within the NSE Tier 1 EQS of 750 ug/L.
- Anthracene (standard of 2.4 ug/L) – SCU10-004-MW (4.0 ug/L), SCU15-018-MW (2.9 ug/L), SCU17-004-MW (3.6 ug/L), SCU20-013-MW (4.0 ug/L), SCU32-001-MWA (7.4 ug/L), SCU32-003-MW (8.7 ug/L). There is no Tier 1 EQS available for Anthracene.
- Benzo(a)anthracene (standard of 4.7 ug/L) – SCU32-001-MWA (13 ug/L), SCU32-003-MW (19 ug/L). There is no Tier 1 EQS available for Benzo(a)anthracene.
- Benzo(a)pyrene (standard of 0.81 ug/L) – SCU6-004-MW (1.2 ug/L), SCU32-001-MWA (8.0 ug/L), SCU32-002-MW (2.8 ug/L), SCU32-003-MW (11 ug/L). There is no Tier 1 EQS available for Benzo(a)pyrene.
- Benzo(b)fluoranthene (standard of 0.75 ug/L) – SCU6-004-MW (1.0 ug/L), SCU32-001-MWA (6.1 ug/L), SCU32-002-MW (2.1 ug/L), SCU32-003-MW (8.4 ug/L). There is no Tier 1 EQS available for Benzo(b)fluoranthene.
- Benzo(g,h,i)perylene (standard of 0.2 ug/L) – SCU6-004-MW (0.65 ug/L), SCU32-001-MWA (3.1 ug/L), SCU32-002-MW (1.4 ug/L), SCU32-003-MW (4.3 ug/L). There is no Tier 1 EQS available for Benzo(g,h,i)perylene.

- Benzo(k)fluoranthene (standard of 0.4 ug/L) –SCU6-004-MW (0.6 ug/L), SCU32-001-MWA (3.8 ug/L), SCU32-002-MW (1.3 ug/L), SCU32-003-MW (5.3 ug/L). There is no Tier 1 EQS available for Benzo(k)fluoranthene.
- Chrysene (standard of 1 ug/L) – SCU6-004-MW (1.8 ug/L), SCU32-001-MWA (12 ug/L), SCU32-002-MW (2.6 ug/L), SCU32-003-MW (17 ug/L). There is no Tier 1 EQS available for Chrysene.
- Dibenz(a,h)anthracene (standard of 0.52 ug/L) – SCU32-001-MWA (0.91 ug/L), SCU32-003-MW (1.3 ug/L). There is no Tier 1 EQS available for Dibenz(a,h)anthracene.
- Indeno(1,2,3-cd)pyrene (standard of 0.2 ug/L) – SCU6-004-MW (0.61 ug/L), SCU32-001-MWA (3.0 ug/L), SCU32-002-MW (1.2 ug/L), SCU32-003-MW (4.2 ug/L). There is no Tier 1 EQS available for Indeno(1,2,3-cd)pyrene.

Analytical data is provided in **Table 1** and analytical certificates in **Appendix B**.

3.2 Hydrocarbons

The 63 groundwater samples (including six duplicates and two trip blanks) submitted for TPH/BTEX analysis were either non-detect or contained concentrations below the NSE Tier 1 EQS for a Commercial site with Non-Potable groundwater usage and coarse-grained soil.

Analytical data is provided in **Table 2** and analytical certificates in **Appendix B**.

3.3 Metals (including Mercury)

Fifty-nine groundwater results (including six duplicates) for samples submitted for dissolved Metals analysis. NSE Tier 1 EQS are not available for metals in groundwater at non-potable sites. Concentrations were either non-detect or contained concentrations below the MOE standards, with the following exceptions:

- Sodium (standard of 2,300,000 ug/L) – SCU27-002-MW (5,200,000 ug/L), SCU32-001-MWB (2,300,000 ug/L).

Analytical data is provided in **Table 3** and analytical certificates in **Appendix B**.

3.4 VOCs

One groundwater sample was submitted for VOC analysis (SCU10-001-MW). All results were either non-detect or contained concentrations below the NSE Tier 1 EQS, with the exception of cis-1,2-Dichloroethylene which had a concentration of 92 ug/L and exceeded the standard of 30 ug/L. MOE standards were used for comparison purposes since NSE Tier 1 EQSs are not available for all parameters. All parameters contained concentrations within MOE standards, with the following exceptions:

- cis-1,2-Dichloroethylene (standard of 1.6 ug/L) – SCU10-001-MW (92 ug/L). The concentration exceeded the NSE Tier 1 EQS of 30 ug/L.
- trans-1,2-Dichlorethylene (standard of 1.6 ug/L) – SCU10-001-MW (1.8 ug/L). The concentration was within the NSE Tier 1 EQS of 30 ug/L.
- Trichloroethylene (standard of 1.6 ug/L) – SCU10-001-MW (1.8 ug/L). The concentration was within the NSE Tier 1 EQS of 1300 ug/L.

Analytical data is provided in **Table 4** and analytical certificates in **Appendix B**.

3.5 PCBs

Two groundwater samples were submitted for PCB analysis. PCBs were not detected in any of the samples.

Analytical data is provided in **Table 5** and analytical certificates in **Appendix B**.

3.6 QA/QC

A laboratory quality assurance and quality control (QA/QC) program was followed to ensure that the sampling and analytical data were interpretable, meaningful and reproducible.

All groundwater samples were analyzed by Maxxam. Maxxam is accredited through the Standards Council of Canada (SCC) and certified by the Canadian Association for Laboratory Accreditation (CALA). Method blanks, control standards samples, certified reference material standards, method spikes, replicates, duplicates and instrument blanks are routinely analyzed as part of their QA/QC programs.

As an internal quality control measure, the project laboratory routinely reports the results of laboratory prepared duplicate analyses. The results of the laboratory QA/QC are reported in the laboratory certificates provided in **Appendix B**. If these criteria are not met, the laboratory is asked by SLR to either re-analyze the affected samples or qualify the results. SLR has reviewed these data and verifies that the laboratory internal QA/QC results autumn within the lab's own specified acceptance criteria.

To verify the reproducibility of the laboratory analyses and to demonstrate that the field sampling techniques utilized by SLR personnel are capable of yielding reproducible results, SLR collected a total of six blind field duplicate (BFD) samples that represent a minimum of 11.8% of the samples collected for any one parameter tested. Six duplicate groundwater samples were submitted for PAH, TPH/BTEX, and metals analyses. The duplicates submitted were as follows:

- FD #1 for SCU18-002-MW (November 29, 2013);
- FD #2 for SCU17-010-MWA (December 1, 2013);
- FD #3 for SCU15-004-MWA (December 3, 2013);
- FD #4 for SCU16-006-MW (December 3, 2013);
- FD #5 for SCU32-004-MW (December 5, 2013); and
- FD #6 for SCU31-002-MWB (December 7, 2013).

Based on the results of blind field duplicate, the relative percent difference (RPD) is calculated as a measure of QA/QC. The RPD is defined as the difference between the duplicate results divided by the mean of the results, expressed as a percentage. Analytical error increases near the method detection limit (MDL); therefore, the RPD is not normally calculated unless the concentrations of both the original and duplicate samples are greater than 5 times the MDL. If the RPD for a sample and its duplicate do not meet SLR's RPD standards for the parameters analyzed, an explanation is required to qualify the difference in values.

Many of the parameters were not detected, so the corresponding RPD's could not be calculated. The calculated average RPD's were:

- FD #1 for SCU18-002-MW:
    - PAH: RDPs were calculated between 42.9% and 56.4%, with 5/6 analytes reviewed having concentrations below 5 X MDL.

  - BTEX/TPH: no RDP calculated (no parameters were detected)
  - Metals: RDPs ranged from 0% to 142.0%, with 6/14 analytes reviewed having concentrations below 5 X MDL.
- FD #2 for SCU17-010-MWA:
  - PAH: RDPs were calculated between 4.44% and 22.2%, with 7/8 analytes reviewed having concentrations below 5 X MDL.
  - BTEX/TPH: no RDP calculated (no parameters were detected)
  - Metals: RDPs ranged from 0% to 14.8%, with 5/13 analytes reviewed having concentrations below 5 X MDL.
- FD #3 for SCU15-004-MWA:
  - PAH: RDPs were calculated between 0% and 22.2%, with 3/10 analytes reviewed having concentrations below 5 X MDL.
  - BTEX/TPH: RPDs ranged from 3.0% to 20.7%, with 4/5 analytes reviewed having concentrations below 5 X MDL.
  - Metals: RDPs ranged from 0% to 54.2%, with 6/17 analytes reviewed having concentrations below 5 X MDL.
- FD #4 for SCU16-006-MW:
  - PAH: RDPs were calculated between 14.0% and 28.6%, with 7/8 analytes reviewed having concentrations below 5 X MDL.
  - BTEX/TPH: no RDP calculated (no parameters were detected)
  - Metals: RDPs ranged from 0% to 47.6%, with 3/12 analytes reviewed having concentrations below 5 X MDL. The maximum RPD for approved calculations was 3.9%.
- FD #5 for SCU32-004-MW:
  - PAH: RDPs were calculated between 0% and 27.5%, with 2/20 analytes reviewed having concentrations below 5 X MDL.
  - BTEX/TPH: RPDs ranged from 13.3% to 37.3%, with 3/4 analytes reviewed having concentrations below 5 X MDL.
  - Metals: RDPs ranged from 0% to 182.8%, with 8/18 analytes reviewed having concentrations below 5 X MDL.
- FD #6 for SCU31-002-MWB:
  - PAH: RDPs were calculated between 6.7% and 22.2%, with all analytes reviewed having concentrations below 5 X MDL.
  - BTEX/TPH: no RDP calculated (no parameters were detected)
  - Metals: RDPs ranged from 0% to 48.6%, with 4/13 analytes reviewed having concentrations below 5 X MDL.

The majority of the RDPs reported outside of the optimum range were for analytes with concentrations below five times the MDL, which is unlikely to prove reliability. All duplicate samples, with analyte concentrations greater than five times the MDL, were generally observed to compare well with their respective original samples, with the exception of aluminium in SCU15-004-MWA, phenanthrene in SCU18-002-MW, and aluminium, lead, manganese and molybdenum in SCU32-004-MW.

Two laboratory-prepared groundwater trip blanks were also analysed for BTEX/TPH by Maxxam for QA/QC purposes, including:

- Trip Blank #1(November 29, 2013); and
- Trip Blank #2 (December 4, 2013).

Concentrations of BTEX/TPH in the two groundwater trip blanks were reported below laboratory detection limits.

Based on the field QA/QC results, it is the opinion of SLR that the data collected from the investigations is reliable.

Laboratory comments in regards to sample quality included:

- Elevated PAH RDL(s) due to sample dilution – SCU20-013-MW (November 26, 2013), SCU20-014-MW (November 26, 2013), SCU20-016-MW (November 26, 2013), SCU20-017-MW (November 26, 2013), SCU10-004-MW (December 2, 2013), SCU17-004-MW (December 2, 2013), SCU15-018-MW (December 3, 2013), SCU32-001-MWA (December 5, 2013)
- PAH sample contained sediment – FD1 (November 29, 2013), FD #2 (December 1, 2013), SCU17-010-MWA (December 1, 2013), SCU17-010-MWB (December 1, 2013), SCU17-010-MWC (December 1, 2013), SCU19-010-MW (December 1, 2013), SCU18-009-MW (December 1, 2013), SCU6-004-MW (December 2, 2013), SCU18-007-MW (December 2, 2013), SCU15-018-MW (December 3, 2013), SCU16-006-MW (December 3, 2013), SCU31-013-MWB (December 4, 2013), SCU31-013-MWC (December 4, 2013), FD #5 (December 5, 2013), SCU32-002-MW (December 5, 2013), SCU32-001-MWA (December 5, 2013), SCU32-001-MWB (December 5, 2013), SCU32-003-MW (December 5, 2013), SCU32-004-MW (December 5, 2013), SCU26-001-MW (December 5, 2013), SCU26-002-MW (December 5, 2013), SCU27-002-MW (December 5, 2013), SCU26-007-MW (December 6, 2013), SCU19-029-MW (December 7, 2013), SCU31-002-MWB (December 7, 2013), FD #6 (December 7, 2013), SCU15-012-MW (December 9, 2013)
- Elevated PAH RDL(s) due to matrix/co-extractive interference – FD #2 (December 1, 2013), SCU17-010-MWA (December 1, 2013), SCU19-010-MW (December 1, 2013), SCU17-004-MW (December 2, 2013), SCU32-001-MWB (December 5, 2013), SCU25-003-MW (December 6, 2013), SCU19-030-MW (December 7, 2013)
- Elevated VOC RDL(s) due to matrix interference – SCU10-001-MW (December 2, 2013)
- Matrix Spike: <10 % of compounds in multi-component analysis are in violation – Dissolved Silver (AG) – SCU17-010-MWB (December 1, 2013), SCU15-018-MW (December 3, 2013),
- RPD: duplicate results are outside acceptance limit; insufficient sample for repeat analysis (parameters 1-Methylnaphthalene, Acenaphthene, Acenaphthylene, Fluoranthene, Flourene, Phenanthrene and Pyrene) – SCU8-002-MW (December 2, 2013), SCU7-006-MWA (December 2, 2013), SCU10-004-MW (December 2, 2013), SCU11-003-MW (December 2, 2013), SCU6-004-MW (December 2, 2013), SCU17-004-MW (December 2, 2013), SCU18-007-MW (December 2, 2013),
- RPD: duplicate results are outside acceptance limit; insufficient sample for repeat analysis (parameters 1-Methylnaphthalene, Acenaphthene, Acenaphthylene, Anthracene, Fluoranthene, Flourene, Phenanthrene and Pyrene) – FD #3 (December 3, 2013), SCU15-004-MWA (December 3, 2013), SCU15-004-MWB (December 3, 2013), SCU15-018-MW (December 3, 2013), SCU16-004-MW (December 3, 2013), SCU16-006-MW (December 3, 2013),
- VPH analysis performed on previously opened vial – SCU15-018-MW (December 3, 2013), SCU16-014-MW (December 6, 2013)
- TEH sample contained sediment – SCU15-018-MW (December 3, 2013)
- Elevated reporting limits for trace metals due to sample matrix – SCU27-002-MW (December 5, 2013)
- PCB sample contained sediment – SCU19-029-MW (December 7, 2013)

The QA/QC laboratory comments were reviewed and are considered acceptable and do not affect the conclusions. In most cases, the comments provided would indicate that the results may be biased high. An additional laboratory issue is highlighted below.

3.7 Field Observations

3.7.1 Sampling

The following observations were recorded in the field during sampling and are included in **Table A-1** and in field forms located in **Appendix A**:

- SCU10-004-MW: A hydrocarbon odour and sheen was identified on the oil/water interface probe. Groundwater was not run through the flow-through cell during purging.
- SCU19-032-MW: The well was found to be damaged beyond repair and red sediment was observed at the bottom of the well. The depth to the bottom of the monitor well was 6.084 m from the top of casing, which is 1.914m shallower than the 2012 reading of 7.998 m. No water was observed in the well and a sample not collected.
- SCU32-001-MWB: A skim of product was identified at the top of the water table. The oil/water interface probe did not detect water level once the product touched the probe.

Table A-1, Appendix A summarizes the findings from the field forms and provides the last reading of field parameters collected prior to sampling.

3.7.2 Product Check

The following observations were recorded in the field during product checks in SCU10, SCU11, SCU15 and SCU31 and are included in **Table A-2, Appendix A**:

- SCU10-002-MW: oil/water interface probe did not detect product, product present on probe, strong hydrocarbon odour from product
- SCU10-003-MW: oil/water interface probe did not detect product, no product present, no hydrocarbon odour
- SCU11-001-MWA: oil/water interface probe did not detect product, no product present, no hydrocarbon odour
- SCU11-001-MWB: oil/water interface probe did not detect product, no product present, no hydrocarbon odour
- SCU15-001-MWA: oil/water interface probe did not detect product, product present on end of probe, slight hydrocarbon odour from product, rust coloured sediment on probe
- SCU15-008-RW: oil/water interface probe did not detect product, product present on probe and tape (bottom 2 m), thin layer of product on top of water (from bailer), slight hydrocarbon odour from product
- SCU15-016-MW: oil/water interface probe did not detect product, no product present, no hydrocarbon odour, rust coloured sediment on probe
- SCU31-002-MWA: oil/water interface probe did not detect product, product present on probe and tape, slight hydrocarbon odour from product
- RW1: oil/water interface probe did not detect product, no product present, slight hydrocarbon odour
- RW2: oil/water interface probe did not detect product, no product present, no hydrocarbon odour

3.8 PAH Impacts in SCU 20 Discussion

Historically, PAH impacts were noted in all monitor wells located in solidified/stabilized (S/S) material in SCU 20. No exceedances were reported for TPH/BTEX or metals. The following summarizes the analytical results of four analytes that were historically noted as impacts in SCU 20 during at least one monitoring event:

Sampling Date:	Acenaphthylene (ug/L)	Anthracene (ug/L)	Benzo(g,h,i) perylene (ug/L)	Indeno(1,2,3-cd) pyrene (ug/L)
September 2010	SCU20-013-MW: **18**	SCU20-013-MW: 1.8	SCU20-013-MW: 0.01	SCU20-013-MW: 0.01
	SCU20-014-MW: **2.8**	SCU20-014-MW: 0.72	SCU20-014-MW: 0.05	SCU20-014-MW: 0.05
	SCU20-015-MW: **4.1**	SCU20-015-MW: 1.2	SCU20-015-MW: <0.01	SCU20-015-MW: <0.01
	SCU20-016-MW: 0.48	SCU20-016-MW: 0.55	SCU20-016-MW: <0.01	SCU20-016-MW: <0.01
	SCU20-017-MW: **7.7**	SCU20-017-MW: 0.91	SCU20-017-MW: 0.02	SCU20-017-MW: 0.02
November 2010	SCU20-013-MW: **26**	SCU20-013-MW: **2.7**	SCU20-013-MW: 0.03	SCU20-013-MW: 0.03
	SCU20-014-MW: **3.4**	SCU20-014-MW: 0.85	SCU20-014-MW: 0.05	SCU20-014-MW: 0.04
	SCU20-015-MW: 1.3	SCU20-015-MW: 1.1	SCU20-015-MW: 0.05	SCU20-015-MW: 0.05
	SCU20-016-MW: 1.2	SCU20-016-MW: 0.27	SCU20-016-MW: <0.01	SCU20-016-MW: <0.01
	SCU20-017-MW: **6.4**	SCU20-017-MW: 0.88	SCU20-017-MW: 0.07	SCU20-017-MW: 0.07
October 2011	SCU20-013-MW: **18**	SCU20-013-MW: **3.1**	SCU20-013-MW: 0.01	SCU20-013-MW: 0.01
	SCU20-014-MW: **7.2**	SCU20-014-MW: 1.4	SCU20-014-MW: 0.07	SCU20-014-MW: 0.07
	SCU20-015-MW: 0.83	SCU20-015-MW: 1.1	SCU20-015-MW: **0.29**	SCU20-015-MW: **0.28**
	SCU20-016-MW: **3.7**	SCU20-016-MW: 0.55	SCU20-016-MW: <0.01	SCU20-016-MW: <0.01
	SCU20-017-MW: **4.4**	SCU20-017-MW: 1.5	SCU20-017-MW: 0.15	SCU20-017-MW: 0.14
November 2012	SCU20-013-MW: **29**	SCU20-013-MW: 2.0	SCU20-013-MW: 0.050	SCU20-013-MW: 0.045
	SCU20-014-MW: **4.6**	SCU20-014-MW: 1.0	SCU20-014-MW: 0.033	SCU20-014-MW: 0.034
	SCU20-015-MW: 0.55	SCU20-015-MW: 0.24	SCU20-015-MW: 0.035	SCU20-015-MW: 0.032
	SCU20-016-MW: **2.2**	SCU20-016-MW: 0.40	SCU20-016-MW: <0.01	SCU20-016-MW: <0.01
	SCU20-017-MW: 0.98	SCU20-017-MW: 0.39	SCU20-017-MW: 0.027	SCU20-017-MW: 0.026
November 2013	SCU20-013-MW: **34**	SCU20-013-MW: **4.0**	SCU20-013-MW: 0.083	SCU20-013-MW: 0.088
	SCU20-014-MW: **5.7**	SCU20-014-MW: 1.1	SCU20-014-MW: 0.064	SCU20-014-MW: 0.065
	SCU20-015-MW: 0.96	SCU20-015-MW: 0.50	SCU20-015-MW: 0.084	SCU20-015-MW: 0.073

Sampling Date:	Acenaphthylene (ug/L)	Anthracene (ug/L)	Benzo(g,h,i) perylene (ug/L)	Indeno(1,2,3-cd) pyrene (ug/L)
	SCU20-016-MW: **3.1**	SCU20-016-MW: 0.37	SCU20-016-MW: 0.013	SCU20-016-MW: 0.013
	SCU20-017-MW: **3.7**	SCU20-017-MW: 1.2	SCU20-017-MW: 0.19	SCU20-017-MW: 0.18
MOE-Table 3	1.8	2.4	0.2	0.2
NSE-Tier 1 EQS	750	---	---	---
NSE- Tier 2 PSS (>10m)	60(marine) 58 (freshwater)	60(marine) 46 (freshwater)	--- (marine) 1.7 (freshwater)	--- (marine) 2.1 (freshwater)

Notes:
Bold = exceedance of MOE Table 3 Standards (2011)
--- = no standard
NSE- Tier 2 PSS (>10m) – NSE Tier 2 Pathway Specific Standards for Groundwater Discharge to Surface Water, > 10 m from Surface Water Body; discharge to marine water and freshwater

Based on review of the data, there are no exceedances of NSE Tier 1 EQS, but not all analytes have screening values. Tier 1 EQS are values based on vapour migration to indoor air, which is not a current consideration for SCU20. The potential open pathway for groundwater in SCU 20 is discharge to Sydney Harbour. Due to the distance (>100m) from the harbour to some of these wells, SCU20-016-MW and SCU20-017-MW in particular, the pathway may not be present. Screening against the NSE Tier 2 PSS (>10 m) as shown above, was completed to determine if there were risks associated with this potential pathway. While Sydney Harbour is a marine water body, no marine standards are available for benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene, therefore these parameters have been screened against the freshwater standards. No exceedances are observed for the historical PAH impacts based on current screening criteria.

The following summary is based on review of the results and discussion of historical screening with MOE standards:

- Acenaphthylene: Concentrations increased since 2012 for all monitor wells, with exceedances observed in four of five monitor wells.
- Anthracene: Concentrations increased since 2012 for all monitor wells with the exception of one monitor well (SCU20-016-MW), with an exceedance in one of five monitor wells.
- Benzo(g,h,i)perylene: Concentrations increased since 2012 for all monitor wells with no exceedances reordered.
- Indeno(1,2,3-cd)pyrene: Concentrations increased since 2012 for all monitor wells with no exceedances recorded.
- An increasing trend was identified in the PAH concentrations since 2012, but fluctuations in PAH concentrations have been recorded for all analytes in all monitor wells since 2010.

The MOE standards are superseded by NSE Tier 1 EQS and Tier 2 PSS, and no exceedances of the NSE standards in groundwater at SCU20 have been recorded. Reviewing these concentrations is important as PAHs do not appear stable in some of these wells.

Generally, higher concentrations appear to be more prevalent in wells closer to the shoreline of Sydney Harbour (SCU20-013-MW, SCU20-014-MW and SCU20-015-MW). Groundwater data prior to the S/S being placed in SCU 20 is very limited as wells installed in the area in question contained free product and were not sampled. No comparisons can be made to concentrations in groundwater prior to 2010.

During SCU 20 remedial activities, no excavations were advanced to within four metres of the foreshore, and a soil barrier wall installed between the remediated area and the foreshore. It is likely that impacts remain on the harbour side of the barrier (SLR, 2011b).

All the available data, including results for all PAHs, TPH/BTEX and metals analyses, for the monitor wells located in the S/S material was reviewed for general trends over time. Trend analysis was completed on three of the five wells (SCU20-013-MW, SCU20-014-MW and SCU20-016-MW), and the results indicated no discernible trend for autumn data. SCU20-015-MW was considered for trend analysis, but trend analysis was not conducted due to a visually apparent lack of trend in the concentrations. This visually apparent lack of trend was confirmed through an exploratory evaluation of the Benzo(g,h,i)perlene data.

Statistical analysis was not conducted on SCU20-017-MW as there were no exceedances (except for Acenaphthylene compared to MOE standard), PAHs appeared to be decreasing, and the well is in the program to monitor S/S Material.

Detail on statistics is provided in Section 4.0. Sampling will continue with these wells as they are used to characterize the groundwater in the vicinity of S/S material.

4.0 STATISTICAL ANALYSIS

The nonparametric Mann-Kendall statistical trend analysis was used to evaluate the analytical groundwater chemistry for all monitor wells in which analyte concentrations had exceeded applicable standards and for which data was available for at least four sampling events (see Tables 1 to 5). Duplicate analyses were considered to be the same sampling event as the primary sample, and the results of primary and duplicate samples were averaged to obtain the representative concentrations for these events.

The Mann-Kendall test is commonly used to detect monotonic trends in series data including hydrologic applications (Whitfield et al. 2006). This method allows for missing values and the data do not need to conform to a particular distribution (Salmi et al. 2002). The analysis compares the relative magnitudes of sample data rather than the data values themselves (Gilbert, 1987).

For this analysis, the Mann-Kendall test significance level, α, was required to be less than 0.10. This indicates that there is a 90% or better chance, or confidence level, of a trend in the analyte concentrations, while there is 10% chance that these results are from a random distribution and the trend does not exist. This is the threshold at which trends can be said to be probably increasing or probably decreasing (Wiedemeier et al, 2000).

The Mann-Kendall analysis requires a minimum of four sampling events for a 90% confidence level and assigns a score of 0, -1 or +1 for comparison of the analyte concentration for each individual groundwater sampling event to all previous sampling events. Analyte concentrations indicated to have no change from the previous sampling events score a 0, while concentration decreases score a –1, and increases score a +1. A Mann-Kendall Statistic (S) value is obtained from summing the assigned scores, and can indicate a increasing (positive S) or decreasing (negative S) concentration.

A critical value, or minimum absolute value, of S exists for each confidence level. If the absolute value of S is lower than this critical value, no apparent trend, either increasing or decreasing, is indicated at the respective confidence limit. As the confidence limit increases, the critical value of S for a given number of samples also increases.

An S value that indicates no apparent trend is present does not by itself indicate stable concentrations, or a stable plume. The relative degree of variability of the data must also be evaluated. A quick and useful measure of the variability is the Coefficient of Variation (COV) of the data. A COV of less than one indicates the data have relatively low variability, and a COV of 1 or greater indicates the data have relatively high variability. If the S value is lower than the critical S value for the number of sampling events used in the analysis, and the COV of the analyte series is less than 1, a stable trend is likely. If the S value is lower than the number of sampling events used in the analysis, and the COV of the analyte series is equal to or greater than 1, no trend is indicated.

An additional criteria was added to the analyses to consider differences in concentrations which were considered diminimus, in which case the concentrations would be considered to be equal, and a score of 0 would be applied to comparison of these concentrations in the Mann-Kendall equation. This threshold was set to five times the analyte RDL for this analysis, which is the same threshold criteria applied in the evaluation of relative percent difference for laboratory analytical data.

The data set from HCP was screened for locations and parameters to apply trend test analysis. The following criteria were considered:

- An analyte must have been detected in a monitor well at a concentration greater than the applicable standard in at least one sampling event. In some cases analytes were selected as they had historically exceeded MOE standards and not the current NSE Tier 1 EQS.
- A minimum of four sampling events had been conducted at the monitor well
- If obvious trends could be visually identified from the data, Mann-Kendall trend analyses were not conducted

A total of 12 analytes from four monitor wells were identified for potential statistical analysis, as listed in **Table C-1**, **Appendix C**. The following 42 monitor wells had four monitoring events for one or more parameter, but were not considered for statistical analysis:

Monitor Well ID	Number of Sampling Events					Comments
	PAH	BTEX/TPH	Metals	VOCs	PCBs	
SCU6-004-MW	7	4	4			PAHs appear to have increasing trend with several parameters exceeding in 2009, 2010 and 2011. PAH concentrations decreased in 2012 and increased in 2013. No exceedances recorded for BTEX/TPH or metals. Only sampled for PAHs in 2012 and 2013. Statistics were run in 2011 and it was determined that monitoring of PAHs should continue.
SCU7-006-MWA	7	5	5	1		PAHs originally had exceedances in 2004; some fluctuation in results since that time (namely 2010). Exceedances in 2004, 2008, 2010; One PAH exceedance in 2013. No exceedances recorded for BTEX/TPH or metals. Sampled only for PAHs in 2013. Statistics were run in 2011, but it was determined

Monitor Well ID	Number of Sampling Events					Comments
	PAH	BTEX/TPH	Metals	VOCs	PCBs	
						that the plume was not stable and continued monitoring of PAHs was required.
SCU8-002-MW	5	5	5	1		No exceedances recorded.
SCU10-004-MW	6	5	4	1	1	PAHs have exceedances during all sample events and appear to have increased since 2011. No exceedances recorded for BTEX/TPH or metals. An increasing trend was apparent in 2011 and thus statistics were not completed; continued monitoring required.
SCU11-003-MW	5	5	5	1		No exceedances recorded.
SCU15-004-MWA	5	5	5	1		No exceedances recorded since 2003 (PAHs).
SCU15-004-MWB	5	5	5			No exceedances recorded.
SCU15-018-MW	6	6	6			PAHs had exceedances in 2007 and 2008; One PAH exceedance in 2013. No exceedances recorded for BTEX/TPH or metals. Concentrations of all parameters have an obvious decreasing trend, with the exception of 2013.
SCU16-001-MW	5	5	4			No exceedances recorded.
SCU16-004-MW	5	5	5			No exceedances recorded.
SCU16-006-MW	5	5	4			No exceedances recorded - PAHs and BTEX/TPH generally NDs.
SCU16-011-MWA	5	5	5			No exceedances recorded.
SCU16-011-MWB	5	5	5			No exceedances recorded.
SCU16-011-MWC	5	5	5			No exceedances recorded.
SCU16-013-MW	5	5	5			No exceedances recorded.
SCU16-014-MW	5	5	5			No exceedances recorded.
SCU17-004-MW	5	5	5			Two PAH exceedances in 2013 for MOE, but no exceedances as per NSE standards. No exceedances recorded for BTEX/TPH or metals. Statistics were run in 2011 and showed that the concentration were stable.
SCU17-010-MWA	5	5	5			No exceedances recorded.
SCU17-010-MWB	5	5	5			No exceedances recorded.
SCU17-010-MWC	5	5	5			No exceedances recorded.
SCU18-001-MWA	5	5	5			No PAH exceedances reported since 2003. No exceedances recorded for BTEX/TPH or metals.
SCU18-002-MWA	5	5	5	1		No exceedances recorded.
SCU18-007-MW	6	6	6			No PAH exceedances reported, except for one analyte in 2010 for MOE. No exceedances recorded for BTEX/TPH or metals.
SCU18-009-MW	5	5	5			No exceedances recorded.

Monitor Well ID	Number of Sampling Events					Comments
	PAH	BTEX/TPH	Metals	VOCs	PCBs	
SCU18-010-MW	5	5	5			No PAH exceedances reported, except for one analyte in 2010 for MOE. No exceedances recorded for BTEX/TPH or metals.
SCU18-011-MW	5	5	5			No exceedances recorded.
SCU19-002-MWA	5	5	5			No exceedances recorded.
SCU19-002-MWB	4	5	5			No exceedances recorded.
SCU19-010-MW	3	2	2			No exceedances recorded.
SCU19-015-MW	7	6	6			No exceedances recorded.
SCU20-015-MW	5	5	5			Some PAH exceedances recorded in 2010 and 2011 for MOE. No exceedances recorded for BTEX/TPH or metals. Statistics were not completed in 2013 due to visible lack of trend in concentrations.
SCU20-017-MW	5	5	5			PAH exceedances recorded in each sampling event except for 2012 for MOE. Monitor well is located more that 50m from a water body, so there are no NSE Tier 2 EQS exceedances. PAHs appear to be decreasing. No exceedances recorded for BTEX/TPH or metals.
SCU20-018-MW	5	5	5			No exceedances recorded.
SCU25-001-MW	5	5	5			No exceedances recorded.
SCU25-003-MW	7	5	5	1		PAH exceedances only reported in 2007 for MOE, with some fluctuations in results since that time. No exceedances recorded for BTEX/TPH or metals, with the exception of cadmium in 2007. Sampled only for PAHs in 2013.
SCU25-004-MW	5	5	7			No exceedances recorded. Mercury exceeded MOE in 2009 and 2010 as reported in 2010 GWMP, but the mercury standard was updated in 2011 and concentrations do not exceed new standard. There are no NSE Tier 1 EQS for metals parameters on sites with non potable groundwater. Sampled only for metals and mercury in 2013.
SCU25-007-MW	5	5	5			No exceedances recorded.
SCU26-007-MW	5	5	5			PAH exceedances reported in 2009, 2011 and 2012 for MOE, but no NSE Tier 1 EQS exceedances. No exceedances recorded for BTEX/TPH or metals. Sampled only for PAHs in 2013. Monitor well is located more that 150m from a water body.
SCU31-002-MWB	5	4	4			Vanadium exceedance recorded in

Monitor Well ID	Number of Sampling Events					Comments
	PAH	BTEX/TPH	Metals	VOCs	PCBs	
						2005 for MOE. No exceedances recorded since that time.
SCU31-013-MWB	5	4	5			No exceedances recorded.
SCU31-013-MWC	5	4	5			No exceedances recorded.
SCU33-001-MW	5	5	5			No exceedances recorded.
Note: Exceedances identified in this table are generally based on historical screening with MOE standards.						

An additional seven monitor wells had four sampling events, but were not included for analysis as at least two sampling events were conducted within a four month period. The monitor wells are:

- SCU19-029-MW;
- SCU19-030-MW;
- SCU19-031-MW;
- SCU26-001-MW;
- SCU26-002-MW;
- SCU27-002-MW; and,
- MCES-007-MW.

A total of twelve Mann-Kendall trend analyses were conducted on select PAH constituents from four monitor wells that met these criteria. Additional analytes and monitor wells were also reviewed to determine if Mann-Kendall trend analyses was beneficial. The results of the Mann-Kendall tests and review with respect to dissolved plume stability for each area, well, and analyte are presented in **Table C-1** in **Appendix C**. These results are summarized as follows:

- SCU10-001-MW: Analysis of seasonally specific data (autumn) indicated no discernible trend in the cis-1,2,-Dichloroethylene (DCE) concentrations. Vinyl chloride concentrations were found to be statistically stable. This provides additional evidence that the DCE plume may also be stable.

- SCU20-013-MW: Analysis of seasonally specific data (autumn) indicated no discernible trend in the concentrations of acenaphthylene or anthracene. Utilizing all of the available data produced an increasing trend for acenaphthylene, however that result appears to be seasonally biased, and thus stats are inconclusive. It should be noted that the 'no trend' result for acenaphthylene was a marginal no-trend result (borderline increasing) and thus this well should be a further monitored moving forward.

- SCU20-014-MW: Analysis of seasonally specific data (4 autumn events) in addition to the full data set (5 events) indicated no discernible trend in the concentrations of acenaphthylene.

- SCU20-016-MW: Analysis of seasonally specific data (4 autumn events) in addition to the full data set (5 events) indicated no discernible trend in the concentrations of acenaphthylene.

The current analysis indicates that additional sampling events will be necessary at SCU20-013-MW to determine the acenaphthylene trend. Also, additional sampling is recommended at SCU20-013-MW, SCU20-014-MW, and SCU20-015-MW as they monitor solidified material.

The results of the Mann-Kendall Test analyses for the groundwater monitor wells are presented in **Appendix C**.

4.1 Discussion

The following discussions summarize information regarding the monitor wells sampled and monitored during the 2013 monitoring event.

Twenty-three monitor well locations did not have reported exceedances or have not had a reportable exceedance since the first round of sampling and do not require additional monitoring. Recommendations from the 2011 GWMP also suggested that the following 23 monitor wells no longer require sampling and should be decommissioned if no further use is planned:

- SCU8-002-MW
- SCU11-003-MW
- SCU15-004-MWA
- SCU15-004-MWB
- SCU16-001-MW
- SCU16-004-MW
- SCU16-006-MW
- SCU16-011-MWA
- SCU16-011-MWB
- SCU16-011-MWC
- SCU16-013-MW
- SCU16-014-MW
- SCU17-010-MWA
- SCU17-010-MWB
- SCU17-010-MWC
- SCU18-001-MW
- SCU18-002-MW
- SCU18-009-MW
- SCU25-001-MW
- SCU25-007-MW
- SCU31-013-MWB
- SCU31-013-MWC
- SCU33-001-MW

Four monitor wells were sampled to monitor remedial work at the Oil Sludge Disposal Area (OSDA) and were temporarily added to the GWMP in 2012 to assess groundwater in the vicinity of a bioremediation project. The majority of the bioremediation project was completed in October 2013, but the windrows remain on site. All monitor wells were sampled in four separate events: 2003 or 2004, 2012 (July and November) and 2013. The groundwater results are outlined below:

- SCU26-001-MW – One exceedance of TPH was reported in 2004 and it has not exceeded since that time. Three PAH analytes exceeded MOE standards in 2012, but concentrations have since decreased. NSE does not have Tier 1 EQS for the specific PAH analytes in a non-potable groundwater condition as they are not volatile. The monitor well is located more than 400 m from a water body and thus, the NSE Tier 1 EQS are the only standards that would apply. No exceedances of metals have been reported.
- SCU26-002-MW – No exceedances of PAHs, BTEX/TPH and metals have been reported, but PAH concentrations have been fluctuating since 2003.
- SCU27-002-MW – PAHs, BTEX/TPH and metals had been monitored and no exceedances were reported with the exception of nickel (2003) and sodium (2003 and 2012) based on MOE standards. NSE does not have Tier 1 EQS for metals in a non-potable groundwater condition as they are not volatile. The monitor well is located more than 400 m from a water body and thus, the NSE Tier I EQS are the only standards that would apply.
- MCES-007-MW – One PAH (indeno(1,2,3-cd)prene) exceedance of MOE standards was observed in 2012. No exceedances of NSE Tier 1 EQS were reported for PAHs, metals and TPH/BTEX.

These monitor wells can be removed from the sampling program once the windrows have been removed from the OSDA.

The following 16 monitor wells were included in the GWMP to monitor solidification/stabilization (S/S) material placed in the Blast Furnace Area (BFA), the Ore Field or SCU 20:

- SCU18-010-MW (Ore Field)
- SCU18-011-MW (Ore Field)
- SCU19-002-MWA (BFA)
- SCU19-002-MWB (BFA)
- SCU19-010-MW (BFA)
- SCU19-015-MW (BFA)
- SCU19-029-MW (Ore Field/BFA)
- SCU19-030-MW (Ore Field/BFA)
- SCU19-031-MW (BFA)
- SCU19-032-MW (BFA)
- SCU20-013-MW (SCU20)
- SCU20-014-MW (SCU20)
- SCU20-015-MW (SCU20)
- SCU20-016-MW (SCU20)
- SCU20-017-MW (SCU20)
- SCU20-018-MW (SCU20)

Monitor well, SCU19-32-MW was found to be destroyed during the 2013 GWMP sampling event. This monitor well should be replaced to continue monitoring.

Analytical results indicate that there are no exceedances of NSE Tier 1 EQS for PAHs, BTEX/TPH, metals and PCBs for the monitor wells used to monitor the BFA or Ore Field. SCU20 wells were previously discussed in Section 3.8. No exceedances of Tier 1 EQS or Tier 2 PSS were recorded.

Monitor wells used to track changes in quality of S/S material should remain in the sampling program.

Monitor wells located at the High Dump Tank Farm (HDTF) were added to the 2013 GWMP as they were installed in 2011 and are expected to be decommissioned as the slag is mined from the area. It was determined appropriate to sample the monitor wells again to determine if there have been any changes since 2011 and to assess conditions prior to any decommissioning. The following discusses the analytical results from sampling events in 2011 and 2013:

- SCU32-001-MWA – PAHs increased since 2011, with multiple analytes exceeding MOE standards. No exceedances of NSE Tier 1 EQS are reported for PAHs. No exceedances were recorded for BTEX/TPH or metals. Monitor well should continue to be monitored until it is decommissioned due to increasing PAH concentrations.
- SCU32-001-MWB – PAHs increased since 2011, but no exceedances were recorded. No exceedances were recorded for BTEX/TPH or metals, with the exception of sodium (2011 and 2013) in excess of the MOE standard. Future monitoring is not required.
- SCU32-002-MW – PAHs increased in 2011, with multiple analytes exceeding MOE standards in 2013. No exceedances of NSE Tier 1 EQS are reported for PAHs. No exceedances were recorded for BTEX/TPH or metals. Monitor well should continue to be monitored until it is decommissioned due to increasing PAH concentrations.
- SCU32-003-MW – PAHs and TPH increased since 2011, with multiple PAH analytes exceeding MOE standards in 2013. No exceedances of NSE Tier 1 EQS are reported for PAHs. No exceedances were recorded for BTEX/TPH or metals. Monitor well should continue to be monitored until it is decommissioned due to increasing PAH and TPH concentrations.

- SCU32-004-MW – PAHs increased since 2011, but no exceedances were recorded. No exceedances were recorded for BTEX/TPH or metals, with the exception of sodium (2011 and 2013) in excess of the MOE standard. Future monitoring is not required.

The following describes the conditions of monitor wells that have been monitored and have had reported exceedance in more than one sampling event:

- SCU6-004-MW – Sampling occurred in 2004, 2005, 2009, 2010, 2011, 2012 and 2013. No exceedances were recorded for BTEX/TPH or metals. PAHs had an obvious increasing trend until 2012, and have been fluctuating since then. No exceedances of NSE Tier 1 EQS were identified, but this monitor well should be monitored again in five years to determine if PAHs have become stable. It was observed that the well cover for this monitor well was damaged (SLR, 2013b) and should be replaced.
- SCU7-006-MWA – Sampling occurred in 2004, 2008, 2009, 2010, 2011, 2012 and 2013. No exceedances were recorded for BTEX/TPH or metals. PAHs have fluctuated since 2004. Acenaphthalyene is the only analyte that has exceeded MOE standards in the last six sampling events with the concentration reported in 2013 being the highest since 2004. It does not exceed the NSE Tier 1 EQS. This monitor well should be monitored again in five years to determine if PAHs have become stable.
- SCU10-001-MW – Sampling occurred in 2003, 2008, 2010, 2011, 2012 and 2013 (sampling was for VOCs only in 2012 and 2013). Statistical analysis was completed in 2013.
- SCU10-004-MW – Sampling occurred in 2004, 2008, 2010, 2011, 2012 and 2013. No exceedances were recorded for metals. TPH/BTEX concentrations exceeded the NSE Tier 1 EQS in 2004 and have generally displayed an increasing trend since the second round of sampling until 2012, but no other exceedances have been recorded. PAHs show a similar trend, but there are no exceedances of NSE Tier 1 EQS. Changes in field observations were noted in 2012. Due to the size of the increase measured in 2012 and the change in field observations, other monitor wells and recovery wells in the vicinity of SCU10-004-MW are currently under investigation. The monitor well should remain in the GWMP.
- SCU15-018-MW – Sampling occurred in 2007, 2008, 2009, 2010, 2011, and 2013. No exceedances were recorded for BTEX/TPH or metals. While one or more PAH was reported as an exceedance of the MOE standard since 2007, no concentrations exceed the NSE Tier 1 EQS. PAH concentrations generally appear to have been decreasing since 2007. This monitor well should be monitored again in five years to determine if PAHs have continued to decrease or become stable.
- SCU17-004-MW – Sampling occurred in 2005, 2009, 2010, 2011, and 2013. No exceedances were recorded for BTEX/TPH or metals. While one or more PAH was reported as an exceedance of the MOE standard since 2005, no concentrations exceed the NSE Tier 1 EQS. PAH concentrations were considered stable after statistics were completed as per the 2011 GWMP. Since 2011, concentrations of multiple analytes have increased in concentration, and this monitor well should be monitored again in five years to determine if PAHs appear stable again.
- SCU18-007-MW – Sampling occurred in 2006, 2009, 2010, 2011, and 2013. No exceedances were recorded for BTEX/TPH or metals. While acenaphthylene was reported as an exceedance of the MOE standard in 2010 only, it did not exceed the NSE Tier 1 EQS. The majority of the analytical results have reported concentrations of PAHs to be below reportable detection limits and future monitoring is not required.
- SCU25-003-MW Sampling occurred in 2007, 2008, 2009, 2010, 2011, 2012 and 2013. No exceedances were recorded for BTEX/TPH or metals, except for cadmium exceeding the MOE standard in 2007. Multiple PAH analytes exceeded MOE standards in 2007, with no exceedances since that time. No exceedances of NSE Tier 1 EQS are reported for PAHs.

Statistics completed as part of the 2011 GWMP did not show a trend, but concentrations have generally decreased since that time. Future monitoring is not required.

- SCU25-004-MW – Sampling occurred in 2007, 2008, 2009, 2010, 2011, 2012 and 2013. No exceedances were recorded for PAHs, BTEX/TPH or metals. Historically, mercury had exceeded the MOE standards prior to updates in 2011. In 2010 statistics were completed indicated that mercury was stable but an increasing trend was apparent. Statistics completed in 2012 indicated no discernible trend in mercury, but did not use the 2012 data as it was dissolved mercury and not total due to a laboratory issue. Concentrations decreased in 2013 and this monitor well should be monitored again in five years to determine if mercury concentrations have stabilized.
- SCU26-007-MW – Sampling occurred in 2003, 2007, 2009, 2011, 2012 and 2013. No exceedances were recorded for BTEX/TPH or metals. PAHs exceedance of MOE standards were recorded in three consecutive monitoring events (2009, 2011, and 2012), with concentrations measured in 2013 being significantly less than 2012. No exceedances of NSE Tier 1 EQS were identified and this monitor well should be monitored again in five years to determine if PAH concentrations have stabilized. It was also noted that this well had the majority of the stick-up well housing was exposed (SLR, 2013b) and should be repaired.
- SCU31-002-MWB is a nested pair with SCU31-002-MWA. While no exceedances have been recorded in MWB since 2005, it should remain in the sampling program to ensure free product impacts in MWA are not migrating. Both monitor wells should continue to be monitored.

Results of the Mann-Kendall trend analyses are discussed below:

- Results of the Mann-Kendal analysis for SCU10-001-MW, of seasonally specific data (autumn only), indicated no discernible trend in the DCE concentrations. Statistical analysis of all available data indicated a stable trend in the DCE concentrations; however analysis may be biased from mixed seasonal data. As vinyl chloride is a daughter product of DCE, statistical analysis was also conducted on vinyl chloride. The analysis was conducted on the autumn data only, as well as all the available data, and both results indicated a stable trend. This provides additional evidence that the DCE plume may also be stable. While VOCs appear stable, continued monitoring is recommended if remediation of the groundwater impacts is not conducted.

- Results of the Mann-Kendal analysis for SCU20-013-MW, of seasonally specific data (autumn only), indicated no discernible trend in the Acenaphthylene or Anthracene concentrations. Statistical analysis of all available data indicated an increasing trend in the Acenaphthylene concentrations; however analysis may be biased from mixed seasonal data. Statistical analysis of all available data again indicated no discernible trend in the Anthracene concentrations. The well should be monitored further as the no discernible trend result for Acenaphthylene was close to an increasing trend.

- At location SCU20-014-MW, Mann-Kendall trend analyses were conducted for acenaphthylene, for both seasonally specific data (autumn only) and for all available data. The result, in both cases, indicated that there is currently no discernible trend at this location.

- At location SCU20-016-MW, Mann-Kendall trend analyses were conducted for acenaphthylene, for both seasonally specific data (autumn only) and for all available data. The result, in both cases, indicated that there is currently no discernible trend at this location.

Ten monitor/recovery wells were monitored (i.e. product check) as part of the GWMP. Six monitor/recovery wells (SCU10-002-MW, SCU10-003-MW, SCU11-001-MWA, SCU11-001-MWB, RW1 and RW2) located in, or adjacent to, SCU 10 had been monitored quarterly for product since changes were identified in 2012. SCU31-002-MWA was monitored for product as product had been observed in the monitor well since 2005. Plans for remediation in this area will be considered once the slag material located in the High Dump Tank Farm has been quarried. The remaining monitor/recovery wells (SCU15-001-MWA, SCU15-008-R and SCU15-016-MW) were monitored due to observations made during monitor well inspections conducted in 2012. Refer to **Table D-1**, **Appendix D** for observations and recommendations for the continued monitoring (without sampling) of specific wells should continue.

Based on the results of the monitoring program (see **Table D-1**, **Appendix D**), an additional three monitor wells (SCU15-001-MWB, SCU15-008-MWB and SCU15-012-MW) were added to the sampling program to determine if product located in nearby monitor wells or recovery wells in SCU15 had migrated. No PAH or BTEX/TPH exceedances of NSE Tier 1 EQS were recorded. No further monitoring is required unless results from future product monitoring indicate a negative change.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Seventy-one monitor wells were monitored in November and December 2013, of which 61 were sampled and 10 monitor/recovery wells were checked for product. Samples were submitted for a combination of PAH, BTEX/TPH, Metals, VOC, and/or PCB analyses. The fieldwork for this monitoring program was conducted between November 26 and December 9, 2013. Sampling was conducted via low-flow purging and sampling methods.

The results of the monitoring program are as follows:

- One monitor well (SCU19-032-MW) was not sampled because it was damaged beyond repair and was found to be filled with sediment.

- Ten monitor/recovery wells were monitored for product in SCU10, SCU11, SCU15 and SCU31. Product was observed in five locations.

- Three monitor wells were added to the sampling program in SCU15 (SCU15-001-MWB, SCU15-008-MWB and SCU15-012-MW) due to the presence of product in recovery well, SCU15-008-RW.

- All samples submitted for PAH analysis contained concentrations below applicable NSE Tier 1 EQS. Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene and Indeno(1,2,3-cd)pyrene exceeded the MOE standards in one or more groundwater samples submitted for analysis. All other PAH concentrations were either non-detect or below MOE standards.

- Groundwater samples submitted for TPH/BTEX analysis were either non-detect or contained concentrations below the NSE Tier 1 EQS for a commercial site with non-potable groundwater usage and coarse-grained soil.

- Groundwater analysis indicated a concentration of 5,200,000 ug/L for sodium in monitor well SCU27-002-MW and 2,300,000 ug/L for sodium in monitor well SCU32-001-MWB, which

exceed the MOE standards. All other metals concentrations were either below the MOE standards or non-detect. There are no NSE Tier 1 EQS for metals

- Cis-1,2-Dichloroethylene was the only VOC concentration above the applicable NSE Tier 1 EQS. Cis-1,2-Dichloroethylene, trans-1,2-Dichlorethylene and Trichloroethylene exceeded the MOE standards in the sample submitted for analysis. All other VOC concentrations were either non-detect or below NSE Tier 1 EQS and MOE standards.

- Groundwater samples submitted for PCB analysis did not contain detectable concentrations.

Review of analytical data from 2003 to 2013 was completed and statistical analysis (i.e. Mann-Kendall) was considered for all sample locations that contained at least four rounds of data. A total of 12 analyte series at four monitor wells remained for which Mann-Kendall trend analysis was applied. The results of the analyses indicated the following:

- SCU10-001-MW displayed a stable trend in the DCE concentrations from all available data, however analysis may be biased from mixed seasonal data. DCE concentrations displayed no discernible trend on analysis of seasonally specific data (autumn only). Vinyl chloride (daughter product of DCE) analysis displayed a stable trend on the autumn data only, as well as all the available data, indicating the DCE plume may also be stable.

- SCU20-013-MW displayed an increasing trend in the Acenaphthylene concentrations from all available data; however analysis may be biased from mixed seasonal data. Acenaphthylene concentrations displayed no discernible trend on analysis of seasonally specific data (autumn only). Anthracene analysis displayed no discernible trend on the autumn data only, as well as all the available data. The well should be monitored further as the no discernible trend result for Acenaphthylene was close to an increasing trend.

- SCU20-014-MW displayed no discernible trend for acenaphthylene, for both seasonally specific data (autumn only) and for all available data.

- SCU20-016-MW displayed no discernible trend for acenaphthylene, for both seasonally specific data (autumn only) and for all available data.

<u>Recommendations</u>

- The following 23 monitor well locations did not have reported exceedances or have not had a reportable exceedance since the first round of sampling and do not require additional monitoring. Recommendations from the 2011 GWMP also suggested that the following 23 monitor wells no longer require sampling and should be decommissioned if no further use is planned:

- SCU8-002-MW
- SCU11-003-MW
- SCU15-004-MWA
- SCU15-004-MWB
- SCU16-001-MW
- SCU16-004-MW
- SCU16-006-MW
- SCU16-011-MWA
- SCU16-011-MWB
- SCU17-010-MWA
- SCU17-010-MWB
- SCU17-010-MWC
- SCU18-001-MW
- SCU18-002-MW
- SCU18-009-MW
- SCU25-001-MW
- SCU25-007-MW
- SCU31-013-MWB

- SCU16-011-MWC
- SCU16-013-MW
- SCU16-014-MW
- SCU31-013-MWC
- SCU33-001-MW

- Four monitor wells (SCU26-001-MW, SCU26-002-MW, SCU27-002-MW and MCES-007-MW) were temporarily added to the GWMP in 2012 to monitor remedial work at the OSDA. These monitor wells can be removed from the sampling program once the windrows have been removed from the OSDA.

- The following 16 monitor wells were included in the GWMP to monitor solidification/stabilization (S/S) material placed in the Blast Furnace Area (BFA), the Ore Field or SCU 20:

- SCU18-010-MW (Ore Field)
- SCU18-011-MW (Ore Field)
- SCU19-002-MWA (BFA)
- SCU19-002-MWB (BFA)
- SCU19-010-MW (BFA)
- SCU19-015-MW (BFA)
- SCU19-029-MW (Ore Field/BFA)
- SCU19-030-MW (Ore Field/BFA)
- SCU19-031-MW (BFA)
- SCU19-032-MW (BFA)
- SCU20-013-MW (SCU20)
- SCU20-014-MW (SCU20)
- SCU20-015-MW (SCU20)
- SCU20-016-MW (SCU20)
- SCU20-017-MW (SCU20)
- SCU20-018-MW (SCU20)

Monitor well, SCU19-32-MW was found to be destroyed during the 2013 GWMP sampling event. This monitor well should be replaced to continue monitoring. All remaining S/S monitoring locations should remain in the annual GWMP.

Three monitor wells (SCU32-001-MWA, SCU32-002-MW and SCU32-003-MW) at the HDTF should continue to be monitored until they are decommissioned due to increasing PAH concentrations. The remaining two monitor wells (SCU32-001-MWB and SCU32-004-MW) do not require additionally monitoring unless changes to other monitor wells in the HDTF are observed. All monitor wells will be decommissioned prior to the expansion of the slag quarry in this area. Remediation will take place following removal of the slag.

The following describes the conditions of monitor wells that have been monitored and have had reported exceedance in more than one sampling event:

- Three monitor wells should continue to be monitored annually (SCU10-001-MW for VOCs, SCU10-004-MW due to changes observed in 2012 and SCU31-002-MWB to ensure free product in its nested pair, MWA, is not migrating).
- Six monitor wells should be monitored again in five years, five of which should be monitored for PAHs (SCU6-004-MW, SCU7-006-MWA, SCU15-018-MW, SCU17-004-MW and SCU26-007-MW) and one should be monitored for metals (SCU25-004-MW).
- Two monitor wells, SCU18-007-MW and SCU25-003-MW, do not require further sampling as there were no NSE Tier 1 EQS exceedances reported in either well. Also, the majority of the PAH concentrations in SCU18-007-MW have been below reportable detection limits, and PAH concentrations in SCU25-003-MW have generally decreased.

The following recommendations were made regarding the 10 monitor/recovery wells that were monitored (i.e. product check) as part of the GWMP: six require continued quarterly monitoring (SCU10-002-MW, SCU10-003-MW, SCU11-001-MWA, SCU11-001-MWB, RW1 and RW2); one requires quarterly monitoring after it is pumped out (SCU15-008-R); one requires continued

monitoring as part of the annual GWMP (SCU31-002-MWA); and two require no further action (SCU15-001-MWA and SCU15-016-MW).

Monitor wells (SCU15-001-MWB, SCU15-008-MWB and SCU15-012-MW) were sampled to determine if product located in nearby monitor wells or recovery wells in SCU15 had migrated. These monitor wells do not require further monitoring unless results from future product monitoring indicate a negative change.

Based on the Monitor Well and Recovery Well Inspection report (SLR, 2013b), it was observed that most of the stick-up well housing of SCU26-007-MW was exposed. Repairs should be completed by lowering the stick-up housing and reducing the elevation of the casing to match current ground elevations to protect the well. It was also observed that the well cover was damaged on well SCU6-004-MW and should be replaced.

Recommended changes to the monitoring program are summarized in **Drawing 2**.

6.0 STATEMENT OF LIMITATIONS

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. for Nova Scotia Lands Inc. It is intended for the sole and exclusive use of Nova Scotia Lands Inc. and its authorized agents for the purpose(s) set out in this report. Any use of, reliance on or decision made based on this report by any person other than Nova Scotia Lands Inc. for any purpose, or by Nova Scotia Lands Inc. for a purpose other than the purpose(s) set out in this report, is the sole responsibility of such other person or Nova Scotia Lands Inc. Nova Scotia Lands Inc. and SLR Consulting (Canada) Ltd. make no representation or warranty to any other person with regard to this report and the work referred to in this report and they accept no duty of care to any other person or any liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm that may be suffered or incurred by any other person as a result of the use of, reliance on, any decision made or any action taken based on this report or the work referred to in this report.

The investigation undertaken by SLR Consulting (Canada) Ltd. with respect to this report and any conclusions or recommendations made in this report reflect SLR Consulting (Canada) Ltd.'s judgment based on the site conditions observed at the time of the GWMP on the date(s) set out in this report, on information available at the time of preparation of this report, on the interpretation of data collected from the field investigation, and on the results of laboratory analyses, which were limited to the quantification in select samples of those substances specifically identified in the report. This report has been prepared for specific application to this site and it is based, in part upon visual observation of the site and specific analysis of specific chemical parameters and materials during a specific time interval, all as described in this report. Unless otherwise stated, the findings cannot be extended to previous or future site conditions, or chemical parameters, materials or analyses which were not addressed. Substances other than those addressed by the investigation described in this report may exist within the site; substances addressed by the investigation may exist in areas of the site not investigated and concentrations of substances addressed which are different than those reported may exist in areas other than the locations from which samples were taken. SLR Consulting (Canada) Ltd. expresses no warranty with respect to the accuracy of the laboratory analyses, methodologies used, or presentation of analytical results by the laboratory. Actual concentrations of the substances identified in the samples submitted may vary according to the extraction and testing procedures used.

As the evaluation and conclusions reported herein do not preclude the existence of other chemical compounds and/or that variations of conditions within the site may be possible, this report should be used for informational purposes only and should absolutely not be construed as a comprehensive hydrogeological or chemical characterization of the site. If site conditions change or if any additional information becomes available at a future date, modifications to the findings, conclusions and recommendations in this report may be necessary.

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Nova Scotia Lands Inc. may submit this report to Nova Scotia Environment and/or related Nova Scotia environmental regulatory authorities or persons for review and comment purposes.

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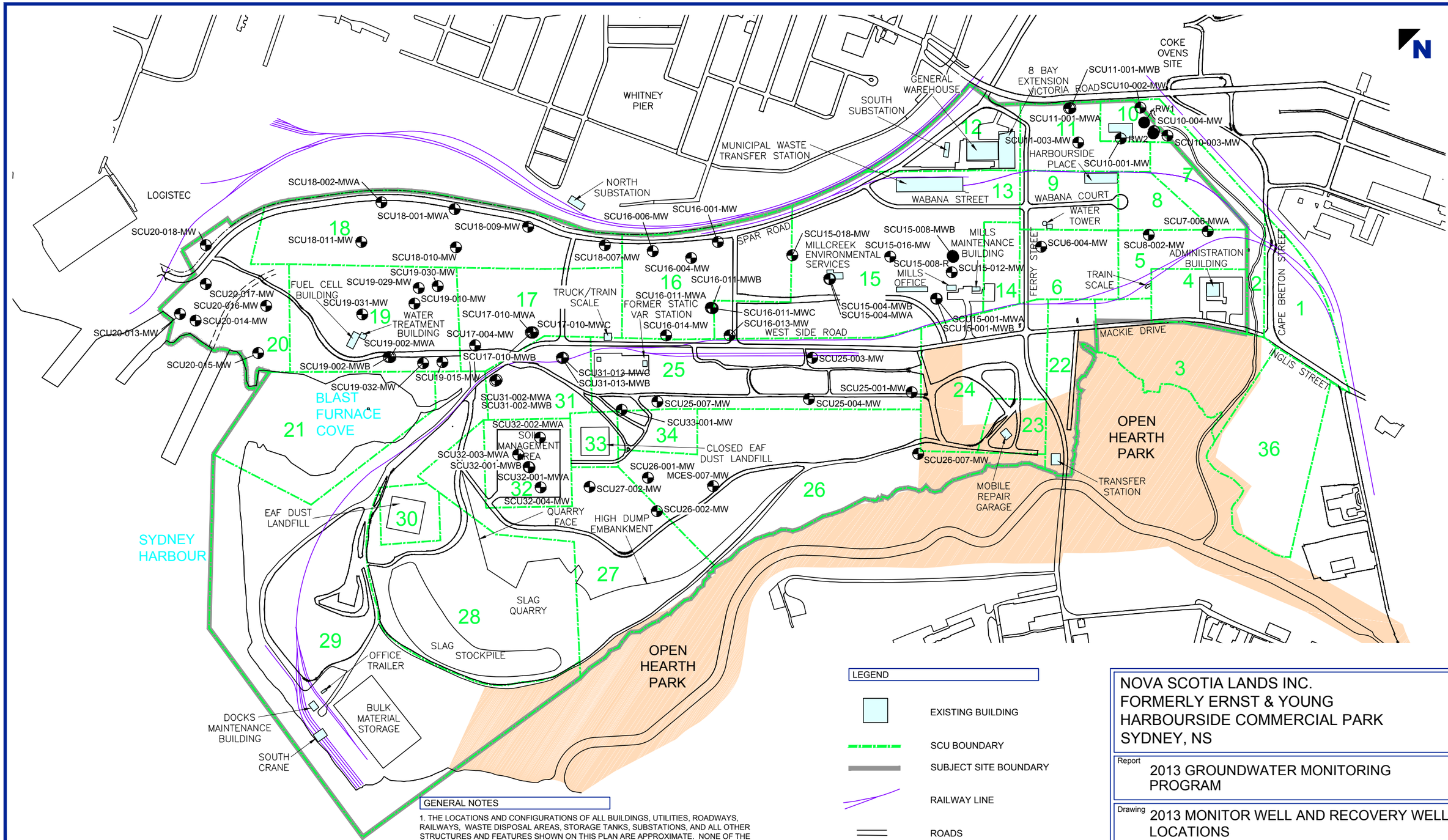
DRAWINGS
Monitor Well and Recovery Well Location Plan
Monitoring Recommendations

2013 Groundwater Monitoring Program
Harbourside Commercial Park, Sydney, NS
SLR Project No.: 210.05890.00000



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THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. ACTUAL LOCATIONS MAY VARY AND NOT ALL STRUCTURES ARE SHOWN.

LEGEND

- EXISTING BUILDING
- SCU BOUNDARY
- SUBJECT SITE BOUNDARY
- RAILWAY LINE
- ROADS
- BOREHOLE COMPLETED AS A MONITORING WELL
- BOREHOLE COMPLETED AS A RECOVERY WELL

GENERAL NOTES

1. THE LOCATIONS AND CONFIGURATIONS OF ALL BUILDINGS, UTILITIES, ROADWAYS, RAILWAYS, WASTE DISPOSAL AREAS, STORAGE TANKS, SUBSTATIONS, AND ALL OTHER STRUCTURES AND FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE. NONE OF THE AFOREMENTIONED FEATURES HAVE BEEN POSITIONED BASED ON SURVEY DATA. ALL FEATURE LOCATIONS HAVE BEEN DERIVED HISTORICAL AND TECHNICAL SOURCES.

2. BASE MAP INFORMATION FROM ADI LIMITED, PROJECT No. 6401-001.1, DWG. No. 14-1, DATE 09.Feb.18 AND CBRM, EDM ENVIRONMENTAL DESIGN AND MANAGEMENT, AND WAYNE D. HARDY, NSCL, CLS, PLAN No. SYSCO-03/02.

3. INFORMATION CONTAINED IN THIS DRAWING IS CONCEPTUAL, AND SHALL NOT BE USED FOR ENGINEEERING PURPOSES, OR TO LOCATE UTILITIES, BUILDINGS, BUILDING REMAINS, OR WASTE DISPOSAL AREAS.

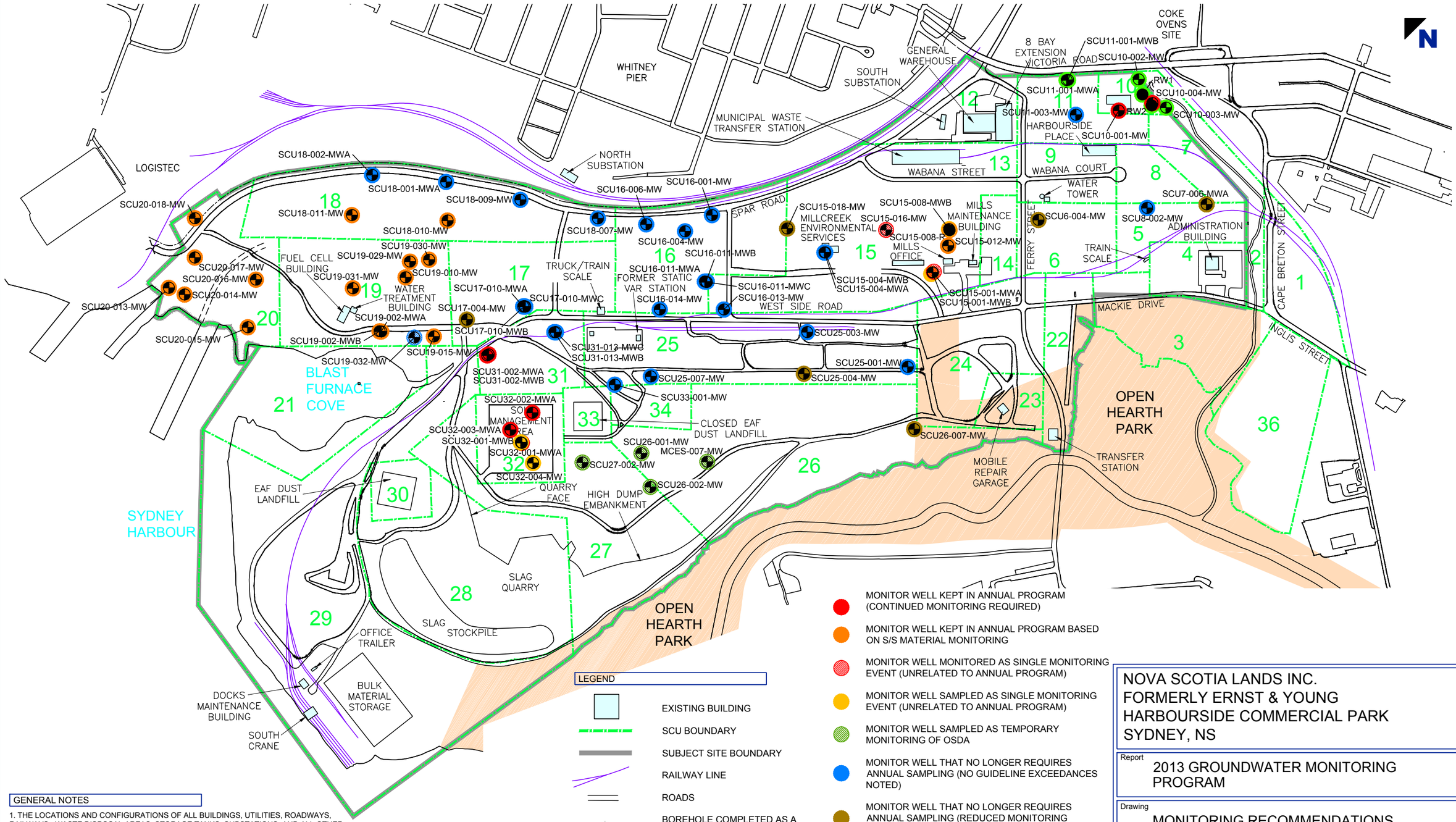
NOVA SCOTIA LANDS INC.
FORMERLY ERNST & YOUNG
HARBOURSIDE COMMERCIAL PARK
SYDNEY, NS

Report: 2013 GROUNDWATER MONITORING PROGRAM

Drawing: 2013 MONITOR WELL AND RECOVERY WELL LOCATIONS

Date: March 5, 2014	Scale: AS SHOWN	Drawing No.: 1
File Name: S_210-05890-00000-A1	Project No.: 210.05890.00000	

SLR



LEGEND

- EXISTING BUILDING
- SCU BOUNDARY
- SUBJECT SITE BOUNDARY
- RAILWAY LINE
- ROADS
- BOREHOLE COMPLETED AS A MONITORING WELL
- MONITOR WELL DESTROYED; SHOULD BE REPLACED FOR S/S MATERIAL MONITORING

- MONITOR WELL KEPT IN ANNUAL PROGRAM (CONTINUED MONITORING REQUIRED)
- MONITOR WELL KEPT IN ANNUAL PROGRAM BASED ON S/S MATERIAL MONITORING
- MONITOR WELL MONITORED AS SINGLE MONITORING EVENT (UNRELATED TO ANNUAL PROGRAM)
- MONITOR WELL SAMPLED AS SINGLE MONITORING EVENT (UNRELATED TO ANNUAL PROGRAM)
- MONITOR WELL SAMPLED AS TEMPORARY MONITORING OF OSDA
- MONITOR WELL THAT NO LONGER REQUIRES ANNUAL SAMPLING (NO GUIDELINE EXCEEDANCES NOTED)
- MONITOR WELL THAT NO LONGER REQUIRES ANNUAL SAMPLING (REDUCED MONITORING SCHEDULE RECOMMENDED)
- MONITOR RECOVERY WELL THAT REQUIRES CONTINUED QUARTERLY MONITORING (MONITORING ONLY, NO SAMPLING, UNRELATED TO ANNUAL PROGRAM)
- RECOVERY WELL THAT REQUIRES CONTINUED QUARTERLY MONITORING AFTER PUMPING (MONITORING ONLY, NO SAMPLING, UNRELATED TO ANNUAL PROGRAM)

SCALE 1:7500
WHEN PLOTTED AT 11 x 17 PAGE SIZE
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THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. ACTUAL LOCATIONS MAY VARY AND NOT ALL STRUCTURES ARE SHOWN.

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HARBOURSIDE COMMERCIAL PARK
SYDNEY, NS

Report
2013 GROUNDWATER MONITORING PROGRAM

Drawing
MONITORING RECOMMENDATIONS

Date April 17, 2014	Scale AS SHOWN	Drawing No. 2
File Name S_210-05890-00000-A2	Project No. 210.05890.00000	

SLR

TABLES
Summary of Analytical Results

2013 Groundwater Monitoring Program
Harbourside Commercial Park, Sydney, NS
SLR Project No.: 210.05890.00000

Table 1
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU6-004-MW	SCU6-004-MW	SCU6-004-MW	SCU6-004-MW	SCU6-004-MW	SCU6-004-MW	SCU06-004-MW	SCU7-006-MWA	SCU7-006-MWA	SCU7-006-MWA	SCU7-006-MWA	SCU7-006-MWA	SCU7-006-MWA	SCU07-006-MWA	SCU8-002-MW	SCU8-002-MW	SCU8-002-MW	SCU8-002-MW	SCU8-002-MW	SCU08-002-MW
Sampling Date				13-Aug-04	30-Jun-05	18-Nov-09	19-Nov-10	25-Oct-11	20-Nov-12	2-Dec-13	17-Sep-04	18-Nov-08	16-Nov-09	26-Nov-10	31-Oct-11	20-Nov-12	2-Dec-13	12-Sep-03	16-Nov-09	9-Nov-10	25-Oct-11	25-Oct-11	2-Dec-13
Field Duplicate Label																						FD-02	
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	<0.03	<0.1	<0.05	<0.05	<0.05	<0.05	<0.050	230	9.4	<0.05	15	<0.05	<0.05	15	0.4	<0.050	<0.050	<0.050	<0.050	<0.050
2-Methylnaphthalene	ug/L	38000	1800	<0.04	<0.1	<0.05	<0.05	<0.05	<0.05	<0.050	47	5.7	<0.05	3.0	<0.05	<0.05	0.37	0.4	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthene	ug/L	-	600	<0.03	<0.02	0.07	0.06	0.19	0.021	0.10	220	1.7	0.01	2.4	0.03	0.015	4.3	<0.20	<0.010	<0.010	0.01	0.01	<0.010
Acenaphthylene	ug/L	750	1.8	<0.03	<0.02	0.09	0.01	0.11	<0.01	0.11	**43**	**11**	<0.01	**18**	0.02	0.035	**21**	<0.20	<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	ug/L	-	2.4	0.15	0.07	0.42	0.33	1	0.10	0.56	**130**	0.33	0.02	0.77	<0.01	<0.01	0.89	<0.20	<0.010	<0.010	0.02	0.06	<0.010
Benzo(a)anthracene	ug/L	-	4.7	0.44	0.19	1.1	1.2	2.8	0.44	2.1	**64**	0.01	<0.01	0.02	<0.01	0.014	0.013	0.3	<0.010	<0.010	0.02	0.2	<0.010
Benzo(a)pyrene	ug/L	-	0.81	0.31	0.17	**0.88**	**1.2**	**2.3**	0.31	**1.2**	**36**	<0.01	<0.01	<0.01	<0.01	0.011	<0.010	<0.20	<0.010	<0.010	0.02	0.16	<0.010
Benzo(b)fluoranthene	ug/L	-	0.75	---	0.17	0.63	**1.2**	**2.7**	0.21	**1.0**	**46.7**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	0.3	<0.010	<0.010	0.02	0.09	<0.010
Benzo(g,h,i)perylene	ug/L	-	0.2	0.16	0.1	**0.59**	**0.71**	**1.4**	0.18	**0.65**	**11**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.20	<0.010	<0.010	0.02	0.08	<0.010
Benzo(j)fluoranthene	ug/L	-	-	---	---	---	---	---	---	0.64	---	---	---	---	---	---	<0.010	---	---	---	---	---	<0.010
Benzo(k)fluoranthene	ug/L	-	0.4	---	0.18	**0.45**	**0.58**	**0.84**	0.31	**0.60**	**21**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.20	<0.010	<0.010	0.01	0.08	<0.010
Chrysene	ug/L	-	1	0.69	0.18	**1.1**	**1.2**	**2.7**	0.37	**1.8**	**47**	<0.01	<0.01	<0.01	<0.01	0.013	0.013	0.3	<0.010	<0.010	0.02	0.19	<0.010
Dibenz(a,h)anthracene	ug/L	-	0.52	0.06	0.04	0.14	0.22	0.43	0.047	0.18	**4.7**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.20	<0.010	<0.010	0.01	0.03	<0.010
Fluoranthene	ug/L		130	0.63	0.38	2.0	2.3	6.1	0.76	3.7	**140**	0.15	0.09	0.42	<0.01	0.025	0.52	0.6	<0.010	<0.010	0.02	0.39	0.011
Fluorene	ug/L	-	400	0.04	0.02	0.07	0.06	0.21	0.020	0.11	150	3.8	<0.01	8.0	<0.01	0.025	12	<0.20	<0.010	<0.010	0.01	0.01	<0.010
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	0.17	0.12	**0.58**	**0.68**	**1.4**	0.16	**0.61**	**16**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.20	<0.010	<0.010	0.02	0.08	<0.010
Naphthalene	ug/L	7000	1400	0.04	<0.4	<0.02	<0.02	<0.02	<0.02	<0.20	1310	68	<0.02	70*	<0.02	<0.02	<0.20	0.3	<0.020	<0.020	<0.020	<0.020	<0.20
Perylene	ug/L	-	-	0.1	0.07	0.21	0.31	0.57	0.086	0.31	8.6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	---	<0.010	<0.010	0.02	0.04	<0.010
Phenanthrene	ug/L	-	580	0.3	0.2	1.4	1.2	3.2	0.42	2.2	320	2.6	0.02	3.6	<0.01	0.042	6.4	0.6	<0.010	<0.010	0.02	0.17	0.018
Pyrene	ug/L	-	68	0.91	0.35	1.6	1.8	4.6	0.63	3.2	**110**	0.08	0.02	0.22	0.01	0.019	0.28	0.5	<0.010	<0.010	0.03	0.33	0.011

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU10-004-MW	SCU10-004-MW	SCU10-004-MW	SCU10-004-MW	SCU10-004-MW	SCU10-004-MW	SCU11-003-MW	SCU11-003-MW	SCU11-003-MW	SCU11-003-MW	SCU11-003-MW	SCU15-001-MWB	SCU15-001-MWB	SCU15-004-MWA	SCU15-004-MWA	SCU15-004-MWA	SCU15-004-MWA	SCU15-004-MWA	SCU15-004-MWA	SCU15-004-MWB
Sampling Date				17-Sep-04	19-Nov-08	10-Nov-10	31-Oct-11	23-Nov-12	2-Dec-13	12-Sep-04	19-Nov-09	10-Nov-10	25-Oct-11	2-Dec-13	11-Sep-03	7-Dec-13	11-Sep-03	17-Nov-09	9-Nov-10	25-Oct-11	3-Dec-13	3-Dec-13	11-Sep-03
Field Duplicate Label																					FD#3		
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	**2400**	19	38 *	74 **	380 **	85 **	<0.20	<0.050	<0.050	<0.050	<0.050	0.04	<0.050	0.25	<0.050	<0.050	<0.050	1.0	0.99	<0.030
2-Methylnaphthalene	ug/L	38000	1800	**4150**	14	37 *	71 **	590 **	80 **	<0.20	<0.050	<0.050	<0.050	<0.050	0.05	<0.050	0.22	<0.050	<0.050	<0.050	1.0	1.0	<0.030
Acenaphthene	ug/L	-	600	**1580**	18	37	51 **	230 **	53 **	<0.20	<0.010	<0.010	<0.010	0.025	<0.03	<0.010	0.08	<0.010	0.01	0.02	0.12	0.11	<0.030
Acenaphthylene	ug/L	750	1.8	**194**	**2.2**	**7.5**	**10**	**34 ****	**20**	<0.20	<0.010	<0.010	<0.010	<0.010	<0.03	<0.010	0.04	<0.010	<0.010	0.02	0.14	0.13	<0.030
Anthracene	ug/L	-	2.4	**590**	1.7	**2.4**	**13**	**38 ****	**4.0**	<0.20	<0.010	<0.010	0.01	0.023	<0.012	<0.010	0.29	<0.010	<0.010	0.02	0.015	0.012	<0.012
Benzo(a)anthracene	ug/L	-	4.7	**205**	0.37	0.28	3.1	**5.3**	0.34	0.2	<0.010	<0.010	0.01	0.011	<0.018	<0.010	0.7	<0.010	<0.010	0.01	<0.010	<0.010	<0.018
Benzo(a)pyrene	ug/L	-	0.81	**111**	0.12	0.23	**1.7**	**1.9**	0.20	<0.20	<0.010	<0.010	0.01	<0.010	0.018	<0.010	0.51	<0.010	<0.010	0.02	<0.010	<0.010	0.012
Benzo(b)fluoranthene	ug/L	-	0.75	**128**	0.08	0.15	**1.1**	**1.4**	0.14	0.2	<0.010	<0.010	<0.010	<0.010	---	<0.010	0.6	<0.010	<0.010	0.01	<0.010	<0.010	---
Benzo(g,h,i)perylene	ug/L	-	0.2	*<1*	0.01	0.09	**0.61**	**0.58**	0.077	<0.20	<0.010	<0.010	0.01	<0.010	<0.03	<0.010	**0.2**	<0.010	<0.010	0.02	<0.010	<0.010	<0.030
Benzo(j)fluoranthene	ug/L	-	-	---	---	---	---	---	0.090	---	---	---	---	<0.010	---	<0.010	---	---	---	---	<0.010	<0.010	---
Benzo(k)fluoranthene	ug/L	-	0.4	**52**	0.11	0.12	**0.73**	**1.5**	0.089	<0.20	<0.010	<0.010	0.02	<0.010	---	<0.010	0.3	<0.010	<0.010	0.01	<0.010	<0.010	---
Chrysene	ug/L	-	1	**173**	0.32	0.26	**2.5**	**4.0**	0.29	0.2	<0.010	<0.010	0.01	0.011	<0.03	<0.010	0.7	<0.010	<0.010	0.02	<0.010	<0.010	0.021
Dibenz(a,h)anthracene	ug/L	-	0.52	**11.2**	<0.01	0.03	0.27	0.15	0.027	<0.010	<0.010	<0.010	0.01	<0.010	<0.01	<0.010	0.07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	ug/L		130	**882**	2.4	2.4	13	38 **	3.5	0.4	<0.010	0.01	0.01	0.031	<0.03	<0.010	1.3	<0.010	<0.010	0.02	0.019	0.016	0.04
Fluorene	ug/L	-	400	**1420**	10	18	39 **	140 **	31	<0.20	<0.010	<0.010	<0.010	0.031	<0.03	<0.010	0.1	<0.010	<0.010	0.02	0.11	0.11	<0.030
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	**41**	0.01	0.09	**0.74**	**0.75**	0.072	<0.20	<0.010	<0.010	0.01	<0.010	<0.03	<0.010	**0.2**	<0.010	<0.010	0.01	<0.010	<0.010	<0.030
Naphthalene	ug/L	7000	1400	**11900**	21	180 *	68 **	**2400 ****	680 **	<0.20	<0.020	<0.020	<0.020	<0.20	<0.03	<0.20	0.26	<0.020	<0.020	0.2	16	16	<0.030
Perylene	ug/L	-	-	---	0.02	0.04	0.28	0.32	0.043	---	<0.010	<0.010	0.01	<0.010	<0.03	<0.010	0.11	<0.010	<0.010	0.01	<0.010	<0.010	<0.030
Phenanthrene	ug/L	-	580	**2510**	5.1	15	47	170 **	24	0.2	<0.010	0.02	0.01	0.079	0.03	0.016	1.3	<0.010	<0.010	0.02	0.074	0.072	0.05
Pyrene	ug/L	-	68	**553**	1.7	1.6	8.7	18	2.3	0.3	<0.010	0.01	0.02	0.027	<0.025	<0.010	1.2	<0.010	<0.010	0.03	0.021	0.018	0.035

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU15-004-MWB	SCU15-004-MWB	SCU15-004-MWB	SCU15-004-MWB	SCU15-004-MWB	SCU15-008-MWB	SCU15-008-MWB	SCU15-012-MW	SCU15-012-MW	SCU15-018-MW	SCU15-018-MW	SCU15-018-MW	SCU15-018-MW	SCU15-018-MW	SCU15-018-MW	SCU16-001-MW	SCU16-001-MW	SCU16-001-MW	SCU16-001-MW	SCU16-001-MW
Sampling Date				17-Nov-09	9-Nov-10	25-Oct-11	25-Oct-11	3-Dec-13	22-Jan-07	9-Dec-13	4-Jan-07	9-Dec-13	8-Jan-07	20-Nov-08	4-Dec-09	9-Nov-10	26-Oct-11	3-Dec-13	13-Jul-06	23-Nov-09	15-Nov-10	25-Oct-11	3-Dec-13
Field Duplicate Label							FD-03																
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	<0.050	<0.050	<0.050	<0.050	<0.050	<0.5	<0.050	<0.05	<0.050	93	140	180	83 *	110	52 **	<0.050	<0.050	<0.050	<0.050	<0.050
2-Methylnaphthalene	ug/L	38000	1800	<0.050	<0.050	<0.050	<0.050	<0.050	<0.5	<0.050	<0.05	<0.050	150	210	240	100 *	110	37 **	<0.050	<0.050	0.05	<0.050	0.073
Acenaphthene	ug/L	-	600	<0.010	<0.010	0.01	0.01	0.014	<0.9	0.013	0.08	<0.010	25	36	44	28	30	17	<0.010	<0.010	<0.010	<0.010	0.045
Acenaphthylene	ug/L	750	1.8	<0.010	<0.010	<0.010	<0.010	<0.010	<0.9	<0.010	<0.01	<0.010	**3.4**	1	1.6	1.1	0.95	0.63	<0.010	<0.010	0.03	<0.010	0.017
Anthracene	ug/L	-	2.4	<0.010	<0.010	0.02	0.01	0.012	<0.8	<0.010	<0.01	<0.010	**10**	**5.1**	**5.9**	**3.9**	2.2	**2.9**	<0.010	0.02	0.02	<0.010	0.056
Benzo(a)anthracene	ug/L	-	4.7	<0.010	<0.010	0.01	0.01	<0.010	<0.7	<0.010	<0.01	0.013	**4.9**	1.1	0.28	0.42	0.10	0.99	<0.010	0.01	<0.010	<0.010	0.046
Benzo(a)pyrene	ug/L	-	0.81	<0.010	<0.010	0.01	0.01	<0.010	<0.7	<0.010	<0.01	0.010	**1**	0.51	0.09	0.22	0.04	0.34	<0.010	<0.010	<0.010	<0.010	0.046
Benzo(b)fluoranthene	ug/L	-	0.75	<0.010	<0.010	<0.010	0.02	<0.010	<0.7	<0.010	<0.01	<0.010	**0.9**	0.32	0.04	0.13	0.02	0.25	<0.010	<0.010	<0.010	<0.010	0.048
Benzo(g,h,i)perylene	ug/L	-	0.2	<0.010	<0.010	0.01	0.01	<0.010	*<0.8*	<0.010	<0.01	<0.010	**0.3**	0.08	0.01	0.05	0.01	0.063	<0.010	<0.010	<0.010	<0.010	0.038
Benzo(j)fluoranthene	ug/L	-	-	---	---	---	---	<0.010	---	<0.010	---	<0.010	---	---	---	---	---	0.12	---	---	---	---	0.025
Benzo(k)fluoranthene	ug/L	-	0.4	<0.010	<0.010	0.01	0.01	<0.010	*<0.7*	<0.010	<0.01	<0.010	**0.87**	**0.47**	0.08	0.13	0.02	0.14	<0.010	<0.010	<0.010	<0.010	0.021
Chrysene	ug/L	-	1	<0.010	<0.010	0.02	0.01	<0.010	<0.9	<0.010	<0.01	0.013	**4.1**	0.91	0.21	0.36	0.09	0.86	<0.010	<0.010	<0.010	<0.010	0.055
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.010	<0.010	0.01	0.01	<0.010	*<0.8*	<0.010	<0.01	<0.010	0.16	0.02	<0.010	0.02	<0.010	0.027	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	ug/L		130	<0.010	<0.010	0.02	0.02	0.028	<0.8	0.018	0.02	0.030	11	4.2	2.3	2.6	1.3	3.2	0.02	0.02	0.01	<0.010	0.095
Fluorene	ug/L	-	400	<0.010	<0.010	0.01	0.01	0.016	<0.9	0.012	<0.01	<0.010	15	20	17	14	12	8.5	<0.010	<0.010	0.05	<0.010	0.045
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	<0.010	<0.010	0.01	0.01	<0.010	*<0.7*	<0.010	<0.01	<0.010	**0.36**	0.1	0.02	0.05	0.01	0.052	<0.010	<0.010	<0.010	<0.010	0.030
Naphthalene	ug/L	7000	1400	<0.020	<0.020	<0.020	<0.020	<0.20	<0.7	<0.20	<0.2	<0.20	**2900**	**3500**	**4700**	**2300 ***	**2500**	1300 **	<0.020	<0.020	<0.020	<0.020	<0.20
Perylene	ug/L	-	-	<0.010	<0.010	0.02	0.01	<0.010	<0.7	<0.010	<0.01	<0.010	0.17	0.08	0.02	0.03	<0.010	0.028	<0.010	<0.010	<0.010	<0.010	0.018
Phenanthrene	ug/L	-	580	<0.010	<0.010	0.02	0.02	0.059	<0.8	0.032	0.02	0.035	26	21	16	18	9.5	11	<0.010	0.01	0.05	<0.010	0.16
Pyrene	ug/L	-	68	<0.010	<0.010	0.02	0.02	0.024	<0.8	0.018	0.02	0.027	8.6	2.6	1.4	1.6	0.8	2.5	0.02	0.01	0.01	<0.010	0.088

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU16-004-MW	SCU16-004-MW	SCU16-004-MW	SCU16-004-MW	SCU16-004-MW	SCU16-006-MW	SCU16-006-MW	SCU16-006-MW	SCU16-006-MW	SCU16-006-MW	SCU16-006-MW	SCU16-011-MWA	SCU16-011-MWA	SCU16-011-MWA	SCU16-011-MWA	SCU16-011-MWA	SCU16-011-MWA	SCU16-011-MWB	SCU16-011-MWB	SCU16-011-MWB	SCU16-011-MWB
Sampling Date				14-Jul-06	20-Nov-09	11-Nov-10	24-Oct-11	3-Dec-13	12-Jul-06	23-Nov-09	11-Nov-10	24-Oct-11	3-Dec-13	3-Dec-13	14-Jul-06	23-Nov-09	12-Nov-10	24-Oct-11	4-Dec-13	14-Jul-06	23-Nov-09	12-Nov-10	24-Oct-11
Field Duplicate Label														FD#4									
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	<0.050	<0.050	0.08	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050	<0.050	<0.050	<0.50	0.56	0.52	0.46
2-Methylnaphthalene	ug/L	38000	1800	<0.050	<0.050	0.10	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050	<0.050	<0.050	<0.50	0.49	0.47	0.34
Acenaphthene	ug/L	-	600	<0.010	<0.010	0.07	<0.010	0.019	0.03	<0.010	<0.010	<0.010	0.023	0.020	<0.90	<0.010	0.02	<0.010	0.026	<0.90	0.14	0.14	0.1
Acenaphthylene	ug/L	750	1.8	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.90	<0.010	<0.010	<0.010	<0.010	<0.90	0.04	0.04	0.03
Anthracene	ug/L	-	2.4	<0.010	0.09	0.03	0.02	0.069	<0.010	<0.010	<0.010	<0.010	0.020	0.015	<0.80	0.02	<0.010	<0.010	0.024	<0.80	0.07	0.06	0.06
Benzo(a)anthracene	ug/L	-	4.7	<0.010	0.02	<0.010	0.02	0.031	<0.010	<0.010	<0.010	<0.010	0.013	0.010	<0.70	<0.010	<0.010	<0.010	<0.010	<0.70	0.02	<0.010	<0.010
Benzo(a)pyrene	ug/L	-	0.81	<0.010	0.02	<0.010	0.02	0.029	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	<0.70	<0.010	<0.010	<0.010	<0.010	<0.70	0.01	<0.010	<0.010
Benzo(b)fluoranthene	ug/L	-	0.75	<0.010	0.02	<0.010	0.02	0.022	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.70	<0.010	<0.010	<0.010	<0.010	<0.70	0.01	<0.010	<0.010
Benzo(g,h,i)perylene	ug/L	-	0.2	<0.010	0.01	<0.010	0.02	0.018	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	*<0.80*	<0.010	<0.010	<0.010	<0.010	*<0.80*	0.03	<0.010	<0.010
Benzo(j)fluoranthene	ug/L	-	-	---	---	---	---	0.015	---	---	---	---	<0.010	<0.010	**---**	---	---	---	<0.010	---	---	---	---
Benzo(k)fluoranthene	ug/L	**-**	0.4	<0.010	0.02	<0.010	0.01	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	*<0.70*	<0.010	<0.010	<0.010	<0.010	*<0.70*	0.01	<0.010	<0.010
Chrysene	ug/L	-	1	<0.010	0.02	<0.010	0.03	0.034	0.02	<0.010	<0.010	<0.010	0.013	0.011	<0.90	<0.010	<0.010	<0.010	<0.010	<0.90	0.01	<0.010	<0.010
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	*<0.80*	<0.010	<0.010	<0.010	<0.010	*<0.80*	0.06	<0.010	<0.010
Fluoranthene	ug/L		130	<0.010	0.03	0.02	0.04	0.070	0.02	<0.010	<0.010	<0.010	0.041	0.033	<0.80	0.02	0.02	0.01	0.030	<0.80	0.29	0.23	0.2
Fluorene	ug/L	-	400	<0.010	<0.010	0.05	<0.010	0.022	0.02	<0.010	<0.010	<0.010	0.025	0.019	<0.90	<0.010	0.01	<0.010	0.025	<0.90	0.11	0.14	0.09
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	<0.010	0.01	<0.010	0.01	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	*<0.70*	<0.010	<0.010	<0.010	<0.010	*<0.70*	0.03	<0.010	<0.010
Naphthalene	ug/L	7000	1400	<0.020	<0.020	0.5	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.20	<0.20	<0.70	<0.020	<0.020	<0.020	<0.20	<0.70	0.6	0.6	0.4
Perylene	ug/L	**-**	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.70	<0.010	<0.010	<0.010	<0.010	<0.70	0.01	<0.010	<0.010
Phenanthrene	ug/L	-	580	<0.010	0.02	0.08	0.02	0.085	<0.010	<0.010	<0.010	<0.010	0.081	0.067	<0.80	<0.010	0.02	<0.010	0.066	<0.80	0.38	0.30	0.25
Pyrene	ug/L	-	68	<0.010	0.03	0.02	0.04	0.062	0.02	<0.010	<0.010	<0.010	0.032	0.026	<0.80	0.02	0.02	0.02	0.027	<0.80	0.21	0.16	0.14

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU16-011-MWB	SCU16-011-MWC	SCU16-011-MWC	SCU16-011-MWC	SCU16-011-MWC	SCU16-011-MWC	SCU16-011-MWC	SCU16-013-MW	SCU16-013-MW	SCU16-013-MW	SCU16-013-MW	SCU16-013-MW	SCU16-014-MW	SCU16-014-MW	SCU16-014-MW	SCU16-014-MW	SCU16-014-MW	SCU17-004-MW	SCU-17-004-MW	SCU17-004-MW
Sampling Date				4-Dec-13	14-Jul-06	23-Nov-09	12-Nov-10	12-Nov-10	24-Oct-11	4-Dec-13	13-Jul-06	23-Nov-09	12-Nov-10	24-Oct-11	4-Dec-13	13-Jul-06	23-Nov-09	15-Nov-10	24-Oct-11	6-Dec-13	15-Sep-05	30-Nov-09	15-Nov-10
Field Duplicate Label								FD 2															
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	0.43	<0.50	0.33	0.19	0.19	0.27	0.19	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	19	12	8.2
2-Methylnaphthalene	ug/L	38000	1800	0.42	<0.50	0.27	0.15	0.14	0.18	0.18	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	31	19	14
Acenaphthene	ug/L	-	600	0.11	<0.90	0.09	0.06	0.06	0.07	0.053	<0.010	<0.010	0.03	0.01	0.032	<0.010	<0.010	<0.010	<0.010	<0.010	2.3	1.5	1.2
Acenaphthylene	ug/L	750	1.8	0.024	<0.90	0.02	0.02	0.01	0.02	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	**19**	**12**	**8.4**
Anthracene	ug/L	-	2.4	0.060	<0.80	0.04	0.03	0.02	0.04	0.026	<0.010	0.02	<0.010	<0.010	0.029	<0.010	<0.010	<0.010	<0.010	<0.010	**3.3**	**2.4**	1.7
Benzo(a)anthracene	ug/L	-	4.7	<0.010	<0.70	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.016	<0.010	0.01	<0.010	<0.010	<0.010	0.17	0.15	0.11
Benzo(a)pyrene	ug/L	-	0.81	<0.010	<0.70	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	0.01 *	<0.010	<0.010	0.010	0.03	0.01	0.01
Benzo(b)fluoranthene	ug/L	-	0.75	<0.010	<0.70	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	0.02	0.01
Benzo(g,h,i)perylene	ug/L	-	0.2	<0.010	*<0.80*	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	<0.010
Benzo(j)fluoranthene	ug/L	-	-	<0.010	---	---	---	---	---	<0.010	---	---	---	---	<0.010	---	---	---	---	<0.010	---	---	---
Benzo(k)fluoranthene	ug/L	-	0.4	<0.010	*<0.70*	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.03	0.03	0.01
Chrysene	ug/L	-	1	<0.010	<0.90	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	<0.010	0.016	<0.010	0.01	<0.010	<0.010	<0.010	0.12	0.09	0.07
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.010	*<0.80*	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	ug/L		130	0.16	<0.80	0.17	0.09	0.09	0.1	0.057	0.02	0.06	0.04	0.03	0.071	0.03	0.03	0.01	<0.010	0.027	2.9	2.2	2.3
Fluorene	ug/L	-	400	0.10	<0.90	0.07	0.05	0.05	0.05	0.047	<0.010	<0.010	0.02	<0.010	0.027	<0.010	<0.010	<0.010	<0.010	<0.010	11	8.6	7.4
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	<0.010	*<0.70*	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	<0.010
Naphthalene	ug/L	7000	1400	0.56	<0.70	0.4	<0.020	<0.020	0.2	0.26	<0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.20	150	59	43 *
Perylene	ug/L	-	-	<0.010	<0.70	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	<0.010
Phenanthrene	ug/L	-	580	0.28	<0.80	0.22	0.12	0.14	0.15	0.12	0.04	0.04	0.05	0.02	0.10	0.03	0.02	0.01	<0.010	0.027	16	11	9.6
Pyrene	ug/L	-	68	0.12	<0.80	0.13	0.06	0.06	0.07	0.046	0.02	0.04	0.03	0.02	0.051	0.02	0.03	0.01	<0.010	0.026	1.9	1.5	1.5

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU17-004-MW	SCU17-004-MW	SCU17-010-MWA	SCU17-010-MWA	SCU17-010-MWA	SCU17-010-MWA	SCU17-010-MWA	SCU17-010-MWA	SCU17-010-MWA	SCU17-010-MWB	SCU17-010-MWB	SCU17-010-MWB	SCU17-010-MWB	SCU17-010-MWB	SCU17-010-MWB	SCU17-010-MWC	SCU17-010-MWC	SCU17-010-MWC	SCU17-010-MWC	SCU17-010-MWC	SCU17-010-MWC
Sampling Date				26-Oct-11	2-Dec-13	10-Jul-06	20-Nov-09	20-Nov-09	15-Nov-10	26-Oct-11	1-Dec-13	1-Dec-13	10-Jul-06	23-Nov-09	15-Nov-10	26-Oct-11	1-Dec-13	10-Jul-06	23-Nov-09	15-Nov-10	15-Nov-10	26-Oct-11	1-Dec-13
Field Duplicate Label								DUP B				FD #2									FD 3		
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	15	20	0.09	<0.050	<0.050	<0.050	0.37	<0.050	<0.050	<0.050	<0.050	<0.050	0.20	<0.050	<0.050	<0.050	<0.050	<0.050	0.10	<0.050
2-Methylnaphthalene	ug/L	38000	1800	26	37	0.14	<0.050	<0.050	<0.050	0.42	<0.050	<0.050	<0.050	0.07	<0.050	0.23	<0.050	<0.050	<0.050	<0.050	<0.050	0.11	<0.050
Acenaphthene	ug/L	-	600	2	2.8	0.03	<0.010	<0.010	0.01	0.14	0.012	0.015	<0.010	0.04	<0.010	0.08	0.016	<0.010	<0.010	<0.010	<0.010	0.05	<0.010
Acenaphthylene	ug/L	750	1.8	**14**	**20**	0.06	0.02	0.01	0.01	<0.010	<0.020 *	<0.020 *	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.03	<0.010
Anthracene	ug/L	-	2.4	2.1	**3.6**	0.08	0.04	0.03	0.05	0.03	0.023	0.022	<0.010	<0.010	<0.010	0.02	0.021	<0.010	<0.010	<0.010	<0.010	0.19	<0.010
Benzo(a)anthracene	ug/L	-	4.7	0.09	0.099	0.02	0.04	0.02	<0.010	<0.010	<0.010	0.012	<0.010	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.31	<0.010
Benzo(a)pyrene	ug/L	-	0.81	0.02	<0.020 *	0.02	0.03	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.20	<0.010
Benzo(b)fluoranthene	ug/L	-	0.75	0.02	0.012	0.01	0.02	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.17	<0.010
Benzo(g,h,i)perylene	ug/L	-	0.2	<0.010	<0.010	0.01	0.02	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	0.05	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.08	<0.010
Benzo(j)fluoranthene	ug/L	-	-	---	<0.020 *	---	---	---	---	---	<0.010	<0.010	---	---	---	---	<0.010	---	---	---	---	---	<0.010
Benzo(k)fluoranthene	ug/L	-	0.4	0.01	<0.010	0.02	0.02	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.14	<0.010
Chrysene	ug/L	-	1	0.07	0.065	0.02	0.03	0.02	<0.010	<0.010	0.012	0.015	<0.010	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.29	<0.010
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.010	<0.010	<0.010	0.01	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	0.08	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.04	<0.010
Fluoranthene	ug/L		130	1.9	2.5	0.08	0.10	0.02	0.04	0.01	0.039	0.047	<0.010	0.01	<0.010	0.01	0.036	<0.010	<0.010	<0.010	<0.010	0.61	0.016
Fluorene	ug/L	-	400	1.4	19	0.17	0.04	0.02	0.04	0.07	0.028	0.030	<0.010	0.03	<0.010	0.05	0.028	<0.010	<0.010	<0.010	<0.010	0.12	0.014
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	<0.010	<0.010	0.01	0.02	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	0.04	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.10	<0.010
Naphthalene	ug/L	7000	1400	92	130 **	0.3	<0.020	0.02	0.2	3.7	0.21	0.20	<0.020	0.3	<0.020	1.6	<0.20	<0.020	<0.020	<0.020	<0.020	0.8	<0.20
Perylene	ug/L	-	-	<0.010	<0.010	<0.010	<0.010	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05	<0.010
Phenanthrene	ug/L	-	580	13	23	0.3	0.14	0.02	0.09	0.09	0.072	0.081	<0.010	0.04	<0.010	0.06	0.097	<0.010	<0.010	0.01	<0.010	0.57	0.046
Pyrene	ug/L	-	68	1.2	1.7	0.06	0.07	0.02	0.03	0.01	0.028	0.035	<0.010	<0.010	<0.010	0.01	0.024	<0.010	<0.010	<0.010	<0.010	0.46	0.011

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU18-001-MWA	SCU18-001-MWA	SCU18-001-MW	SCU18-001-MW	SCU18-001-MW	SCU18-001-MW	SCU18-002-MWA	SCU18-002-MWA	SCU18-002-MW	SCU18-002-MW	SCU18-002-MW	SCU18-002-MWA	SCU18-007-MW	SCU18-007-MW	SCU18-007-MW	SCU18-007-MW	SCU18-007-MW	SCU18-007-MW	SCU18-007-MW	SCU18-009-MW
Sampling Date				7-Aug-03	9-Sep-10	12-Nov-10	27-Oct-11	27-Oct-11	29-Nov-13	7-Aug-03	9-Sep-10	12-Nov-10	27-Oct-11	29-Nov-13	29-Nov-13	12-Jul-06	24-Nov-09	7-Sep-10	19-Nov-10	24-Oct-11	26-Oct-11	2-Dec-13	12-Jul-06
Field Duplicate Label								FD-06							**FD #1**								
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	0.25	<0.050	<0.050	<0.050	<0.050	<0.050	<0.30	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	6.1	<0.050	<0.050	<0.050	<0.050	0.47
2-Methylnaphthalene	ug/L	38000	1800	1.3	<0.050	<0.050	<0.050	<0.050	<0.050	0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	7.1	<0.050	<0.050	<0.050	<0.050	0.29
Acenaphthene	ug/L	-	600	0.07	<0.010	<0.010	0.02	0.01	<0.010	<0.30	<0.010	<0.010	0.02	0.025	0.014	<0.010	<0.010	1.6	<0.010	<0.010	<0.010	0.011	2
Acenaphthylene	ug/L	750	1.8	0.14	<0.010	<0.010	0.01	0.01	<0.010	<0.30	<0.010	<0.010	0.01	<0.010	<0.010	<0.010	<0.010	**1.9**	<0.010	<0.010	<0.010	0.012	0.22
Anthracene	ug/L	-	2.4	0.68	<0.010	<0.010	0.02	0.02	<0.010	<0.30	<0.010	<0.010	0.03	0.023	0.013	<0.010	<0.010	0.92	<0.010	<0.010	<0.010	0.012	0.29
Benzo(a)anthracene	ug/L	-	4.7	0.87	0.01	<0.010	<0.010	<0.010	<0.010	<0.0180	<0.010	<0.010	<0.010	0.017	<0.010	<0.010	<0.010	0.12	<0.010	<0.010	<0.010	<0.010	0.01
Benzo(a)pyrene	ug/L	-	0.81	0.71	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	0.02	<0.010	0.02	<0.010	<0.010	<0.010	<0.010	0.02
Benzo(b)fluoranthene	ug/L	-	0.75	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.04	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	ug/L	-	0.2	**0.37**	<0.010	<0.010	0.01	<0.010	<0.010	*<0.30*	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(j)fluoranthene	ug/L	-	-	---	---	---	---	---	<0.010	---	---	---	---	<0.010	<0.010	---	---	---	---	---	---	<0.010	---
Benzo(k)fluoranthene	ug/L	-	0.4	**1.2**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	ug/L	-	1	0.99	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.016	<0.010	0.02	<0.010	0.12	<0.010	<0.010	<0.010	<0.010	0.02
Dibenz(a,h)anthracene	ug/L	-	0.52	0.12	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	ug/L		130	1.7	<0.010	<0.010	0.02	0.02	<0.010	<0.30	<0.010	<0.010	0.02	0.044	0.026	<0.010	<0.010	1.8	<0.010	<0.010	<0.010	0.011	0.25
Fluorene	ug/L	-	400	0.49	<0.010	<0.010	0.03	0.03	<0.010	<0.30	0.01	<0.010	0.03	0.034	0.022	<0.010	<0.010	3.4	<0.010	<0.010	<0.010	0.017	0.83
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	**0.38**	<0.010	<0.010	<0.010	<0.010	<0.010	*<0.30*	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	ug/L	7000	1400	2	<0.020	<0.020	0.2	0.3	<0.20	0.03	<0.020	<0.020	0.3	<0.20	<0.20	<0.020	<0.020	45	<0.020	<0.020	<0.020	<0.20	1.5
Perylene	ug/L	-	-	0.15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.30	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	ug/L	-	580	1.9	<0.010	0.01	0.07	0.07	0.011	0.04	0.02	<0.010	0.09	0.099	0.058	<0.010	<0.010	2.4	0.01	<0.010	<0.010	0.034	1.4
Pyrene	ug/L	-	68	1.5	<0.010	<0.010	0.03	0.02	<0.010	<0.25	<0.010	<0.010	0.02	0.034	0.021	<0.010	<0.010	1.2	<0.010	<0.010	<0.010	0.013	0.19

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU18-009-MW	SCU18-009-MW	SCU18-009-MW	SCU18-009-MW	SCU18-009-MW	SCU18-009-MW	SCU18-010-MW	SCU18-010-MW	SCU18-010-MW	SCU18-010-MW	SCU18-010-MW	SCU18-011-MW	SCU18-011-MW	SCU18-011-MW	SCU18-011-MW	SCU18-011-MW	SCU18-011-MW	SCU19-002-MWA	SCU19-002-MWA	SCU19-002-MWA
Sampling Date				4-Dec-09	4-Dec-09	19-Nov-10	19-Nov-10	27-Oct-11	1-Dec-13	7-Sep-10	17-Nov-10	28-Oct-11	22-Nov-12	29-Nov-13	7-Sep-10	17-Nov-10	17-Nov-10	28-Oct-11	22-Nov-12	29-Nov-13	15-Sep-05	18-Nov-10	26-Oct-11
Field Duplicate Label					DUP E		FD 7										FD 5						
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	0.43	0.37	0.32	0.32	0.5	0.50	6.1	1.3	1.8	1.5	0.67	<0.05	0.05	0.06	<0.05	<0.05	<0.050	2.4	2.5	1.9
2-Methylnaphthalene	ug/L	38000	1800	0.44	0.37	0.21	0.21	0.45	0.44	7.1	0.23	1.7	2.0	0.099	<0.05	0.06	0.07	<0.05	<0.05	<0.050	2.4	2.5	1.3
Acenaphthene	ug/L	-	600	0.69	0.61	0.70	0.75	0.83	0.96	1.6	0.60	0.50	0.33	0.29	0.02	0.02	0.03	0.02	0.060	0.049	0.47	0.85	0.6
Acenaphthylene	ug/L	750	1.8	0.24	0.21	0.16	0.16	0.12	0.24	**1.9**	0.48	0.56	0.50	0.19	0.01	0.03	0.04	<0.01	<0.01	0.012	0.43	0.65	0.39
Anthracene	ug/L	-	2.4	0.29	0.27	0.16	0.18	0.09	0.36	0.92	0.35	0.35	0.19	0.11	<0.01	0.01	0.01	<0.01	0.045	0.016	0.29	0.27	0.14
Benzo(a)anthracene	ug/L	-	4.7	0.02	0.02	<0.010	<0.010	0.01	<0.010	0.12	0.06	0.07	0.089	0.13	0.01	<0.01	<0.01	<0.01	0.042	0.021	0.15	<0.01	0.02
Benzo(a)pyrene	ug/L	-	0.81	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	0.03	0.04	0.053	0.096	<0.01	<0.01	<0.01	<0.01	0.033	0.015	0.12	<0.01	0.02
Benzo(b)fluoranthene	ug/L	-	0.75	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.04	0.02	0.02	0.041	0.068	<0.01	<0.01	<0.01	<0.01	0.023	0.011	0.09	<0.01	0.02
Benzo(g,h,i)perylene	ug/L	-	0.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	0.01	0.02	0.027	0.054	<0.01	<0.01	<0.01	<0.01	0.016	<0.010	0.06	<0.01	<0.01
Benzo(j)fluoranthene	ug/L	-	-	---	---	---	---	---	<0.010	---	---	---	---	0.051	---	---	---	---	---	<0.010	---	---	---
Benzo(k)fluoranthene	ug/L	-	0.4	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	0.02	0.02	0.058	0.045	<0.01	<0.01	<0.01	<0.01	0.032	<0.010	0.12	<0.01	0.01
Chrysene	ug/L	-	1	0.02	0.01	0.02	0.01	0.01	0.013	0.12	0.08	0.09	0.087	0.12	0.01	<0.01	<0.01	<0.01	0.046	0.019	0.17	<0.01	0.02
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.01	0.018	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	0.03	<0.01	<0.01
Fluoranthene	ug/L		130	0.40	0.35	0.24	0.24	0.38	0.35	1.8	0.64	0.61	0.35	0.37	0.03	0.02	0.03	<0.01	0.13	0.044	0.4	0.15	0.13
Fluorene	ug/L	-	400	0.74	0.64	0.69	0.67	0.93	0.90	3.4	1.2	1.1	0.64	0.28	0.02	0.04	0.04	0.01	0.062	0.041	0.75	1.5	0.95
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	0.01	0.02	0.025	0.053	<0.01	<0.01	<0.01	<0.01	0.015	<0.010	0.07	<0.01	<0.01
Naphthalene	ug/L	7000	1400	1.0	0.8	0.8	0.8	1.4	1.2	45	<0.02	12	31 **	<0.20	<0.2	0.3	0.3	<0.02	<0.02	<0.20	12	14	12
Perylene	ug/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.01	0.01	0.016	0.031	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	0.04	<0.01	<0.01
Phenanthrene	ug/L	-	580	1.4	1.2	1.1	0.97	1.6	1.4	2.4	0.93	0.81	0.53	0.29	0.03	0.05	0.05	0.02	0.17	0.052	1.6	1.4	0.92
Pyrene	ug/L	-	68	0.26	0.23	0.16	0.16	0.27	0.24	1.2	0.55	0.61	0.33	0.41	0.03	0.02	0.02	0.01	0.095	0.038	0.34	0.09	0.09

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU19-002-MWA	SCU19-002-MWA	SCU19-002-MWB	SCU19-002-MWB	SCU19-002-MWB	SCU19-002-MWB	SCU19-002-MWB	SCU19-010-MW	SCU19-010-MW	SCU19-010-MW	SCU19-015-MW	SCU19-015-MW	SCU19-015-MW	SCU19-015-MW	SCU19-015-MW	SCU19-015-MW	SCU19-029-MW	SCU19-029-MW	SCU19-029-MW	SCU19-029-MW
Sampling Date				21-Nov-12	27-Nov-13	18-Nov-10	26-Oct-11	21-Nov-12	21-Nov-12	27-Nov-13	20-Sep-05	27-Nov-12	1-Dec-13	22-Sep-05	18-Nov-10	27-Jul-11	26-Oct-11	23-Nov-12	29-Nov-13	28-Jul-11	28-Oct-11	27-Nov-12	7-Dec-13
Field Duplicate Label									FD3														
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	0.49	0.79	<0.05	<0.05	<0.05	<0.05	<0.050	1.7	0.52	0.17	<0.05	<0.05	<0.05	<0.05	0.49	<0.050	<0.05	<0.05	<0.05	<0.050
2-Methylnaphthalene	ug/L	38000	1800	0.26	0.31	<0.05	<0.05	<0.05	<0.05	<0.050	2.3	0.60	0.15	<0.05	0.05	<0.05	<0.05	0.89	<0.050	<0.05	<0.05	<0.05	<0.050
Acenaphthene	ug/L	-	600	0.19	0.32	<0.01	<0.01	0.037	0.032	0.019	1.6	0.49	0.24	<0.01	0.01	<0.01	<0.01	0.46	<0.010	<0.01	<0.01	<0.01	0.026
Acenaphthylene	ug/L	750	1.8	0.087	0.13	<0.01	<0.01	<0.01	<0.01	<0.010	<0.01	<0.01	<0.020 *	<0.01	0.03	<0.01	<0.01	0.052	<0.010	<0.01	<0.01	<0.01	0.020
Anthracene	ug/L	-	2.4	0.055	0.083	<0.01	<0.01	0.011	<0.01	0.030	0.07	0.013	0.031	<0.01	0.01	<0.01	<0.01	0.22	<0.010	0.02	<0.01	0.012	0.041
Benzo(a)anthracene	ug/L	-	4.7	0.023	0.030	<0.01	<0.01	0.024	0.015	0.026	0.01	0.017	<0.010	<0.01	<0.01	<0.01	<0.01	0.067	<0.010	<0.01	<0.01	0.030	0.091
Benzo(a)pyrene	ug/L	-	0.81	0.016	0.026	<0.01	<0.01	0.022	0.011	0.020	0.01	0.012	<0.010	<0.01	<0.01	<0.01	<0.01	0.030	<0.010	<0.01	<0.01	0.022	0.090
Benzo(b)fluoranthene	ug/L	-	0.75	0.013	0.020	<0.01	<0.01	0.011	0.011	0.016	<0.01	0.015	<0.010	<0.01	<0.01	<0.01	<0.01	0.027	<0.010	<0.01	<0.01	0.026	0.072
Benzo(g,h,i)perylene	ug/L	-	0.2	0.010	0.015	<0.01	<0.01	0.013	<0.01	0.012	<0.01	0.011	<0.010	<0.01	<0.01	<0.01	<0.01	0.011	<0.010	<0.01	<0.01	0.016	0.047
Benzo(j)fluoranthene	ug/L	-	-	---	0.013	---	---	---	---	<0.010	---	---	<0.010	---	---	---	---	---	<0.010	---	---	---	0.047
Benzo(k)fluoranthene	ug/L	-	0.4	0.018	0.013	<0.01	<0.01	0.021	0.011	0.010	<0.01	0.014	<0.010	<0.01	<0.01	<0.01	<0.01	0.031	<0.010	<0.01	<0.01	0.026	0.043
Chrysene	ug/L	-	1	0.021	0.032	<0.01	<0.01	0.030	0.016	0.030	0.01	0.017	<0.010	<0.01	<0.01	<0.01	<0.01	0.061	<0.010	<0.01	<0.01	0.027	0.080
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.01	<0.010	<0.01	<0.01	<0.01	<0.01	<0.010	<0.01	0.010	<0.010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.01	<0.01	0.012	0.014
Fluoranthene	ug/L		130	0.068	0.12	<0.01	<0.01	0.063	0.032	0.093	0.04	0.020	0.013	<0.01	0.01	<0.01	<0.01	0.29	<0.010	0.01	<0.01	0.039	0.16
Fluorene	ug/L	-	400	0.28	0.39	<0.01	<0.01	<0.01	<0.01	0.025	0.54	0.17	0.10	<0.01	0.03	<0.01	0.01	0.50	<0.010	0.01	<0.01	0.011	0.030
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	0.010	0.013	<0.01	<0.01	0.011	<0.01	0.011	0.01	0.013	<0.010	<0.01	<0.01	<0.01	<0.01	0.013	<0.010	<0.01	<0.01	0.019	0.044
Naphthalene	ug/L	7000	1400	2.5	3.8	<0.02	<0.02	<0.02	<0.02	<0.20	10	4.0	0.84	<0.02	0.3	<0.02	<0.02	2.8	<0.20	<0.02	<0.02	<0.02	<0.20
Perylene	ug/L	-	-	<0.01	<0.010	<0.01	<0.01	<0.01	<0.01	<0.010	<0.01	0.011	<0.010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.01	<0.01	0.013	0.026
Phenanthrene	ug/L	-	580	0.30	0.47	0.02	<0.01	0.056	0.026	0.15	0.38	0.049	0.048	0.01	0.04	0.01	0.03	0.95	<0.010	0.03	<0.01	0.033	0.12
Pyrene	ug/L	-	68	0.054	0.089	<0.01	<0.01	0.053	0.029	0.081	0.03	0.030	0.025	<0.01	0.01	<0.01	0.01	0.19	<0.010	0.01	0.01	0.038	0.15

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU19-030-MW	SCU19-030-MW	SCU19-030-MW	SCU19-030-MW	SCU19-031-MW	SCU19-031-MW	SCU19-031-MW	SCU19-031-MW	SCU19-031-MW	SCU19-032-MW	SCU19-032-MW	SCU19-032-MW	SCU20-013-MW	SCU20-013-MW	SCU20-013-MW	SCU20-013-MW	SCU20-013-MW	SCU20-014-MW	SCU20-014-MW	SCU20-014-MW
Sampling Date				28-Jul-11	28-Oct-11	27-Nov-12	7-Dec-13	27-Jul-11	27-Jul-11	26-Oct-11	27-Nov-12	27-Nov-13	27-Jul-11	26-Oct-11	23-Nov-12	3-Sep-10	17-Nov-10	27-Oct-11	21-Nov-12	26-Nov-13	3-Sep-10	17-Nov-10	27-Oct-11
Field Duplicate Label									DUP														
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	0.21	<0.05	<0.05	<0.050	<0.05	<0.05	<0.05	<0.05	<0.050	2.20	2.6	0.31	28	39	42	48 **	42 **	5.9	4.4	9.3
2-Methylnaphthalene	ug/L	38000	1800	0.22	<0.05	<0.05	<0.050	<0.05	<0.05	<0.05	<0.05	0.063	<0.05	0.10	0.21	40	59	31	63 **	68 **	9.2	6.3	13
Acenaphthene	ug/L	-	600	1.10	0.62	0.46	0.53	0.07	0.07	0.04	0.010	0.060	4.10	3.70	0.38	5.1	6.9	6.8	4.8	7.6	1.1	0.93	1.7
Acenaphthylene	ug/L	750	1.8	0.02	0.03	0.012	<0.060 *	0.02	0.02	0.01	<0.01	0.017	0.43	0.16	0.014	**18**	**26**	**18**	**29 ****	**34**	**2.8**	**3.4**	**7.2**
Anthracene	ug/L	-	2.4	0.25	0.10	0.015	<0.060 *	0.03	0.03	0.03	0.014	0.055	0.4	0.51	0.14	1.8	**2.7**	**3.1**	2.0	**4.0**	0.72	0.85	1.4
Benzo(a)anthracene	ug/L	-	4.7	0.04	0.05	0.063	0.038	<0.01	0.02	<0.01	0.032	0.036	0.13	0.03	0.013	0.11	0.18	0.08	0.33	0.50	0.16	0.13	0.18
Benzo(a)pyrene	ug/L	-	0.81	<0.01	0.01	0.026	0.020	<0.01	0.02	<0.01	0.026	0.025	0.05	<0.01	<0.01	0.04	0.11	0.02	0.13	0.23	0.10	0.10	0.13
Benzo(b)fluoranthene	ug/L	-	0.75	<0.01	<0.01	0.026	0.018	<0.01	0.02	<0.01	0.032	0.017	0.03	<0.01	<0.01	0.04	0.07	0.01	0.082	0.19	0.07	0.06	0.08
Benzo(g,h,i)perylene	ug/L	-	0.2	<0.01	<0.01	0.019	<0.010	<0.01	0.02	<0.01	0.021	0.011	0.02	<0.01	<0.01	0.01	0.03	0.01	0.050	0.083	0.05	0.05	0.07
Benzo(j)fluoranthene	ug/L	-	-	---	---	---	<0.010	---	---	---	---	0.011	---	---	---	---	---	---	---	0.12	---	---	---
Benzo(k)fluoranthene	ug/L	-	0.4	<0.01	<0.01	0.030	<0.010	<0.01	0.02	<0.01	0.031	0.011	0.03	<0.01	<0.01	0.02	0.05	0.01	0.12	0.11	0.05	0.05	0.05
Chrysene	ug/L	-	1	0.05	0.05	0.060	0.040	<0.01	0.04	0.01	0.031	0.035	0.14	0.03	0.013	0.12	0.19	0.09	0.20	0.44	0.17	0.14	0.19
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.01	<0.01	0.012	<0.010	<0.01	<0.01	<0.01	0.011	<0.010	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.016	0.031	0.02	0.01	0.03
Fluoranthene	ug/L		130	0.82	0.70	0.66	0.62	0.05	0.12	0.10	0.058	0.14	1.40	0.62	0.16	0.92	1.6	1.3	1.4	2.8	0.79	0.80	1.2
Fluorene	ug/L	-	400	0.57	0.48	0.23	0.18	0.04	0.04	0.02	0.015	0.077	1.20	3.50	0.43	11	14	15	10	17	3.3	2.6	4.8
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	<0.01	<0.01	0.021	<0.010	<0.01	0.01	<0.01	0.024	<0.010	0.02	<0.01	<0.01	0.01	0.03	0.01	0.045	0.088	0.05	0.04	0.07
Naphthalene	ug/L	7000	1400	1.00	<0.02	<0.02	<0.20	<0.02	<0.02	<0.02	<0.02	<0.20	<0.02	1.1	1.5	460	670	530	850 **	770 **	44	25	89
Perylene	ug/L	-	-	<0.01	<0.01	0.014	<0.010	<0.01	0.01	<0.01	0.013	<0.010	0.02	<0.01	<0.01	0.01	0.02	<0.01	0.031	0.062	0.03	0.02	0.03
Phenanthrene	ug/L	-	580	0.76	0.04	0.047	<0.040 *	0.04	0.05	0.04	0.047	0.22	0.14	0.41	0.40	8.0	12	13	8.4	18	3.3	2.9	5.6
Pyrene	ug/L	-	68	0.52	0.49	0.45	0.45	0.04	0.09	0.08	0.052	0.11	0.81	0.36	0.10	0.57	0.98	0.78	0.92	1.8	0.58	0.56	0.81

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU20-014-MW	SCU20-014-MW	SCU20-015-MW	SCU20-015-MW	SCU20-015-MW	SCU20-015-MW	SCU20-015-MW	SCU20-016-MW	SCU20-016-MW	SCU20-016-MW	SCU20-016-MW	SCU20-016-MW	SCU20-017-MW	SCU20-017-MW	SCU20-017-MW	SCU20-017-MW	SCU20-017-MW	SCU20-018-MW	SCU20-018-MW	SCU20-018-MW
Sampling Date				22-Nov-12	26-Nov-13	3-Sep-10	17-Nov-10	27-Oct-11	22-Nov-12	26-Nov-13	7-Sep-10	17-Nov-10	27-Oct-11	22-Nov-12	26-Nov-13	7-Sep-10	17-Nov-10	27-Oct-11	21-Nov-12	26-Nov-13	7-Sep-10	17-Nov-10	27-Oct-11
Field Duplicate Label																							
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	7.1	8.7	8.3	2.9	1.1	1.2	2.6	12	3.5	6.5	3.6	5.3	11	9.2	5.8	1.6	5.5	0.11	<0.05	0.08
2-Methylnaphthalene	ug/L	38000	1800	8.9	11	11	3.8	1.1	1.3	2.8	15	3.8	7.2	3.9	5.9	12	9.8	6.3	1.5	5.9	0.09	<0.05	0.07
Acenaphthene	ug/L	-	600	1.4	2.1	1.5	0.91	0.47	0.40	0.68	4.9	1.9	3.1	1.8	2.7	2.9	2.6	1.8	0.56	1.8	0.08	0.03	0.06
Acenaphthylene	ug/L	750	1.8	**4.6**	**5.7**	**4.1**	1.3	0.83	0.55	0.96	0.48	1.2	**3.7**	**2.2**	**3.1**	**7.7**	**6.4**	**4.4**	0.98	**3.7**	0.07	0.02	0.04
Anthracene	ug/L	-	2.4	1.0	1.1	1.2	1.1	1.1	0.24	0.50	0.55	0.27	0.55	0.40	0.37	0.91	0.88	1.5	0.39	1.2	0.10	0.02	0.07
Benzo(a)anthracene	ug/L	-	4.7	0.15	0.23	0.05	0.18	0.99	0.16	0.30	0.03	0.01	0.02	0.011	0.033	0.11	0.19	0.39	0.093	0.62	0.09	<0.01	0.03
Benzo(a)pyrene	ug/L	-	0.81	0.072	0.14	0.01	0.14	0.68	0.082	0.20	0.01	<0.01	0.01	<0.01	0.030	0.04	0.15	0.32	0.052	0.44	0.07	<0.01	0.02
Benzo(b)fluoranthene	ug/L	-	0.75	0.054	0.12	<0.01	0.08	0.53	0.051	0.15	0.01	<0.01	<0.01	<0.01	0.023	0.03	0.10	0.24	0.057	0.33	0.06	<0.01	0.02
Benzo(g,h,i)perylene	ug/L	-	0.2	0.033	0.064	<0.01	0.05	**0.29**	0.035	0.084	<0.01	<0.01	<0.01	<0.01	0.013	0.02	0.07	0.15	0.027	0.19	0.04	<0.01	0.01
Benzo(j)fluoranthene	ug/L	-	-	---	0.068	---	---	---	---	0.12	---	---	---	---	0.013	---	---	---	---	0.24	---	---	---
Benzo(k)fluoranthene	ug/L	-	0.4	0.071	0.069	<0.01	0.06	0.26	0.077	0.10	<0.01	<0.01	<0.01	<0.01	0.013	0.02	0.07	0.17	0.057	0.22	0.04	<0.01	<0.01
Chrysene	ug/L	-	1	0.14	0.20	0.06	0.20	0.97	0.15	0.29	0.04	0.02	0.03	0.013	0.042	0.12	0.19	0.38	0.10	0.56	0.09	<0.01	0.04
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.01	0.019	<0.01	0.02	0.11	<0.01	0.024	<0.01	<0.01	<0.01	<0.01	<0.010	<0.01	0.02	0.06	<0.01	0.060	0.02	<0.01	<0.01
Fluoranthene	ug/L		130	0.96	1.4	0.65	1.0	2.3	0.41	0.93	0.42	0.27	0.35	0.23	0.35	1.4	1.4	1.8	0.53	2.2	0.21	0.02	0.09
Fluorene	ug/L	-	400	3.5	4.2	3.8	2.5	1.1	0.53	1.0	3.9	1.8	3.4	2.1	3.1	5.4	4.9	4.1	1.2	3.6	0.10	0.03	0.09
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	0.034	0.065	<0.01	0.05	**0.28**	0.032	0.073	<0.01	<0.01	<0.01	<0.01	0.013	0.02	0.07	0.14	0.026	0.18	0.03	<0.01	0.01
Naphthalene	ug/L	7000	1400	76 **	84 **	29	13	1.5	7.2	11	190	39	120	47 **	46 **	91	52	31 **	7.8	37 **	0.5	<0.02	0.5
Perylene	ug/L	-	-	0.021	0.041	<0.01	0.03	0.15	0.019	0.049	<0.01	<0.01	<0.01	<0.01	<0.010	0.01	0.04	0.08	0.013	0.10	0.02	<0.01	<0.01
Phenanthrene	ug/L	-	580	4.0	5.4	4.0	4.4	2.8	0.66	1.9	4.3	1.2	2.5	1.6	1.8	5.8	5.2	5.4	1.5	5.0	0.27	0.04	0.26
Pyrene	ug/L	-	68	0.67	1.0	0.42	0.69	1.8	0.33	0.76	0.28	0.22	0.34	0.19	0.33	0.87	0.87	1.3	0.37	1.6	0.19	0.02	0.09

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU20-018-MW	SCU20-018-MW	SCU25-001-MW	SCU25-001-MW	SCU25-001-MW	SCU25-001-MW	SCU25-001-MW	SCU25-003-MW	SCU25-003-MW	SCU25-003-MW	SCU25-003-MW	SCU25-003-MW	SCU25-003-MW	SCU25-003-MW	SCU25-003-MW	SCU25-007-MW	SCU25-007-MW	SCU25-007-MW	SCU25-007-MW	SCU25-007-MW
Sampling Date				21-Nov-12	26-Nov-13	26-Jul-07	18-Nov-09	17-Nov-10	27-Oct-11	6-Dec-13	25-Jul-07	26-Nov-08	25-Nov-09	16-Nov-10	27-Oct-11	27-Oct-11	29-Nov-12	6-Dec-13	24-Jul-07	25-Nov-09	16-Nov-10	25-Oct-11	6-Dec-13
Field Duplicate Label																FD-05							
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	<0.05	<0.050	0.29	0.27	0.31	0.44	0.48	85	1.0	2.1	0.69	1.1	1.1	1.0	0.25	0.13	0.07	0.09	0.09	0.078
2-Methylnaphthalene	ug/L	38000	1800	<0.05	<0.050	0.29	0.20	0.28	0.43	0.48	170	2.5	2.4	1.0	1.9	1.8	1.4	0.19	0.09	<0.050	0.08	0.07	0.062
Acenaphthene	ug/L	-	600	0.023	0.014	0.11	0.11	0.10	0.16	0.17	5.1	0.11	0.19	0.11	0.19	0.18	0.15	0.096	0.08	0.05	0.05	0.06	0.051
Acenaphthylene	ug/L	750	1.8	<0.01	<0.010	0.17	0.25	0.22	0.35	0.36	**23**	0.36	0.56	0.26	0.48	0.48	0.44	0.12	0.07	0.05	0.05	0.07	0.059
Anthracene	ug/L	-	2.4	0.021	0.019	0.18	0.19	0.15	0.35	0.21	**14**	0.38	0.54	0.26	0.66	0.63	0.55	0.14	0.13	0.05	0.04	0.07	0.071
Benzo(a)anthracene	ug/L	-	4.7	0.040	<0.010	0.02	0.02	0.02	0.03	0.031	**7.8**	0.10	0.10	0.06	0.10	0.10	0.12	0.044	0.02	0.03	0.02	0.02	0.038
Benzo(a)pyrene	ug/L	-	0.81	0.026	<0.010	0.01	<0.010	<0.010	<0.010	0.014	**5.4**	0.02	<0.02	0.02	0.01	0.01	<0.01	0.011	<0.010	*<1.0*	<0.010	<0.010	0.029
Benzo(b)fluoranthene	ug/L	-	0.75	0.024	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	**4.4**	0.02	0.02	0.01	0.01	0.01	0.010	0.012	<0.010	<0.010	<0.010	<0.010	0.020
Benzo(g,h,i)perylene	ug/L	-	0.2	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	**2**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	0.011
Benzo(j)fluoranthene	ug/L	-	-	---	<0.010	---	---	---	---	<0.010	---	---	---	---	---	---	---	<0.020 *	---	---	---	---	0.013
Benzo(k)fluoranthene	ug/L	-	0.4	0.026	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	**4.9**	0.02	0.02	0.01	0.01	0.01	0.018	<0.010	<0.010	<0.010	<0.010	<0.010	0.013
Chrysene	ug/L	-	1	0.039	<0.010	0.01	0.02	0.02	0.03	0.036	**6.7**	0.08	0.10	0.05	0.10	0.09	0.099	0.038	0.01	0.03	0.02	0.02	0.036
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	**0.8**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	ug/L		130	0.073	0.032	0.5	0.50	0.56	0.66	0.63	25	0.51	0.99	0.54	0.87	0.86	1.0	0.39	0.52	0.46	0.28	0.35	0.31
Fluorene	ug/L	-	400	0.027	0.026	0.32	0.30	0.35	0.52	0.52	28	0.56	1.0	0.66	1.2	1.3	0.94	0.39	0.14	0.05	0.07	0.09	0.083
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	**2.6**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	0.012
Naphthalene	ug/L	7000	1400	<0.02	<0.20	1.1	1.4	1.7	3.4	3.0	**1500**	7.5	6.3	5.4	8.2	7.6	6.9	0.52	0.3	<0.020	0.3	0.2	<0.20
Perylene	ug/L	-	-	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	1.6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	ug/L	-	580	0.060	0.045	0.69	0.56	0.80	1.1	0.89	64	1.6	2.0	0.99	2.3	2.4	1.8	0.67	0.36	0.10	0.21	0.19	0.23
Pyrene	ug/L	-	68	0.068	0.028	0.28	0.27	0.30	0.38	0.37	12	0.36	0.62	0.31	0.54	0.56	0.63	0.26	0.36	0.31	0.17	0.22	0.23

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU26-MW-001	SCU26-001-MW	SCU26-001-MW	SCU26-001-MW	SCU26-MW-002	SCU26-002-MW	SCU26-002-MW	SCU26-002-MW	SCU26-002-MW	SCU26-007-MW	SCU26-007-MW	SCU26-007-MW	SCU26-007-MW	SCU26-007-MW	SCU27-MW-002	SCU27-002-MW	SCU27-002-MW	SCU27-002-MW	SCU27-002-MW	SCU31-002-MWB
Sampling Date				26-Jul-03	11-Jul-12	26-Nov-12	5-Dec-13	26-Jul-03	11-Jul-12	26-Nov-12	26-Nov-12	5-Dec-13	24-Apr-07	4-Dec-09	31-Oct-11	30-Nov-12	6-Dec-13	26-Jul-03	4-Jul-12	4-Jul-12	26-Nov-12	5-Dec-13	22-Sep-05
Field Duplicate Label											FD5									FD1			
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	<0.05	0.94	1.7	1.7	---	8.5	9.8	11	7.9	0.85	0.85	3.5	3.1	<0.050	<0.05	<0.05	<0.05	<0.05	<0.050	<0.05
2-Methylnaphthalene	ug/L	38000	1800	<0.05	0.68	1.3	1.5	---	12	13	14	9.0	0.97	0.89	4.7	3.2	<0.050	<0.05	<0.05	<0.05	<0.05	<0.050	<0.05
Acenaphthene	ug/L	-	600	0.19	0.13	0.25	0.33	<0.01	0.30	0.47	0.51	0.33	0.18	0.30	2.20	0.81	0.029	<0.01	<0.01	<0.01	0.016	0.058	<0.01
Acenaphthylene	ug/L	750	1.8	0.36	0.26	0.44	0.60	<0.01	0.63	0.75	0.82	0.63	0.96	0.69	**2.1**	**2.2**	0.076	<0.01	<0.01	<0.01	<0.01	0.017	<0.01
Anthracene	ug/L	-	2.4	<0.01	0.24	0.74	0.47	<0.01	0.26	0.41	0.42	0.24	0.38	1.2	**3.9**	0.96	0.058	<0.01	<0.01	<0.01	0.011	0.13	<0.01
Benzo(a)anthracene	ug/L	-	4.7	<0.01	0.53	0.67	0.25	<0.01	0.030	0.13	0.099	0.11	0.2	1.4	**5.6**	0.52	0.30	<0.01	<0.01	<0.01	<0.01	0.18	<0.01
Benzo(a)pyrene	ug/L	-	0.81	0.06	0.51	0.44	0.18	<0.01	<0.01	0.074	0.046	0.10	0.1	0.52	**2.7**	0.21	0.30	<0.01	<0.01	<0.01	<0.01	0.18	<0.01
Benzo(b)fluoranthene	ug/L	-	0.75	<0.01	0.37	0.28	0.15	<0.01	<0.01	0.072	0.047	0.086	0.09	0.46	**2.0**	0.23	0.25	<0.01	<0.01	<0.01	<0.01	0.14	<0.01
Benzo(g,h,i)perylene	ug/L	-	0.2	<0.01	**0.28**	0.18	0.093	<0.01	<0.01	0.038	0.024	0.051	0.04	0.13	**0.80**	0.088	0.065	<0.01	<0.01	<0.01	<0.01	0.089	<0.01
Benzo(j)fluoranthene	ug/L	-	-	---	---	---	0.091	---	---	---	---	0.056	---	---	---	---	0.21	---	---	---	---	0.087	---
Benzo(k)fluoranthene	ug/L	-	0.4	<0.01	**0.51**	0.39	0.086	<0.01	<0.01	0.076	0.049	0.050	0.14	**0.64**	**1.7**	0.26	0.16	<0.01	<0.01	<0.01	<0.01	0.082	<0.01
Chrysene	ug/L	-	1	0.09	0.56	0.58	0.23	<0.01	0.020	0.10	0.075	0.11	0.19	**1.1**	**4.6**	0.47	0.29	<0.01	<0.01	<0.01	<0.01	0.18	<0.01
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.01	0.070	0.051	0.025	<0.01	<0.01	0.012	<0.01	0.015	0.02	0.05	0.34	0.027	0.023	<0.01	<0.01	<0.01	<0.01	0.024	<0.01
Fluoranthene	ug/L		130	0.6	1.3	1.7	1.4	<0.01	0.38	0.73	0.70	0.60	0.88	3.9	13	2.7	0.48	<0.01	0.020	0.020	0.017	0.45	<0.01
Fluorene	ug/L	-	400	<0.01	0.42	0.76	1.0	1	1.0	1.3	1.4	1.0	0.55	0.89	4.7	2.5	0.052	<0.01	0.010	0.010	0.017	0.096	<0.01
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	<0.01	**0.26**	0.24	0.078	<0.01	<0.01	0.047	0.032	0.044	0.04	0.18	**0.96**	0.082	0.066	<0.01	<0.01	<0.01	<0.01	0.076	<0.01
Naphthalene	ug/L	7000	1400	2.1	1.4	3.3	4.4	7.2	7.4	8.4	10	6.6	5.5	2.8	11	9.9	<0.20	<0.02	<0.02	<0.02	<0.02	<0.20	<0.02
Perylene	ug/L	-	-	<0.01	0.13	0.11	0.046	---	<0.01	0.020	0.011	0.032	0.03	0.15	0.59	0.062	0.075	<0.01	<0.01	<0.01	<0.01	0.046	<0.01
Phenanthrene	ug/L	-	580	1.1	1.1 ***	1.7	2.0	1.7	1.6 ***	2.3	2.4	1.8	0.87	3.1	15	4.5	0.18	<0.01	0.030	0.030	0.050	0.47	<0.01
Pyrene	ug/L	-	68	0.32	0.98	1.2	0.91	<0.01	0.22	0.46	0.43	0.44	1.7	3.1	10	1.9	0.60	<0.01	0.020	0.020	0.013	0.40	<0.01

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU31-002-MWB	SCU31-002-MWB	SCU31-002-MWB	SCU31-002-MWB	SCU31-002-MWB	SCU31-013-MWB	SCU31-013-MWB	SCU31-013-MWB	SCU31-013-MWB	SCU31-013-MWB	SCU31-013-MWB	SCU31-013-MWC	SCU31-013-MWC	SCU31-013-MWC	SCU31-013-MWC	SCU31-013-MWC	SCU31-013-MWC	SCU32-001-MWA	SCU32-001-MWA	SCU32-001-MWB
Sampling Date				16-Nov-10	25-Oct-11	21-Nov-12	7-Dec-13	7-Dec-13	26-Jul-07	24-Nov-09	24-Nov-09	18-Nov-10	25-Oct-11	4-Dec-13	26-Jul-07	24-Nov-09	18-Nov-10	25-Oct-11	25-Oct-11	4-Dec-13	24-Nov-11	5-Dec-13	24-Nov-11
Field Duplicate Label							FD#6				DUP C								FD-01				
Polyaromatic Hydrocarbons																							
1-Methylnaphthalene	ug/L	38000	1800	<0.05	<0.05	<0.05	<0.050	<0.050	<0.050	0.50	0.60	0.38	0.15	0.069	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	8.1	15	<0.05
2-Methylnaphthalene	ug/L	38000	1800	<0.05	<0.05	<0.05	<0.050	<0.050	<0.050	0.64	0.77	0.40	0.14	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	2.7	4.1	<0.05
Acenaphthene	ug/L	-	600	<0.01	<0.01	0.019	0.011	<0.010	<0.010	0.23	0.27	0.18	0.07	0.052	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	1.1	5.3	<0.01
Acenaphthylene	ug/L	750	1.8	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	0.09	0.11	0.07	0.03	0.030	<0.010	<0.010	0.01	<0.010	<0.010	<0.010	0.81	**1.8**	<0.01
Anthracene	ug/L	-	2.4	<0.01	<0.01	0.014	<0.010	<0.010	<0.010	0.12	0.17	0.10	0.09	0.10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.84	**7.4**	<0.01
Benzo(a)anthracene	ug/L	-	4.7	<0.01	<0.01	0.032	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	0.03	0.15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.11	**13**	<0.01
Benzo(a)pyrene	ug/L	-	0.81	<0.01	<0.01	0.033	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	0.03	0.18	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.06	**8.0**	<0.01
Benzo(b)fluoranthene	ug/L	-	0.75	<0.01	<0.01	0.027	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.03	0.16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.04	**6.1**	<0.01
Benzo(g,h,i)perylene	ug/L	-	0.2	<0.01	<0.01	0.024	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	0.02	0.12	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.03	**3.1**	<0.01
Benzo(j)fluoranthene	ug/L	-	-	---	---	---	<0.010	<0.010	---	---	---	---	---	0.086	---	---	---	---	---	<0.010	---	4.0	---
Benzo(k)fluoranthene	ug/L	-	0.4	<0.01	<0.01	0.029	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	0.089	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	**3.8**	<0.01
Chrysene	ug/L	-	1	<0.01	<0.01	0.031	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	0.04	0.18	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.12	**12**	<0.01
Dibenz(a,h)anthracene	ug/L	-	0.52	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.026	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	**0.91**	<0.01
Fluoranthene	ug/L		130	0.01	0.01	0.067	0.020	0.016	<0.010	0.33	0.39	0.20	0.15	0.36	0.0	<0.010	<0.010	<0.010	<0.010	0.019	1.1	23	0.02
Fluorene	ug/L	-	400	0.01	<0.01	0.010	0.010	<0.010	<0.010	0.50	0.57	0.33	0.17	0.080	<0.010	<0.010	0.02	<0.010	<0.010	<0.010	2.8	8.8	<0.01
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	<0.01	<0.01	0.018	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	0.097	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.03	**3.0**	<0.01
Naphthalene	ug/L	7000	1400	<0.02	<0.02	<0.02	<0.20	<0.20	<0.02	3.2	3.6	1.9	0.7	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.20	2.8	3.3	<0.2
Perylene	ug/L	-	-	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	0.044	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	1.9	<0.01
Phenanthrene	ug/L	-	580	0.02	0.03	0.068	0.031	0.029	<0.010	0.63	0.79	0.38	0.25	0.32	0.02	<0.010	0.03	<0.010	<0.010	0.030	5.2	39 **	0.04
Pyrene	ug/L	-	68	0.01	0.02	0.063	0.019	0.016	<0.010	0.18	0.22	0.11	0.11	0.30	<0.010	<0.010	<0.010	<0.010	0.01	0.020	0.7	20	0.02

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 1 (continued)
Groundwater PAH Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU32-001-MWB	SCU32-002-MWA	SCU32-002-MW	SCU32-003-MW	SCU32-003-MW	SCU32-004-MW	SCU32-004-MW	SCU32-004-MW	SCU33-001-MW	SCU33-001-MW	SCU33-001-MW	SCU33-001-MW	SCU33-001-MW	MCES-007-MW-001	MCES-007-MWB	MCES-007-MW	MCES-007-MW
Sampling Date				5-Dec-13	25-Nov-11	5-Dec-13	25-Nov-11	5-Dec-13	25-Nov-11	5-Dec-13	5-Dec-13	27-Jul-07	24-Nov-09	16-Nov-10	25-Oct-11	7-Dec-13	26-Jul-03	11-Jul-12	27-Nov-12	5-Dec-13
Field Duplicate Label											FD#5									
Polyaromatic Hydrocarbons																				
1-Methylnaphthalene	ug/L	38000	1800	0.082	0.74	0.91	3.5	5.2	2.3	2.4	2.4	0.18	0.68	0.46	0.65	0.35	1.4	<0.05	0.050	<0.050
2-Methylnaphthalene	ug/L	38000	1800	0.078	0.54	0.80	1.50	2.9	2.1	2.0	1.9	0.08	0.41	0.24	0.36	0.20	1.2	<0.05	0.063	<0.050
Acenaphthene	ug/L	-	600	0.20	0.23	0.65	0.89	4.4	0.48	0.65	0.63	0.13	0.26	0.19	0.23	0.15	0.27	0.020	0.052	<0.010
Acenaphthylene	ug/L	750	1.8	<0.030 *	0.34	0.62	0.56	1.3	0.86	0.90	0.83	0.17	0.47	0.28	0.4	0.23	0.7	<0.01	0.024	<0.010
Anthracene	ug/L	-	2.4	0.37	0.41	1.5	0.76	**8.7**	0.64	1.0	0.91	0.26	0.29	0.20	0.21	0.18	<0.01	0.050	0.18	0.015
Benzo(a)anthracene	ug/L	-	4.7	0.55	0.14	2.7	0.07	**19**	0.07	0.29	0.22	0.29	0.03	0.03	0.05	0.041	<0.01	0.15	0.45	0.015
Benzo(a)pyrene	ug/L	-	0.81	0.46	0.09	**2.8**	0.01	**11**	0.03	0.15	0.15	0.13	<0.010	<0.010	<0.010	<0.010	<0.01	0.13	0.35	0.019
Benzo(b)fluoranthene	ug/L	-	0.75	0.35	0.04	**2.1**	<0.01	**8.4**	0.02	0.14	0.13	0.11	<0.010	<0.010	<0.010	<0.010	<0.01	0.10	0.34	0.014
Benzo(g,h,i)perylene	ug/L	-	0.2	0.22	0.04	**1.4**	<0.01	**4.3**	0.01	0.060	0.066	0.09	<0.010	<0.010	<0.010	<0.010	<0.01	0.080	0.17	0.014
Benzo(j)fluoranthene	ug/L	-	-	0.22	---	1.3	---	5.6	---	0.10	0.093	---	---	---	---	<0.010	---	---	---	<0.010
Benzo(k)fluoranthene	ug/L	-	0.4	0.21	0.03	**1.3**	<0.01	**5.3**	0.01	0.078	0.073	0.13	<0.010	<0.010	<0.010	<0.010	<0.01	0.12	0.30	<0.010
Chrysene	ug/L	-	1	0.52	0.14	**2.6**	0.07	**17**	0.08	0.29	0.23	0.22	0.04	0.03	0.05	0.034	<0.01	0.16	0.39	0.018
Dibenz(a,h)anthracene	ug/L	-	0.52	0.051	0.01	0.38	<0.01	**1.3**	<0.01	0.017	0.019	0.03	<0.010	<0.010	<0.010	<0.010	<0.01	0.020	0.048	<0.010
Fluoranthene	ug/L		130	1.2	0.65	6.9	1.1	33	1.2	2.5	2.1	1.5	1.2	1.1	1.3	0.87	0.74	0.29	0.72	0.039
Fluorene	ug/L	-	400	0.26	0.44	1.2	1.9	6.7	1.4	1.8	1.6	0.42	0.70	0.46	0.57	0.36	0.97	0.030	0.077	0.010
Indeno(1,2,3-cd)pyrene	ug/L	-	0.2	0.19	0.04	**1.2**	<0.01	**4.2**	0.01	0.053	0.054	0.12	<0.010	<0.010	<0.010	<0.010	<0.01	0.080	**0.23**	<0.010
Naphthalene	ug/L	7000	1400	0.22	7.7	6.7	2.4	4.0	6.7	11	10	<0.020	1.8	0.8	1.4	0.74	3.9	<0.02	<0.02	<0.20
Perylene	ug/L	-	-	0.11	0.03	0.68	<0.01	2.6	<0.01	0.040	0.042	0.03	<0.010	<0.010	<0.010	<0.010	0.34	0.040	0.077	<0.010
Phenanthrene	ug/L	-	580	1.3	1.2	6.7	3.3	35	2.8	4.6	4.4	1.1	1.3	0.84	0.95	0.77	<0.01	0.2 ***	0.44	0.015
Pyrene	ug/L	-	68	1.0	0.46	5.8	0.72	27	0.71	1.7	1.4	1.1	0.72	0.74	0.85	0.65	0.34	0.25	0.60	0.042

Notes:

ug/L - micrograms per litre

PAH - polycyclic aromatic hydrocarbons

ND = Not detected

RDL = Reportable Detection Limit

ND(1) = elevated RDL to concentration in brackets

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

---' - not analyzed

* Elevated PAH RDL(s) due to matrix / co-extractive interference.

**Elevated PAH RDL(s) due to sample dilution.

*** PAH RDL(s) elevated due to detection of compound in blank.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

MCES-007-MW is listed under other IDs (i.e. MCES-007-MW-001 and MCES-007-MWB)

Table 2
Groundwater TPH/BTEX Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Duplicate	Date	Units	Benzene	Toluene	Ethylbenzene	Xylene (Total)	C6 - C10 (less BTEX)	>C10-C16 Hydrocarbons	>C16-C21 Hydrocarbons	>C10-C21 Hydrocarbons	>C21-<C32 Hydrocarbons	Modified TPH (Tier1)
SCU8-002-MW		16-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU8-002-MW		9-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU8-002-MW		25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	0.1	0.1
SCU8-002-MW	(FD-02)	25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU8-002-MW		02-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU10-004-MW		17-Sep-04	mg/L	1	0.22	0.17	4.2	<0.010	---	---	54	1.5	56
SCU10-004-MW		19-Nov-08	mg/L	0.017	0.002	0.003	0.012	0.02	---	---	0.4	<0.50	<0.50
SCU10-004-MW		10-Nov-10	mg/L	0.077	0.005	0.006	0.027	0.03	0.7	<0.20	---	<0.50	0.7
SCU10-004-MW		31-Oct-11	mg/L	0.057	0.006	0.006	0.053	0.09	1.8	0.24	---	<0.50	2.2
SCU10-004-MW		23-Nov-12	mg/L	0.18	0.097	0.074	0.35	0.79	13 *	2.2	---	1	17
SCU10-004-MW		02-Dec-13	mg/L	0.11	0.011	0.013	0.062	0.16	1.9	0.14	---	<0.10	2.2
SCU11-003-MW		12-Sep-03	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	0.95	0.95
SCU11-003-MW		19-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU11-003-MW		10-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU11-003-MW		25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU11-003-MW		02-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU15-001-MWB		11-Sep-03	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.05	---	---	<0.16	<0.51	<12
SCU15-001-MWB		07-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU15-004-MWA		11-Sep-03	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU15-004-MWA		17-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU15-004-MWA		9-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU15-004-MWA		25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU15-004-MWA		03-Dec-13	mg/L	0.0014	0.0033	<0.0010	0.0089	0.013	0.087	<0.050	---	<0.10	0.10
SCU15-004-MWA	FD#3	03-Dec-13	mg/L	0.0015	0.0034	<0.0010	0.0093	0.016	0.084	<0.050	---	<0.10	<0.10
SCU15-004-MWB		11-Sep-03	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU15-004-MWB		17-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	0.8	0.8
SCU15-004-MWB		09-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU15-004-MWB		25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU15-004-MWB	(FD-03)	25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU15-004-MWB		03-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU15-008-MWB		22-Jan-07	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU15-008-MWB		09-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.020	0.071	0.14	---	<0.10	0.21
SCU15-012-MW		04-Jan-07	mg/L	<0.0010	0.005	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU15-012-MW		09-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU15-018-MW		8-Jan-07	mg/L	0.13	0.048	0.3	0.8	1.6	---	---	4.8	<0.50	6.4
SCU15-018-MW		20-Nov-08	mg/L	0.190	0.040	0.490	1.300	3.20	---	---	5.6	<0.50	8.8
SCU15-018-MW		4-Dec-09	mg/L	0.16	<0.0010	0.45	0.91	2.8	---	---	7.3	<0.50	10
SCU15-018-MW		9-Nov-10	mg/L	0.13	<0.0010	0.41	0.70	2.6	7.7	<0.20	---	<0.50	10
SCU15-018-MW		26-Oct-11	mg/L	0.084	0.002	0.28	0.37	1.5	7	0.12	---	<0.50	8
SCU15-018-MW		03-Dec-13	mg/L	0.051	0.0012	0.18 ***	0.16	1.1 ***	4.5	0.11	---	<0.10	5.7
SCU16-001-MW		13-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-001-MW		23-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-001-MW		15-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-001-MW		25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-001-MW		03-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU16-004-MW		14-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-004-MW		20-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-004-MW		11-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-004-MW		24-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-004-MW		03-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU16-006-MW		12-Jul-06	mg/L	0.001	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-006-MW		23-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-006-MW		11-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-006-MW		24-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-006-MW		03-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU16-006-MW	FD#4	03-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU16-011-MWA		14-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-011-MWA		23-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-011-MWA		12-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-011-MWA		24-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-011-MWA		04-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU16-011-MWB		14-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-011-MWB		23-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-011-MWB		12-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-011-MWB		24-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-011-MWB		04-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU16-011-MWC		14-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-011-MWC		23-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-011-MWC		12-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-011-MWC	(FD 2)	12-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-011-MWC		24-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-011-MWC		04-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU16-013-MW		13-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-013-MW		23-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-013-MW		12-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-013-MW		24-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-013-MW		04-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU16-014-MW		13-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU16-014-MW		23-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	0.7	0.7 ****
SCU16-014-MW		15-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-014-MW		24-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU16-014-MW		06-Dec-13	mg/L	<0.0013	<0.0013	<0.0013	<0.0026	<0.013	<0.050	<0.050	---	<0.10	<0.10
SCU17-004-MW		15-Sep-05	mg/L	0.004	0.005	<0.0010	0.008	0.01	---	---	0.5	<0.50	0.5
SCU17-004-MW		30-Nov-09	mg/L	<0.0010	0.002	<0.0010	<0.0020	0.01	---	---	0.3	<0.50	<0.50
SCU17-004-MW		15-Nov-10	mg/L	0.001	0.002	<0.0010	0.002	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU17-004-MW		26-Oct-11	mg/L	0.001	0.003	<0.0010	0.004	<0.010	0.38	0.13	---	<0.50	0.5
SCU17-004-MW		02-Dec-13	mg/L	0.0011	0.0024	<0.0010	0.0059	0.011	0.41	0.12	---	<0.10	0.54
SCU17-010-MWA		10-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU17-010-MWA		20-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
NSE Tier 1 EQS[1]				20	20	20	20	-	-	-	-	-	20

Notes:

mg/L - milograms per litre

ND - Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Ground Water Commercial/Industrial Site), 2013

'-' - no guideline available

---' - not analysed

* Elevated THE RDL(s) due to sample dilution.

** Elevated THE RDL(s) due to insufficient sample.

*** VPH analysis performed on previously opened vial

**** Lube Oil Fraction

Exceeds NSE Tier 1 EQS

Table 2 (continued)
Groundwater TPH/BTEX Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Duplicate	Date	Units	Benzene	Toluene	Ethylbenzene	Xylene (Total)	C6 - C10 (less BTEX)	>C10-C16 Hydrocarbons	>C16-C21 Hydrocarbons	>C10-C21 Hydrocarbons	>C21-<C32 Hydrocarbons	Modified TPH (Tier1)
SCU17-010-MWA	(DUP B)	20-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU17-010-MWA		15-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU17-010-MWA		26-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU17-010-MWA		01-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU17-010-MWA	FD #2	01-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU17-010-MWB		10-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	0.02	---	---	<0.20	<0.50	<0.50
SCU17-010-MWB		23-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU17-010-MWB		15-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU17-010-MWB		26-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU17-010-MWB		01-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU17-010-MWC		23-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU17-010-MWC		15-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU17-010-MWC	(FD 3)	15-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU17-010-MWC		26-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	0.1	0.1
SCU17-010-MWC		01-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU18-001-MWA		7-Aug-03	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU18-001-MWA		9-Sep-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	<0.20	<0.20	<0.5	<0.5
SCU18-001-MW		12-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-001-MW		27-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-001-MW	(FD-06)	27-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-001-MW		29-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU18-002-MWA		7-Aug-03	mg/L	0.001	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU18-002-MW		9-Sep-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	<0.20	<0.20	<0.5	<0.5
SCU18-002-MW		12-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-002-MW		27-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-002-MW		29-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU18-002-MWA	FD #1	29-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU18-007-MW		12-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU18-007-MW		24-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU18-007-MW		7-Sep-10	mg/L	0.002	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	0.007
SCU18-007-MW		19-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-007-MW		24-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-007-MW		26-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-007-MW		02-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU18-009-MW		12-Jul-06	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	---	---	---	<0.20	<0.50	<0.50
SCU18-009-MW		4-Dec-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU18-009-MW	(DUP E)	4-Dec-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU18-009-MW		19-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-009-MW	(FD 7)	19-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-009-MW		27-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-009-MW		01-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU18-010-MW		7-Sep-10	mg/L	0.002	0.002	<0.0010	0.007	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-010-MW		17-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-010-MW		28-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.10	0.07	---	0.1	0.3
SCU18-010-MW		22-Nov-12	mg/L	0.0014	0.0013	<0.0010	0.0036	<0.010	0.094	0.07	---	<0.50	0.16
SCU18-010-MW		29-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU18-011-MW		7-Sep-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-011-MW		17-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-011-MW	(FD 5)	17-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-011-MW		28-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-011-MW		22-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU18-011-MW		29-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU19-002-MWA		20-Sep-05	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU19-002-MWA		18-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-002-MWA		26-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-002-MWA		21-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-002-MWA		27-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU19-002-MWB		22-Sep-05	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU19-002-MWB		18-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-002-MWB		26-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-002-MWB		21-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-002-MWB	(FD-03)	21-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-002-MWB		27-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	0.11	0.11
SCU19-010-MW		20-Sep-05	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU19-010-MW		27-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.064	0.17	---	0.23	0.46
SCU19-010-MW		01-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	0.084	---	0.14	0.23
SCU19-015-MW		15-Sep-05	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU19-015-MW		18-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-015-MW		27-Jul-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-015-MW		26-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-015-MW		23-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-015-MW		29-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU19-029-MW		28-Jul-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-029-MW		28-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-029-MW		27-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-029-MW		07-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU19-030-MW		28-Jul-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.28	0.4		0.2	0.8
SCU19-030-MW		28-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.24	0.33	---	0.1	0.7
SCU19-030-MW		27-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.17	0.21	---	0.15	0.53
SCU19-030-MW		07-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.15	0.19	---	0.15	0.49
SCU19-031-MW		27-Jul-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-031-MW	(DUP)	27-Jul-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-031-MW		26-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU19-031-MW		27-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	0.055	---	<0.50	<0.50
SCU19-031-MW		27-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU20-013-MW		3-Sep-10	mg/L	0.014	0.026	0.011	0.077	0.12	1.3	0.6		<0.50	2.0
SCU20-013-MW		17-Nov-10	mg/L	0.016	0.028	0.012	0.081	0.13	2.9	1.6	---	1.5	6.2
SCU20-013-MW		27-Oct-11	mg/L	0.011	0.018	0.008	0.056	0.06	2.3	1.5	---	1.0	4.8
SCU20-013-MW		21-Nov-12	mg/L	0.01	0.016	0.0071	0.053	0.093	2.3	1.3	---	1.3	4.9
NSE Tier 1 EQS[1]				20	20	20	20	-	-	-	-	-	20

Notes:

mg/L - milograms per litre

ND - Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

Atlantic PIRI - Tier I Risk-Based Screening Level (RBSL)

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Ground Water Commercial/Industrial Site), 2013

'-' - no guideline available

---' - not analysed

* Elevated THE RDL(s) due to sample dilution.

** Elevated THE RDL(s) due to insufficient sample.

*** VPH analysis performed on previously opened vial

**** Lube Oil Fraction

Exceeds NSE Stier 1 EQS

Table 2 (continued)
Groundwater TPH/BTEX Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Duplicate	Date	Units	Benzene	Toluene	Ethylbenzene	Xylene (Total)	C6 - C10 (less BTEX)	>C10-C16 Hydrocarbons	>C16-C21 Hydrocarbons	>C10-C21 Hydrocarbons	>C21-<C32 Hydrocarbons	Modified TPH (Tier1)
SCU20-013-MW		26-Nov-13	mg/L	0.011	0.016	0.0069	0.053	0.10	2.2	1.0	---	0.80	4.2
SCU20-014-MW		3-Sep-10	mg/L	0.002	0.003	<0.0010	0.006	<0.010	0.3	<0.20		<0.50	<0.50
SCU20-014-MW		17-Nov-10	mg/L	0.003	0.002	<0.0010	0.005	<0.010	0.3	<0.20	---	<0.50	<0.50
SCU20-014-MW		27-Oct-11	mg/L	0.003	0.002	<0.0010	0.005	<0.010	0.54**	0.54**	---	0.4	1.5
SCU20-014-MW		22-Nov-12	mg/L	0.0023	0.0021	<0.0010	0.0049	0.013	0.35	0.34	---	0.26	0.96
SCU20-014-MW		26-Nov-13	mg/L	0.0027	0.0021	<0.0010	0.0048	0.019	0.35	0.27	---	0.24	0.87
SCU20-015-MW		3-Sep-10	mg/L	0.003	0.001	<0.0010	0.003	<0.010	0.3	<0.20		<0.50	<0.50
SCU20-015-MW		17-Nov-10	mg/L	0.003	0.001	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU20-015-MW		27-Oct-11	mg/L	0.002	<0.0010	<0.0010	<0.0020	<0.010	0.20	0.20	---	0.3	0.7
SCU20-015-MW		22-Nov-12	mg/L	0.0024	0.001	<0.0010	<0.0020	<0.010	0.099	0.13	---	0.16	0.39
SCU20-015-MW		26-Nov-13	mg/L	0.0021	<0.0010	<0.0010	<0.0020	<0.010	0.14	0.12	---	0.21	0.48
SCU20-016-MW		7-Sep-10	mg/L	0.002	0.001	<0.0010	<0.0020	<0.010	0.7	0.2	---	<0.50	0.9
SCU20-016-MW		17-Nov-10	mg/L	0.001	<0.0010	<0.0010	<0.0020	<0.010	0.3	0.3	---	<0.50	0.5
SCU20-016-MW		27-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.35	0.33		0.3	1.0
SCU20-016-MW		22-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.21	0.2	---	0.19	0.59
SCU20-016-MW		26-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.32	0.29	---	0.27	0.87
SCU20-017-MW		7-Sep-10	mg/L	0.005	0.006	<0.0010	0.009	<0.010	0.4	<0.20	---	<0.50	<0.50
SCU20-017-MW		17-Nov-10	mg/L	0.002	0.002	<0.0010	0.005	<0.010	0.4	<0.20	---	<0.50	<0.50
SCU20-017-MW		27-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.21	0.09	---	0.1	0.4
SCU20-017-MW		21-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.093	<0.20	---	<0.50	<0.50
SCU20-017-MW		26-Nov-13	mg/L	0.0017	0.0015	<0.0010	<0.0020	0.011	0.26	0.15	---	0.19	0.61
SCU20-018-MW		7-Sep-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU20-018-MW		17-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU20-018-MW		27-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU20-018-MW		21-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU20-018-MW		26-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU25-001-MW		26-Jul-07	mg/L	<0.0010	0.003	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU25-001-MW		18-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU25-001-MW		17-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU25-001-MW		27-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.06	0.07	---	<0.50	0.1
SCU25-001-MW		06-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU25-007-MW		24-Jul-07	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU25-007-MW		25-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU25-007-MW		16-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU25-007-MW		25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU25-007-MW		06-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	0.055	---	<0.10	<0.10
SCU26-001-MW		26-Jul-03	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU26-001-MW		22-Jan-04	mg/L	0.005	0.003	<0.0010	0.008	5.3	---	---	12	4.5	**26**
SCU26-001-MW		11-Jul-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU26-001-MW		26-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	0.015	0.096	0.1	---	0.13	0.34
SCU26-001-MW		05-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.089	<0.050	---	0.12	0.21
SCU26-002-MW		26-Jul-03	mg/L	0.01	0.0061	<0.0010	0.0059	0.05	---	---	<0.20	<0.50	<0.50
SCU26-002-MW		11-Jul-12	mg/L	0.034	0.026	0.0015	0.022	0.050	0.29	0.070	---	<0.50	0.41
SCU26-002-MW		26-Nov-12	mg/L	0.018	0.015	<0.0010	0.013	0.052	0.37	0.18	---	0.13	0.72
SCU26-002-MW	**(FD-05)**	26-Nov-12	mg/L	0.017	0.014	<0.0010	0.012	0.049	0.35	0.16	---	0.18	0.74
SCU26-002-MW		05-Dec-13	mg/L	0.023	0.018	0.0011	0.016	0.066	0.31	0.13	---	0.12	0.63
SCU27-002-MW		4-Jul-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU27-002-MW	**(FD1)**	4-Jul-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	0.053	---	0.14	0.19
SCU27-002-MW		26-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU27-002-MW		05-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	0.063	---	0.14	0.20
SCU31-002-MWB		22-Sep-05	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU31-002-MWB		16-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU31-002-MWB		25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU31-002-MWB		21-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	0.061	---	<0.50	<0.50
SCU31-002-MWB		07-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU31-002-MWB	**FD#6**	07-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU31-013-MWB		18-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU31-013-MWB	**(DUP C)**	24-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU31-013-MWB		18-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU31-013-MWB		25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.06	<0.06	---	<0.50	<0.50
SCU31-013-MWB		04-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	0.14	0.14
SCU31-013-MWC		24-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU31-013-MWC		18-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU31-013-MWC		25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.06	<0.06	---	<0.50	<0.50
SCU31-013-MWC	**(FD-01)**	25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU31-013-MWC		04-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU32-001-MWA		24-Nov-11	mg/L	<0.0010	0.004	<0.0010	<0.0020	<0.0010	0.32	0.15	---	<0.10	0.5
SCU32-001-MWA		05-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.99	0.82	---	0.56	2.4
SCU32-001-MWB		24-Nov-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU32-001-MWB		05-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU32-002-MWA		25-Nov-11	mg/L	0.001	0.004	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU32-002-MW		05-Dec-13	mg/L	0.0011	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
SCU32-003-MW		25-Nov-11	mg/L	<0.0010	0.008	<0.0010	<0.0020	<0.010	0.22	0.1	---	<0.10	0.3
SCU32-003-MW		05-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	2.1	2.5	---	1.9	6.6
SCU32-004-MW		25-Nov-11	mg/L	<0.0010	0.003	<0.0010	<0.0020	<0.010	0.11	0.07	---	<0.10	0.2
SCU32-004-MW		05-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.16	0.15	---	0.35	0.66
SCU32-004-MW	**FD#5**	05-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.14	0.11	---	0.24	0.50
SCU33-001-MW		27-Jul-07	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU33-001-MW		25-Nov-09	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
SCU33-001-MW		16-Nov-10	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
SCU33-001-MW		25-Oct-11	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.07	0.07	---	<0.50	0.1
SCU33-001-MW		07-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	0.052	0.053	---	<0.10	0.11
MCES-007-MW-001		26-Jul-03	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	---	---	<0.20	<0.50	<0.50
MCES-007-MWB		11-Jul-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
MCES-007-MW		27-Nov-12	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.20	<0.20	---	<0.50	<0.50
MCES-007-MW		05-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
TRIP BLANK #1		29-Nov-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
TRIP BLANK #2		04-Dec-13	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.010	<0.050	<0.050	---	<0.10	<0.10
NSE Tier 1 EQS[1]				20	20	20	20	-	-	-	-	-	20

Notes:

mg/L - milograms per litre

ND - Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

Atlantic PIRI - Tier I Risk-Based Screening Level (RBSL)

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Ground Water Commercial/Industrial Site), 2013

'-' - no guideline available

---' - not analysed

* Elevated THE RDL(s) due to sample dilution.

** Elevated THE RDL(s) due to insufficient sample.

*** VPH analysis performed on previously opened vial

**** Lube Oil Fraction

Exceeds NSE Stier 1 EQS

Table 3
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU8-002-MW*	SCU8-002-MW	SCU8-002-MW	SCU8-002-MW	SCU8-002-MW	SCU08-002-MW	SCU10-004-MW*	SCU10-004-MW	SCU10-004-MW	SCU10-004-MW	SCU10-004-MW	SCU11-003-MW*	SCU11-003-MW	SCU11-003-MW	SCU11-003-MW	SCU11-003-MW	SCU15-004-MWA*	SCU15-004-MWA	SCU15-004-MWA	SCU15-004-MWA	SCU15-004-MWA
Sampling Date				12-Sep-03	16-Nov-09	9-Nov-10	25-Oct-11	25-Oct-11	2-Dec-13	17-Sep-04	19-Nov-08	10-Nov-10	23-Nov-12	2-Dec-13	12-Sep-03	19-Nov-09	10-Nov-10	25-Oct-11	2-Dec-13	11-Sep-03	17-Nov-09	9-Nov-10	25-Oct-11	3-Dec-13
Field Duplicate Label								FD-02																
Dissolved Aluminum (Al)	ug/L	-	-	<5.0	6.1	8.4	5.2	18	7.9	101	<5.0	13	<5.0	39	<5.0	6.0	11	8.1	12	850	<5.0	10	9.6	86
Dissolved Antimony (Sb)	ug/L	-	20000	<0.40	0.89	2.0	1.6	1.2	1.9	<0.40	1.2	<0.40	<0.40	<1.0	<0.40	<0.40	<0.40	0.77	<1.0	3.7	<0.40	3.7	0.59	<1.0
Dissolved Arsenic (As)	ug/L	-	1900	0.7	2.0	1.9	1.3	1.3	1.9	15.7	4.3	8.1	0.96	11	2.2	1.7	1.6	1.8	1.5	4.4	2.1	1.8	2.2	5.0
Dissolved Barium (Ba)	ug/L	-	29000	65	63	85	75	74	59	87.2	56	49	78	57	172	77	75	74	64	60.2	100	92	84	90
Dissolved Beryllium (Be)	ug/L	-	67	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0
Dissolved Bismuth (Bi)	ug/L	-	-	---	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	<100	120	140	<100	<100	120	<100	<100	<100	110	69	130	160	160	100	130	<100	<100	<100	<100	72
Dissolved Cadmium (Cd)	ug/L	-	2.7	0.056	0.076	0.075	0.018	0.02	0.045	<0.017	<0.017	<0.017	<0.017	<0.010	0.058	<0.017	<0.017	<0.017	0.020	0.3	<0.017	<0.017	<0.017	<0.010
Dissolved Calcium (Ca)	ug/L	-	-	96800	130000	160000	120000	120000	140000	244000	130000	100000	99000	100000	87800	61000	71000	69000	72000	42800	84000	82000	99000	90000
Dissolved Chromium (Cr)	ug/L	-	810	<1.0	3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.0	<1.0	<1.0	<1.0	<1.0	5.8	1.9	<1.0	<1.0
Dissolved Cobalt (Co)	ug/L	-	66	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<0.40	2	<1.0	<1.0	<1.0	<0.40	1	<1.0	<1.0	<1.0	<0.40
Dissolved Copper (Cu)	ug/L	-	87	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5	<2.0	<2.0	<2.0	<2.0	11	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	<100	<100	<100	<100	<100	<50	<100	<100	<100	<100	110	<100	<100	<100	<100	<50	930	<100	<100	100	<50
Dissolved Lead (Pb)	ug/L	-	25	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	---	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	6	<1.0	<1.0	<1.0	<0.50
Dissolved Lithium (Li)	ug/L	-	-	4	10	15	7.8	7.2	---	34	28	29	17	---	8	13	19	17	---	15	18	19	13	---
Dissolved Magnesium (Mg)	ug/L	-	-	16300	22000	30000	21000	21000	23000	1330	6000	5000	10000	3600	16400	17000	21000	21000	20000	3290	7800	5900	10000	4900
Dissolved Manganese (Mn)	ug/L	-	-	309	25	30	16	17	5.0	10	14	83	21	73	3870	<4.0	49	13	90	116	<4.0	<4.0	9.2	41
Dissolved Molybdenum (Mo)	ug/L	-	9200	<4.0	<4.0	<4.0	<4.0	<4.0	4.1	<4.0	6.9	6.6	<4.0	5.4	7	<4.0	<4.0	<4.0	3.4	8	19	21	20	14
Dissolved Nickel (Ni)	ug/L	-	490	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3	<2.0	7	<3.0	<3.0	<3.0	<2.0	6	<3.0	<3.0	<3.0	<2.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	130	150	<100	<100	170	<100	<100	<100	<100	<100	150	<100	<100	<100	<100	160	<100	<100	<100	260
Dissolved Potassium (K)	ug/L	-	-	3200	2400	2800	2800	2600	2300	10000	13000	9000	<600	10000	10300	11000	12000	13000	12000	4600	5900	6400	6700	11000
Dissolved Selenium (Se)	ug/L	-	63	<1.0	1.6	3.6	8.5	4.2	3.4	3	3.1	1.9	<1.0	1.2	2	<1.0	<1.0	4.5	1.1	1	1.0	1.0	5.6	2.9
Silicon (Si)	ug/L	-	-	---	10000	---	---	---	---	---	---	---	---	---	---	8000	---	---	---	---	---	7000	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	11800	8700	12000	22000	23000	12000	151000	140000	92000	13000	100000	72900	18000	12000	18000	24000	70900	17000	19000	30000	23000
Dissolved Strontium (Sr)	ug/L	-	-	258	410	560	360	370	420	1160	550	470	6200	540	238	230	260	240	250	244	540	550	610	480
Dissolved Thallium (Tl)	ug/L	-	510	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10
Dissolved Tin (Sn)	ug/L	-	-	<20	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0
Dissolved Titanium (Ti)	ug/L	-	-	---	<3.0	<3.0	<3.0	<3.0	<2.0	---	<3.0	<3.0	<3.0	2.9	---	<3.0	<3.0	<3.0	<2.0	---	<3.0	<3.0	<3.0	<2.0
Dissolved Uranium (U)	ug/L	-	420	1.66	3.5	5.4	2.8	2.8	3.7	<0.15	2.4	1.6	2	1.2	1.64	1.1	1.9	1.5	1.5	0.66	0.68	0.62	1.3	0.24
Dissolved Vanadium (V)	ug/L	-	250	<2.0	4.3	4.0	<2.0	2.8	3.6	10	8.0	7.5	<2.0	7.3	7	10	9.9	9.9	8.3	40	31	43	36	22
Dissolved Zinc (Zn)	ug/L	-	1100		---	6.9	5.5	5.3	7.5	2	<5.0	<5.0	<5.0	6.2	---	---	8.4	<5.0	<5.0	---	<5.0	<5.0	<5.0	5.7
Zinc total (Zn)	ug/L	-	1100	9	5.7	41	---	---	---	---	---	---	---	---	1.3	<5.0	<5.0	---	---	12	---	<5.0	---	---
Mercury total (Hg)	ug/L	-	0.29	<0.013	0.016	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.023	<0.013	0.2	0.019	<0.013	<0.013	<0.013	**0.8**	0.026	<0.013	<0.013	0.040
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulphur (S)	ug/L	-	-	42700	---	---	---	---	---	246000	100000	---	---	---	66800	---	---	---	---	22200	---	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU15-004-MWA	SCU15-004-MWB*	SCU15-004-MWB	SCU15-004-MWB	SCU15-004-MWB	SCU15-004-MWB	SCU15-004-MWB	SCU15-018-MW	SCU15-018-MW	SCU15-018-MW	SCU15-018-MW	SCU15-018-MW	SCU15-018-MW	SCU16-001-MW	SCU16-001-MW	SCU16-001-MW	SCU16-001-MW	SCU16-004-MW	SCU16-004-MW	SCU16-004-MW	SCU16-004-MW
Sampling Date				3-Dec-13	11-Sep-03	17-Nov-09	9-Nov-10	25-Oct-11	25-Oct-11	3-Dec-13	8-Jan-07	20-Nov-08	4-Dec-09	9-Nov-10	26-Oct-11	3-Dec-13	23-Nov-09	15-Nov-10	25-Oct-11	3-Dec-13	14-Jul-06	20-Nov-09	11-Nov-10	24-Oct-11
Field Duplicate Label				FD #3					FD-03															
Dissolved Aluminum (Al)	ug/L	-	-	150	750	<5.0	8.6	5.3	<5.0	11	56	28	15	32	9.1	5.5	31	25	50	17	8.9	12	6.3	15
Dissolved Antimony (Sb)	ug/L	-	20000	<1.0	1.3	<0.40	<0.40	<0.40	0.63	<1.0	0.44	<0.40	<0.40	<0.40	0.66	<1.0	<0.40	<0.40	0.66	<1.0	<0.40	<0.40	1.5	1.9
Dissolved Arsenic (As)	ug/L	-	1900	5.1	10.3	12	13	13	13	13	8.8	5.8	6.8	5.4	3.1	2.0	3.1	2.5	3.3	3.5	0.72	4.7	3.2	3.5
Dissolved Barium (Ba)	ug/L	-	29000	89	48.2	53	47	45	46	47	950	920	990	1000	590	680	22	22	22	7.6	39	40	41	47
Dissolved Beryllium (Be)	ug/L	-	67	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	71	<100	<100	<100	<100	<100	<50	<100	<100	<100	<100	<100	79	<100	<100	<100	65	<100	110	100	120
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.010	0.082	<0.017	<0.017	0.018	<0.017	<0.010	0.13	<0.017	<0.017	<0.017	<0.017	<0.010	<0.017	<0.017	<0.017	<0.010	0.021	0.018	<0.017	<0.017
Dissolved Calcium (Ca)	ug/L	-	-	92000	98700	90000	93000	97000	100000	110000	110000	130000	120000	130000	130000	150000	91000	92000	91000	59000	74000	110000	120000	140000
Dissolved Chromium (Cr)	ug/L	-	810	<1.0	<1.0	3.5	<1.0	<1.0	1.6	<1.0	1.6	<1.0	<1.0	<1.0	3.1	<1.0	8.4	<1.0	<1.0	3.3	<1.0	<1.0	2.5	<1.0
Dissolved Cobalt (Co)	ug/L	-	66	<0.40	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40	1.4	<1.0	1.4	2.3	2.3	0.68	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0
Dissolved Copper (Cu)	ug/L	-	87	<2.0	3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.9	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	58	630	420	480	570	620	1000	2700	4100	4300	4100	3300	<50	<100	<100	<100	<50	<100	<100	<100	<100
Dissolved Lead (Pb)	ug/L	-	25	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0
Dissolved Lithium (Li)	ug/L	-	-	---	8	9.1	11	9.8	9.2	---	6.9	2.8	5.0	7.3	7.7	---	1.7	1.9	2.6	---	19	24	25	27
Dissolved Magnesium (Mg)	ug/L	-	-	5000	8560	12000	12000	13000	13000	13000	21000	37000	34000	37000	31000	25000	5600	4700	2800	500	22000	7800	7300	6200
Dissolved Manganese (Mn)	ug/L	-	-	43	106	250	220	260	260	230	2900	5900	6300	6200	4900	2800	<4.0	<4.0	<4.0	<2.0	48	<4.0	<4.0	<4.0
Dissolved Molybdenum (Mo)	ug/L	-	9200	15	6	<4.0	<4.0	<4.0	<4.0	<2.0	21	<4.0	<4.0	<4.0	<4.0	3.9	23	16	17	3.8	5.8	8.8	7.7	6.5
Dissolved Nickel (Ni)	ug/L	-	490	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	35	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0
Dissolved Phosphorus (P)	ug/L	-	-	270	120	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dissolved Potassium (K)	ug/L	-	-	11000	2500	2100	2700	2400	2300	2300	6000	5400	5200	5600	5400	7300	7500	8500	7300	2300	6000	3600	4100	3900
Dissolved Selenium (Se)	ug/L	-	63	2.6	3.0	<1.0	<1.0	2.6	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	1.1	1.1	1.5	<1.0	5.0	3.7	1.9
Silicon (Si)	ug/L	-	-	---	---	8200	---	---	---	---	---	---	6100	---	---	---	6000	---	---	---	---	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	23000	59000	31000	32000	31000	32000	29000	43000	42000	32000	32000	26000	23000	41000	40000	39000	11000	37000	9100	11000	9300
Dissolved Strontium (Sr)	ug/L	-	-	470	1440	1600	1800	1500	1500	1600	1600	1600	1800	1900	1700	1600	320	280	260	180	3400	860	1100	1000
Dissolved Thallium (Tl)	ug/L	-	510	<0.10	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80
Dissolved Tin (Sn)	ug/L	-	-	<2.0	<20	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<20	<2.0	<20	<20	<20	<2.0	<20	<20	<20	<20
Dissolved Titanium (Ti)	ug/L	-	-	<2.0	---	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0
Dissolved Uranium (U)	ug/L	-	420	0.27	0.98	0.42	0.34	0.66	0.66	1.3	2.7	0.92	2.0	1.4	2	2.1	1.9	1.2	1	<0.10	2.6	4.6	2.8	3
Dissolved Vanadium (V)	ug/L	-	250	22	16	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	17	14	31	91	<2.0	15	14	18
Dissolved Zinc (Zn)	ug/L	-	1100	8.8	---	---	<5.0	<5.0	<5.0	<5.0	34	<5.0	---	8.2	<5.0	<5.0	---	<5.0	<5.0	<5.0	<5.0	---	<5.0	<5.0
Zinc total (Zn)	ug/L	-	1100	---	4	<5.0	<5.0	---	---	---	---	---	<5.0	5.7	<5.0	---	<5.0	<5.0	---	---	<5.0	<5.0	---	---
Mercury total (Hg)	ug/L	-	0.29	0.040	0.2	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.01	0.022	0.017	<0.013	0.19	0.016	<0.013	<0.013	<0.013	<0.013	0.016	<0.013	<0.013
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulphur (S)	ug/L	-	-	---	37800	---	---	---	---	---	39000	---	---	---	---	---	---	---	---	---	60000	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU16-004-MW	SCU16-006-MW	SCU16-006-MW	SCU16-006-MW	SCU16-006-MW	SCU16-006-MW	SCU16-011-MWA	SCU16-011-MWA	SCU16-011-MWA	SCU16-011-MWA	SCU16-011-MWA	SCU16-011-MWB	SCU16-011-MWB	SCU16-011-MWB	SCU16-011-MWB	SCU16-011-MWB	SCU16-011-MWC	SCU16-011-MWC	SCU16-011-MWC	SCU16-011-MWC	SCU16-011-MWC
Sampling Date				3-Dec-13	23-Nov-09	11-Nov-10	24-Oct-11	3-Dec-13	3-Dec-13	14-Jul-06	23-Nov-09	12-Nov-10	24-Oct-11	4-Dec-13	14-Jul-06	23-Nov-09	12-Nov-10	24-Oct-11	4-Dec-13	14-Jul-06	23-Nov-09	12-Nov-10	12-Nov-10	24-Oct-11
Field Duplicate Label									FD #4														FD 2	
Dissolved Aluminum (Al)	ug/L	-	-	13	39	5.1	12	13	8.0	370	250	160	190	120	200	120	120	92	59	45	58	24	24	30
Dissolved Antimony (Sb)	ug/L	-	20000	1.4	<0.40	<0.40	<0.40	<1.0	<1.0	0.78	0.90	0.58	2.3	1.6	<0.40	<0.40	<0.40	0.43	<1.0	<0.40	<0.40	<0.40	<0.40	<0.40
Dissolved Arsenic (As)	ug/L	-	1900	1.7	9.0	8.5	6	4.9	4.9	3.8	2.8	3.1	3.2	2.7	17	12	14	9.9	3.5	9.6	13	14	14	12
Dissolved Barium (Ba)	ug/L	-	29000	28	15	12	16	14	14	19	21	24	27	21	94	83	77	71	65	30	52	45	43	42
Dissolved Beryllium (Be)	ug/L	-	67	<1.0	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	77	<100	<100	<100	<50	<50	<100	<100	<100	<100	75	<100	<100	<100	<100	<50	<100	<100	<100	<100	<100
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.010	<0.017	<0.017	<0.017	<0.010	<0.010	<0.017	<0.017	<0.017	<0.017	<0.010	<0.017	<0.017	<0.017	<0.017	<0.010	<0.017	<0.017	<0.017	<0.017	<0.017
Dissolved Calcium (Ca)	ug/L	-	-	100000	270000	230000	300000	280000	290000	100000	78000	73000	75000	70000	75000	80000	80000	78000	70000	42000	67000	60000	60000	60000
Dissolved Chromium (Cr)	ug/L	-	810	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	3.4	11	25	23	18	<1.0	<1.0	<1.0	7.1	<1.0	<1.0	<1.0	<1.0	<1.0	11
Dissolved Cobalt (Co)	ug/L	-	66	<0.40	<1.0	<1.0	<1.0	<0.40	<0.40	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Copper (Cu)	ug/L	-	87	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.6	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	<50	2500	1300	4800	6700	6700	<100	<100	<100	<100	<50	<100	<100	<100	<100	<50	<100	<100	<100	<100	<100
Dissolved Lead (Pb)	ug/L	-	25	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Lithium (Li)	ug/L	-	-	---	13	12	16	---	---	11	11	13	11	---	35	29	27	28	---	18	22	19	19	21
Dissolved Magnesium (Mg)	ug/L	-	-	5000	33000	27000	28000	28000	28000	90	210	650	420	2100	<60	<60	<60	<60	<100	<60	550	1200	1200	540
Dissolved Manganese (Mn)	ug/L	-	-	<2.0	1900	1400	4000	4000	4000	<4.0	<4.0	<4.0	<4.0	<2.0	80	<4.0	<4.0	<4.0	<2.0	2500	<4.0	<4.0	<4.0	<4.0
Dissolved Molybdenum (Mo)	ug/L	-	9200	3.6	<4.0	<4.0	<4.0	2.8	2.8	<4.0	43	51	43	32	65	25	34	22	13	69	41	44	45	35
Dissolved Nickel (Ni)	ug/L	-	490	<2.0	<3.0	<3.0	4.6	<2.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dissolved Potassium (K)	ug/L	-	-	2400	4700	4300	6000	5700	5700	15000	20000	19000	19000	16000	9000	7600	7900	7500	7600	6000	5500	4900	4800	5100
Dissolved Selenium (Se)	ug/L	-	63	1.5	<1.0	<1.0	1.6	<1.0	<1.0	6.6	3.0	7.2	4.3	3.5	2.6	12	9.4	14	8.4	1.3	9.6	5.0	5.6	11
Silicon (Si)	ug/L	-	-	---	8500	---	---	---	---	<100	7100	---	---	---	<100	10000	---	---	---	<100	8500	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	6900	280000	190000	440000	360000	350000	48000	21000	17000	13000	10000	64000	56000	56000	52000	55000	61000	58000	56000	55000	54000
Dissolved Strontium (Sr)	ug/L	-	-	580	2400	1900	1300	1300	1300	380	430	400	370	380	820	920	900	770	830	490	840	840	830	650
Dissolved Thallium (Tl)	ug/L	-	510	<0.10	<0.80	<0.80	<0.80	<0.10	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.80
Dissolved Tin (Sn)	ug/L	-	-	<2.0	<20	<20	<20	<2.0	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<20
Dissolved Titanium (Ti)	ug/L	-	-	<2.0	<3.0	<3.0	3.4	<2.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0
Dissolved Uranium (U)	ug/L	-	420	2.7	3.4	2.8	2.6	2.6	2.5	39	<0.15	<0.15	<0.15	0.44	<0.15	<0.15	<0.15	<0.15	<0.10	5.5	<0.15	<0.15	<0.15	<0.15
Dissolved Vanadium (V)	ug/L	-	250	17	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	36	50	55	40	5.8	2.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Zinc (Zn)	ug/L	-	1100	<5.0	---	<5.0	5.2	<5.0	<5.0	12	---	<5.0	<5.0	<5.0	5.6	---	<5.0	<5.0	<5.0	5	---	<5.0	<5.0	<5.0
Zinc total (Zn)	ug/L	-	1100	---	<5.0	<5.0	---	---	---	<5.0	<5.0	<5.0	---	---	<5.0	<5.0	<5.0	---	---	<5.0	<5.0	<5.0	<5.0	---
Mercury total (Hg)	ug/L	-	0.29	<0.013	0.015	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.027	<0.013	<0.013	<0.013	<0.013	0.032	<0.013	<0.013	<0.013
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulphur (S)	ug/L	-	-	---	---	---	---	---	---	73000	---	---	---	---	65000	---	---	---	---	51000	---	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU16-011-MWC	SCU16-013-MW	SCU16-013-MW	SCU16-013-MW	SCU16-013-MW	SCU16-013-MW	SCU16-014-MW	SCU16-014-MW	SCU16-014-MW	SCU16-014-MW	SCU16-014-MW	SCU17-004-MW	SCU-17-004-MW	SCU17-004-MW	SCU17-004-MW	SCU17-004-MW	SCU17-004-MW	SCU17-010-MWA	SCU17-010-MWA	SCU 17-010-MWA	SCU17-010-MWA
Sampling Date				4-Dec-13	13-Jul-06	23-Nov-09	12-Nov-10	24-Oct-11	4-Dec-13	13-Jul-06	23-Nov-09	15-Nov-10	24-Oct-11	6-Dec-13	15-Sep-05	30-Nov-09	15-Nov-10	24-Oct-11	26-Oct-11	2-Dec-13	10-Jul-06	20-Nov-09	20-Nov-09	15-Nov-10
Field Duplicate Label																							DUP B	
Dissolved Aluminum (Al)	ug/L	-	-	13	220	44	62	70	65	30	37	24	29	22	100	24	24	1000	59	24	37	69	70	61
Dissolved Antimony (Sb)	ug/L	-	20000	<1.0	<0.40	<0.40	<0.40	2.8	<1.0	<0.40	<0.40	<0.40	<0.40	<1.0	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	<0.40	<0.40	0.78	<0.40
Dissolved Arsenic (As)	ug/L	-	1900	11	3.4	2.2	2.1	1.9	1.7	12	8.0	25	11	9.2	4.7	3.1	3.4	9.9	3.2	4.1	2.5	1.4	1.2	1.4
Dissolved Barium (Ba)	ug/L	-	29000	35	54	91	81	75	91	45	68	25	30	47	44	57	59	47	63	59	51	55	55	46
Dissolved Beryllium (Be)	ug/L	-	67	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	<50	<100	<100	<100	<100	<50	<100	<100	<100	<100	<50	<100	<100	<100	130	<100	<50	110	200	200	130
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.010	<0.017	<0.017	<0.017	<0.017	<0.010	<0.017	0.021	<0.017	<0.017	<0.010	<0.017	<0.017	<0.017	<0.017	<0.017	<0.010	<0.017	<0.017	<0.017	<0.017
Dissolved Calcium (Ca)	ug/L	-	-	48000	180000	190000	210000	200000	220000	<100	61000	77000	68000	66000	120000	87000	110000	42000	130000	150000	130000	110000	120000	100000
Dissolved Chromium (Cr)	ug/L	-	810	<1.0	30	26	34	22	17	2.8	4.3	2.3	<1.0	<1.0	<1.0	2.3	<1.0	<1.0	3.4	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Cobalt (Co)	ug/L	-	66	<0.40	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0
Dissolved Copper (Cu)	ug/L	-	87	<2.0	6.4	4.4	3.3	2.7	3.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	22	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	<50	<100	210	<100	<100	<50	<100	670	<100	<100	720	<100	<100	<100	<100	<100	<50	<100	<100	<100	<100
Dissolved Lead (Pb)	ug/L	-	25	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0
Dissolved Lithium (Li)	ug/L	-	-	---	2.4	36	42	40	---	<1.0	8.6	25	14	---	21	16	17	12	28	---	8.2	13	14	11
Dissolved Magnesium (Mg)	ug/L	-	-	1000	200	<60	<60	<60	<100	8800	10000	5300	6500	10000	200	<60	<60	<60	<60	<100	4300	3300	3700	3300
Dissolved Manganese (Mn)	ug/L	-	-	<2.0	<4.0	<4.0	<4.0	<4.0	<2.0	570	1500	360	870	1800	<4.0	<4.0	<4.0	<4.0	<4.0	<2.0	<4.0	<4.0	<4.0	<4.0
Dissolved Molybdenum (Mo)	ug/L	-	9200	38	14	12	11	8.1	7.5	19	31	37	34	20	4.4	<4.0	5.5	17	12	10	8.5	20	20	13
Dissolved Nickel (Ni)	ug/L	-	490	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	120	<100	110	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dissolved Potassium (K)	ug/L	-	-	4300	14000	20000	20000	16000	20000	13000	17000	22000	22000	17000	12000	5400	8300	20000	12000	14000	10000	8300	8800	9000
Dissolved Selenium (Se)	ug/L	-	63	4.5	<1.0	4.0	4.1	4.7	3.3	<1.0	1.1	1.9	<1.0	<1.0	4.2	5.4	8.9	9.4	9.4	2.8	3.2	1.8	1.2	2.9
Silicon (Si)	ug/L	-	-	---	<100	3200	---	---	---	<100	2700	---	---	---	6600	6400	---	---	---	---	---	3900	4000	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	54000	47000	32000	60000	36000	31000	60000	60000	53000	53000	64000	58000	22000	30000	180000	30000	30000	130000	72000	79000	66000
Dissolved Strontium (Sr)	ug/L	-	-	630	730	1100	1100	870	1100	290	440	560	380	430	350	320	460	270	590	600	400	490	510	450
Dissolved Thallium (Tl)	ug/L	-	510	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80
Dissolved Tin (Sn)	ug/L	-	-	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<20	<2.0	<20	<20	<20	<20
Dissolved Titanium (Ti)	ug/L	-	-	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0
Dissolved Uranium (U)	ug/L	-	420	<0.10	<0.15	<0.15	<0.15	<0.15	<0.10	0.37	<0.15	<0.15	<0.15	<0.10	<0.15	<0.15	<0.15	<0.15	<0.15	<0.10	0.18	0.27	0.29	0.18
Dissolved Vanadium (V)	ug/L	-	250	<2.0	8.3	6.9	5.6	4.2	3.9	<2.0	<2.0	23	9.3	2.4	7.7	14	15	15	7.5	6.6	3	4.7	3.9	3.0
Dissolved Zinc (Zn)	ug/L	-	1100	<5.0	<5.0	---	<5.0	<5.0	<5.0	2.5	---	<5.0	<5.0	<5.0	<5.0	---	<5.0	<5.0	9.1	<5.0	<5.0	---	---	<5.0
Zinc total (Zn)	ug/L	-	1100	---	9.1	<5.0	<5.0	---	---	<5.0	<5.0	<5.0	---	---	---	<5.0	<5.0	---	---	---	---	<5.0	<5.0	<5.0
Mercury total (Hg)	ug/L	-	0.29	<0.013	<0.013	0.02	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.022	<0.013	<0.013	<0.013	<0.013	0.04	0.120	0.13	<0.013
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulphur (S)	ug/L	-	-	---	81000	---	---	---	---	65000	---	---	---	---	59000	---	---	---	---	---	99000	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU17-010-MWA	SCU17-010-MWA	SCU17-010-MWA	SCU17-010-MWB	SCU17-010-MWB	SCU17-010-MWB	SCU17-010-MWB	SCU17-010-MWB	SCU17-010-MWC	SCU17-010-MWC	SCU17-010-MWC	SCU17-010-MWC	SCU17-010-MWC	SCU17-010-MWC	SCU18-001-MWA*	SCU18-001-MWA	SCU18-001-MW	SCU18-001-MW	SCU18-001-MW	SCU18-001-MW	SCU18-002-MWA*
Sampling Date				26-Oct-11	1-Dec-13	1-Dec-13	10-Jul-06	23-Nov-09	15-Nov-10	26-Oct-11	1-Dec-13	10-Jul-06	23-Nov-09	15-Nov-10	15-Nov-10	26-Oct-11	1-Dec-13	7-Aug-03	9-Sep-10	12-Nov-10	27-Oct-11	27-Oct-11	29-Nov-13	7-Aug-03
Field Duplicate Label						FD #2									FD 3							FD 06		
Dissolved Aluminum (Al)	ug/L	-	-	<5.0	56	54	14	5.7	<5.0	<5.0	13	19	6.8	5.5	<5.0	31	19	<5.0	6.2	9.2	7	14	19	<5.0
Dissolved Antimony (Sb)	ug/L	-	20000	<0.40	<1.0	<1.0	<0.40	<0.40	<0.40	<0.40	<1.0	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	5.8	<0.40	<0.40	0.52	<0.40	<1.0	3.9
Dissolved Arsenic (As)	ug/L	-	1900	25	1.3	1.4	0.75	20	19	25	22	0.69	12	9.3	9.2	1.8	12	<0.60	3.8	4.3	4.8	5.5	1.7	1.4
Dissolved Barium (Ba)	ug/L	-	29000	13	42	43	130	9.7	9.6	8.2	7.9	120	15	13	13	43	15	50.8	18	18	16	17	40	13.9
Dissolved Beryllium (Be)	ug/L	-	67	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	530	150	140	<100	150	180	200	150	<100	490	530	440	180	490	<100	<100	100	100	140	120	<100
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.017	<0.010	<0.010	0.036	<0.017	<0.017	<0.017	<0.010	0.049	<0.017	<0.017	<0.017	<0.017	<0.010	<0.017	0.058	0.031	<0.017	<0.017	0.11	<0.017
Dissolved Calcium (Ca)	ug/L	-	-	1100000	110000	110000	37000	850000	840000	840000	780000	46000	1100000	1100000	1100000	85000	1100000	471000	390000	430000	420000	380000	310000	247000
Dissolved Chromium (Cr)	ug/L	-	810	1.3	<1.0	<1.0	3.8	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	<1.0	<1.0	2.6	<1.0	<1.0	<1.0	<1.0	<1.0	4.7	<1.0	<1.0
Dissolved Cobalt (Co)	ug/L	-	66	3	<0.40	<0.40	<1.0	2.0	2.0	2.4	<0.40	<1.0	2.2	2.4	2.3	<1.0	<0.40	<1.0	2.4	2.3	1.9	2	0.98	<1.0
Dissolved Copper (Cu)	ug/L	-	87	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	1300	<50	<50	<100	1100	890	1300	1100	<100	1400	760	860	<100	1400	2140	1700	1500	1600	1500	520	<100
Dissolved Lead (Pb)	ug/L	-	25	<1.0	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0
Dissolved Lithium (Li)	ug/L	-	-	96	---	---	8.1	42	42	41	---	9.2	86	94	91	13	---	44	38	38	40	37	---	8
Dissolved Magnesium (Mg)	ug/L	-	-	65000	4400	4400	4700	34000	27000	26000	26000	5200	67000	61000	62000	4200	72000	69500	57000	61000	58000	55000	56000	16200
Dissolved Manganese (Mn)	ug/L	-	-	620	<2.0	<2.0	5.9	380	320	330	310	13	640	620	630	<4.0	700	11500	10000	11000	8800	8800	7100	1300
Dissolved Molybdenum (Mo)	ug/L	-	9200	5.3	7.3	7.5	<4.0	<4.0	<4.0	<4.0	2.8	<4.0	5.5	5.1	5.5	8.9	5.4	<4.0	<4.0	<4.0	<4.0	<4.0	2.2	6
Dissolved Nickel (Ni)	ug/L	-	490	16	<2.0	<2.0	<3.0	<3.0	<3.0	14	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100		<100	<100	<100	<100	<100	<100
Dissolved Potassium (K)	ug/L	-	-	17000	9800	9500	2000	8400	8000	7700	8600	3000	17000	16000	17000	8300	18000	6600	6000	6700	6200	5700	7000	2100
Dissolved Selenium (Se)	ug/L	-	63	16	4.3	4.0	<1.0	<1.0	<1.0	9	<1.0	<1.0	<1.0	<1.0	<1.0	2.5	<1.0	2	<1.0	<1.0	<1.0	<1.0	<1.0	2
Silicon (Si)	ug/L	-	-	---	---	---	---	11000	---	---	---	---	7500	---	---	---	---	---	---	---	---	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	320000	31000	31000	35000	550000	480000	530000	490000	34000	330000	290000	280000	35000	350000	40000	47000	56000	54000	48000	41000	25400
Dissolved Strontium (Sr)	ug/L	-	-	26000	460	460	590	24000	22000	21000	20000	670	29000	29000	29000	430	26000	8460	11000	11000	9900	9900	6800	2480
Dissolved Thallium (Tl)	ug/L	-	510	<0.80	<0.10	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	4.2	<0.10	<0.80
Dissolved Tin (Sn)	ug/L	-	-	<20	<2.0	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	1.5	<2.0	<20
Dissolved Titanium (Ti)	ug/L	-	-	8.4	<2.0	<2.0	<3.0	<3.0	<3.0	10	<2.0	<3.0	4.5	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	6.2	<2.0	<3.0
Dissolved Uranium (U)	ug/L	-	420	0.35	2.8	2.9	<0.15	3.5	2.7	2.5	2.5	<0.15	0.42	0.31	0.35	1.9	0.30	2.65	1.6	1.4	<0.15	1.5	1.2	1.47
Dissolved Vanadium (V)	ug/L	-	250	<2.0	2.5	2.9	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	4.2	<2.0	3	<2.0	<2.0	<2.0	3.7	<2.0	<2.0
Dissolved Zinc (Zn)	ug/L	-	1100	<5.0	6.7	<5.0	10	---	<5.0	<5.0	<5.0	19	---	<5.0	<5.0	<5.0	7.2	---	---	<5.0	<5.0	<5.0	12	<5.0
Zinc total (Zn)	ug/L	-	1100	---	---	---	---	<5.0	<5.0	---	---	---	<5.0	<5.0	<5.0	---	---	4	<5.0	<5.0	---	---	---	2
Mercury total (Hg)	ug/L	-	0.29	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	---	<0.013	<0.013	<0.013	<0.013	---
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulphur (S)	ug/L	-	-	---	---	---	9100	---	---	---	---	10000	---	---	---	---	---	429000	---	---	---	---	---	174000

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU18-002-MWA	SCU18-002-MW	SCU18-002-MW	SCU18-002-MW	SCU18-002-MWA	SCU18-007-MW	SCU18-007-MW	SCU18-007-MW	SCU18-007-MW	SCU18-007-MW	SCU18-007-MW	SCU18-007-MW	SCU18-009-MW	SCU18-009-MW	SCU18-009-MW	SCU18-009-MW	SCU18-009-MW	SCU18-009-MW	SCU18-009-MW	SCU18-010-MW	SCU18-010-MW
Sampling Date				9-Sep-10	12-Nov-10	27-Oct-11	29-Nov-13	29-Nov-13	12-Jul-06	23-Nov-09	7-Sep-10	19-Nov-10	24-Oct-11	26-Oct-11	2-Dec-13	12-Jul-06	4-Dec-09	4-Dec-09	19-Nov-10	19-Nov-10	27-Oct-11	1-Dec-13	7-Sep-10	17-Nov-10
Field Duplicate Label								FD #1										DUP E		FD 7					
Dissolved Aluminum (Al)	ug/L	-	-	11	6.8	16	70	18	23	7.9	40	30	27	13	12	87	53	20	23	29	24	29	40	33
Dissolved Antimony (Sb)	ug/L	-	20000	<0.40	<0.40	<0.40	<1.0	<1.0	<0.40	<0.40	1.1	3.4	0.79	1.3	<1.0	<0.40	<0.40	2.9	0.87	1.2	<0.40	<1.0	1.1	<0.40
Dissolved Arsenic (As)	ug/L	-	1900	0.65	0.87	0.96	<1.0	<1.0	3.1	1.8	7.58	1.9	2.4	2.6	1.5	5.8	<0.60	3.4	4.0	4.0	4.6	4.0	7.5	6.5
Dissolved Barium (Ba)	ug/L	-	29000	17	17	15	14	14	69	42	26	48	58	64	62	90	75	48	57	59	57	63	26	33
Dissolved Beryllium (Be)	ug/L	-	67	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	<100	<100	<100	77	76	<100	200	<100	200	230	290	190	<100	<100	140	110	110	120	100	<100	<100
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.017	<0.017	<0.017	0.012	0.015	0.043	<0.017	<0.017	<0.017	<0.017	<0.017	0.010	0.035	<0.017	<0.017	<0.017	<0.017	<0.017	<0.010	<0.017	<0.017
Dissolved Calcium (Ca)	ug/L	-	-	190000	200000	190000	200000	200000	85000	67000	170000	71000	82000	84000	82000	100000	190000	76000	82000	82000	81000	96000	170000	250000
Dissolved Chromium (Cr)	ug/L	-	810	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	7.7	<1.0	8.6	11	21	9.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.7
Dissolved Cobalt (Co)	ug/L	-	66	<1.0	<1.0	<1.0	<0.40	<0.40	3.3	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0
Dissolved Copper (Cu)	ug/L	-	87	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	<100	<100	<100	<50	<50	<100	<100	<100	<100	<100	<100	<50	<100	<100	<100	<100	<100	<100	<50	<100	120
Dissolved Lead (Pb)	ug/L	-	25	<1.0	<1.0	<1.0	0.63	0.51	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0
Dissolved Lithium (Li)	ug/L	-	-	12	13	13	---	---	11	8.9	6.4	13	11	12	---	1.3	52	10	13	13	12	---	6.4	9.8
Dissolved Magnesium (Mg)	ug/L	-	-	24000	26000	24000	28000	27000	10000	17000	240	16000	17000	19000	27000	7800	65000	11000	11000	11000	11000	13000	240	880
Dissolved Manganese (Mn)	ug/L	-	-	1200	1200	1100	830	790	15	<4.0	<4.0	<4.0	<4.0	<4.0	<2.0	34	<4.0	82	100	110	94	79	<4.0	<4.0
Dissolved Molybdenum (Mo)	ug/L	-	9200	<4.0	<4.0	<4.0	<2.0	<2.0	10	4.3	29	5.4	4.9	4.8	2.8	9.3	31	7.9	6.1	6.0	5.4	6.5	29	28
Dissolved Nickel (Ni)	ug/L	-	490	<3.0	<3.0	<3.0	<2.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dissolved Potassium (K)	ug/L	-	-	2600	2800	2400	2600	2600	8000	3900	12000	5200	6000	5400	4000	12000	14000	7400	8400	8700	9200	9300	12000	11000
Dissolved Selenium (Se)	ug/L	-	63	<1.0	<1.0	<1.0	1.9	1.8	6.7	2.2	3.6	1.5	<1.0	1.9	1.2	3.1	6.2	<1.0	6.0	6.1	12	1.2	3.6	9.8
Silicon (Si)	ug/L	-	-	---	---	---	---	---	---	5200	---	---	---	---	---	---	1400	10000	---	---	---	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	38000	42000	38000	40000	40000	80000	19000	38000	31000	34000	26000	14000	71000	66000	41000	47000	47000	43000	40000	38000	23000
Dissolved Strontium (Sr)	ug/L	-	-	3700	3800	3200	3100	3100	290	200	740	250	250	360	230	1000	780	600	670	710	680	820	740	1000
Dissolved Thallium (Tl)	ug/L	-	510	<0.80	<0.80	<0.80	<0.10	<0.10	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80
Dissolved Tin (Sn)	ug/L	-	-	<20	<20	<20	<2.0	<2.0	<20	<20	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<20	<20	<20	<20	<20
Dissolved Titanium (Ti)	ug/L	-	-	<3.0	<3.0	<3.0	<2.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0
Dissolved Uranium (U)	ug/L	-	420	1.3	1.1	1.2	1.4	1.4	0.99	2.0	<0.15	3.4	5.3	6.4	3.6	0.26	<0.15	2.4	1.7	1.7	1.9	1.9	<0.15	<0.15
Dissolved Vanadium (V)	ug/L	-	250	<2.0	<2.0	<2.0	<2.0	<2.0	17	10	98	12	16	17	7.6	2.9	3.3	5.1	<2.0	<2.0	2.4	2.9	98	130
Dissolved Zinc (Zn)	ug/L	-	1100	---	<5.0	<5.0	59	10	<5.0	---	<5.0	<5.0	<5.0	6	<5.0	<5.0	---	---	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Zinc total (Zn)	ug/L	-	1100	<5.0	<5.0	---	---	---	3.8	<5.0	---	---	---	---	---	---	<5.0	<5.0	---	---	---	---	---	---
Mercury total (Hg)	ug/L	-	0.29	---	<0.013	<0.013	<0.013	<0.013	<0.013	0.025	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.015	0.024	<0.013	<0.013	<0.013	<0.013	---	0.025
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulphur (S)	ug/L	-	-	---	---	---	---	---	55000	---	55000	---	---	---	---	61000	---	---	---	---	---	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU18-010-MW	SCU18-010-MW	SCU18-010-MW	SCU18-011-MW	SCU18-011-MW	SCU18-011-MW	SCU18-011-MW	SCU18-011-MW	SCU18-011-MW	SCU19-002-MWA	SCU19-002-MWA	SCU19-002-MWA	SCU19-002-MWA	SCU19-002-MWA	SCU19-002-MWB	SCU19-002-MWB	SCU19-002-MWB	SCU19-002-MWB	SCU19-002-MWB	SCU19-002-MWB
Sampling Date				28-Nov-11	22-Nov-12	29-Nov-13	7-Sep-10	17-Nov-10	17-Nov-10	28-Oct-11	22-Nov-12	29-Nov-13	20-Sep-05	18-Nov-10	26-Oct-11	21-Nov-12	27-Nov-13	22-Sep-05	18-Nov-10	26-Oct-11	21-Nov-12	21-Nov-12	27-Nov-13
Field Duplicate Label									FD 5													FD-03	
Dissolved Aluminum (Al)	ug/L	-	-	140	31	27	36	16	17	21	<5.0	23	<5.0	<5.0	20	17	38	<5.0	<5.0	9.5	12	22	39
Dissolved Antimony (Sb)	ug/L	-	20000	1.8	3.2	1.4	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	<0.40	<0.40	<0.40	<0.40	<1.0	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0
Dissolved Arsenic (As)	ug/L	-	1900	5.5	6.6	7.2	3.5	3.4	3.5	3.4	3.6	4.3	<0.60	<0.60	2.4	5.2	1.0	<0.60	<0.60	9.7	11	12	8.0
Dissolved Barium (Ba)	ug/L	-	29000	39	39	33	25	22	22	20	23	21	67	130	98	83	56	49	63	47	83	83	66
Dissolved Beryllium (Be)	ug/L	-	67	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	<100	<100	59	230	180	170	180	<100	150	<100	<100	560	410	430	<100	<100	490	440	590	470
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.017	<0.017	<0.010	<0.017	<0.017	<0.017	<0.017	<0.017	<0.010	0.61	<0.017	0.049	<0.017	<0.010	2.2	<0.017	<0.017	<0.017	<0.017	<0.010
Dissolved Calcium (Ca)	ug/L	-	-	2200000	200000	180000	160000	150000	150000	130000	150000	150000	770000	450000	490000	610000	460000	1200000	1400000	120000	1600000	1600000	1800000
Dissolved Chromium (Cr)	ug/L	-	810	3.1	2.3	2.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.4	<1.0	<1.0	<1.0
Dissolved Cobalt (Co)	ug/L	-	66	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	1.3	1.1	<0.40	<1.0	<1.0	3.5	3.5	3.9	<0.40
Dissolved Copper (Cu)	ug/L	-	87	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	380	130	69	1300	1300	1300	740	<100	830	<100	<100	110	340	800	<100	1200	1000	1500	3000	2400
Dissolved Lead (Pb)	ug/L	-	25	1.2	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	0.52	<1.0	<1.0	<1.0	<1.0	<1.0	0.76
Dissolved Lithium (Li)	ug/L	-	-	12	15	---	76	71	74	55	57	---	93	94	86	96	---	92	110	88	110	120	---
Dissolved Magnesium (Mg)	ug/L	-	-	1400	830	750	39000	39000	36000	24000	24000	24000	140000	190000	130000	130000	93000	170000	180000	160000	180000	190000	180000
Dissolved Manganese (Mn)	ug/L	-	-	15	<4.0	3.7	350	330	330	230	210	330	120	85	55	83	88	600	630	530	650	630	600
Dissolved Molybdenum (Mo)	ug/L	-	9200	22	20	20	9.3	8.9	9.1	9.6	<4.0	11	<4.0	<4.0	6.4	6.2	5.2	<4.0	<4.0	<4.0	<4.0	<4.0	2.8
Dissolved Nickel (Ni)	ug/L	-	490	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	6.4	<3.0	<2.0	<3.0	<3.0	17	7.2	14	<2.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	<100	100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	250	25000	<100	<100	<100	<100	120
Dissolved Potassium (K)	ug/L	-	-	12000	14000	13000	10000	9800	9400	11000	14000	14000	37000	62000	38000	31000	22000	25000	20000	19000	22000	22000	23000
Dissolved Selenium (Se)	ug/L	-	63	2.3	2.8	1.4	<1.0	1.4	2.2	<1.0	<1.0	<1.0	35	<1.0	7.3	12	<1.0	49	<1.0	21	37	46	<1.0
Silicon (Si)	ug/L	-	-	---	---	---	---	---	---	---	---	---	4200	---	---	---	---	7300	---	---	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	20000	20000	26000	20000	17000	17000	19000	29000	21000	1000000	1600000	990000	760000	560000	730000	310000	540000	410000	420000	280000
Dissolved Strontium (Sr)	ug/L	-	-	830	890	790	520	560	540	470	620	750	41000	18000	24000	33000	26000	100000	150000	120000	140000	140000	150000
Dissolved Thallium (Tl)	ug/L	-	510	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10
Dissolved Tin (Sn)	ug/L	-	-	<20	<20	<2.0	<20	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<20	<2.0
Dissolved Titanium (Ti)	ug/L	-	-	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	3.2	<3.0	<3.0	<2.0
Dissolved Uranium (U)	ug/L	-	420	0.38	<0.15	0.45	0.43	<0.15	<0.15	<0.15	<0.15	<0.10	<0.15	<0.15	0.28	0.61	0.80	5.2	<0.15	3.7	2	1.8	1.2
Dissolved Vanadium (V)	ug/L	-	250	140	110	54	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Zinc (Zn)	ug/L	-	1100	<5.0	<5.0	6.2	<5.0	<5.0	<5.0	<5.0	<5.0	8.2	55	<5.0	<5.0	<5.0	7.3	<5.0	<5.0	5.4	6.4	5.9	11
Zinc total (Zn)	ug/L	-	1100	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mercury total (Hg)	ug/L	-	0.29	0.017	0.021	0.013	---	<0.013	<0.013	0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.013	<0.013
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulphur (S)	ug/L	-	-	---	---	---	---	---	---	---	---	---	230000	---	---	---	---	200000	---	---	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU19-010-MW	SCU19-010-MW	SCU19-010-MW	SCU19-015-MW	SCU19-015-MW	SCU19-015-MW	SCU19-015-MW	SCU19-015-MW	SCU19-015-MW	SCU19-029-MW	SCU19-029-MW	SCU19-029-MW	SCU19-029-MW	SCU19-030-MW	SCU19-030-MW	SCU19-030-MW	SCU19-030-MW	SCU19-031-MW	SCU19-031-MW	SCU19-031-MW
Sampling Date				26-Jul-03	27-Nov-12	1-Dec-13	15-Sep-05	18-Nov-10	27-Jul-11	26-Oct-11	23-Nov-12	29-Nov-13	28-Jul-11	28-Oct-11	27-Nov-12	7-Dec-13	28-Jul-11	28-Oct-11	27-Nov-12	7-Dec-13	27-Jul-11	27-Jul-11	26-Oct-11
Field Duplicate Label																						DUP	
Dissolved Aluminum (Al)	ug/L	-	-	29	25	27	9.7	14	13	110	7	7.2	400	250	390	240	28	370	17	23	110	65	130
Dissolved Antimony (Sb)	ug/L	-	20000	<0.40	<0.40	<1.0	<0.40	<0.40	<0.40	1.6	<0.40	<1.0	<0.40	<0.40	<0.40	<1.0	<0.40	<0.40	<0.40	<1.0	<0.40	<0.40	0.68
Dissolved Arsenic (As)	ug/L	-	1900	11	6.2	4.4	2.2	1.4	1.4	1.2	2.3	1.4	8.6	12	18	14	1.4	0.60	0.63	<1.0	3.30	3.40	3
Dissolved Barium (Ba)	ug/L	-	29000	75	57	48	41	58	38	41	37	28	44	46	66	52	110	82	79	61	48	49	53
Dissolved Beryllium (Be)	ug/L	-	67	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	260	290	260	200	460	420	520	620	540	630	600	610	570	310	310	210	210	340	350	330
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.017	<0.017	0.012	<0.017	0.025	0.022	<0.017	<0.017	<0.010	0.033	0.035	<0.017	0.028	<0.017	0.024	<0.017	<0.010	0.025	0.020	0.044
Dissolved Calcium (Ca)	ug/L	-	-	130000	130000	130000	150000	320000	290000	350000	450000	370000	7400	20000	26000	20000	190000	190000	230000	200000	180000	180000	170000
Dissolved Chromium (Cr)	ug/L	-	810	<1.0	<1.0	6.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1
Dissolved Cobalt (Co)	ug/L	-	66	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	0.57	<1.0	<1.0	<1.0	<0.40	1.3	1.3	<1.0
Dissolved Copper (Cu)	ug/L	-	87	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	<100	140	320	<100	<100	<100	<100	2800	65	400	360	1200	850	200	510	<100	<50	640	460	970
Dissolved Lead (Pb)	ug/L	-	25	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	2.7	1.5	<1.0	0.54	1.6	5.2	<1.0	0.52	3.9	1.7	<1.0
Dissolved Lithium (Li)	ug/L	-	-	23	21	---	87	120	98	130	160	---	3.8	3.7	4.3	---	66	73	62	---	72	72	62
Dissolved Magnesium (Mg)	ug/L	-	-	16000	8400	6500	4900	10000	11000	12000	13000	9800	650	6700	5600	4900	810	56000	53000	37000	580	580	40000
Dissolved Manganese (Mn)	ug/L	-	-	510	120	63	41	71	58	64	570	38	4100	1000	2200	1500	5900	620	560	370	38000	38000	840
Dissolved Molybdenum (Mo)	ug/L	-	9200	11	14	13	<4.0	<4.0	<4.0	<4.0	4	2.3	17	21	22	19	<4.0	<4.0	<4.0	<2.0	9.5	9.5	8.5
Dissolved Nickel (Ni)	ug/L	-	490	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<2.0	3.1	<3.0	<3.0	<2.0	3.7	3.6	<3.0
Dissolved Phosphorus (P)	ug/L	-	-	220	<100	140	<100	<100	<100	<100	<100	<100	520	720	810	790	<100	<100	<100	130	<100	<100	<100
Dissolved Potassium (K)	ug/L	-	-	530	35000	28000	26000	36000	27000	29000	30000	25000	22000	27000	27000	26000	17000	16000	16000	15000	36000	36000	39000
Dissolved Selenium (Se)	ug/L	-	63	1.9	6.2	3.0	1.5	4.2	4.1	19	17	22	1.4	<1.0	<1.0	<1.0	5	1.0	<1.0	1.1	<1.0	1.1	1.8
Silicon (Si)	ug/L	-	-	4500	---	---	33000	---	---	---	---	---	---	<100	---	---	---	---	---	---	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	100000	48000	31000	24000	53000	27000	33000	24000	27000	250000	280000	240000	230000	66000	51000	37000	27000	72000	71000	77000
Dissolved Strontium (Sr)	ug/L	-	-	490	530	490	570	1600	1300	<2.0	2000	1600	66	340	120	100	830	800	1000	770	680	690	710
Dissolved Thallium (Tl)	ug/L	-	510	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80
Dissolved Tin (Sn)	ug/L	-	-	<20	<20	<2.0	<20	<20	<20	<20	<20	<2.0	<20	<20	<20	<2.0	<20	<20	<20	<2.0	<20	<20	<20
Dissolved Titanium (Ti)	ug/L	-	-	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	5.4	<3.0	<2.0	11	6.1	5.9	6.7	<3.0	8.5	<3.0	3.3	<3.0	<3.0	4.8
Dissolved Uranium (U)	ug/L	-	420	1.7	0.43	0.31	2.6	6.6	3.7	32	24	7.3	0.98	0.80	0.4	0.35	1.40	1.8	1.5	1.1	2.3	2.3	2.7
Dissolved Vanadium (V)	ug/L	-	250	4.3	25	38	4.9	5.3	4.2	7.7	7.8	8.7	2.4	<2.0	3.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Zinc (Zn)	ug/L	-	1100	2.9	<5.0	5.9	<5.0	<5.0	<5.0	<5.0	<5.0	7.0	8.3	<5.0	5.7	37	<5.0	10	<5.0	<5.0	<5.0	<5.0	9.1
Zinc total (Zn)	ug/L	-	1100	<5.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mercury total (Hg)	ug/L	-	0.29	<0.013	---	<0.013	<0.013	<0.013	---	<0.013	<0.013	<0.013	---	0.17	---	<0.013	---	<0.013	---	<0.013	---	---	<0.013
Dissolved Mercury (Hg)	ug/L	-	0.29	---	<0.013	---	---	---	---	---	---	---	---	---	0.02	---	---	---	<0.013	---	---	---	---
Sulphur (S)	ug/L	-	-	---	---	---	120000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU19-031-MW	SCU19-031-MW	SCU19-032-MW	SCU19-032-MW	SCU19-032-MW	SCU20-013-MW	SCU20-013-MW	SCU20-013-MW	SCU20-013-MW	SCU20-013-MW	SCU20-014-MW	SCU20-014-MW	SCU20-014-MW	SCU20-014-MW	SCU20-014-MW	SCU20-015-MW	SCU20-015-MW	SCU20-015-MW	SCU20-015-MW	SCU20-015-MW
Sampling Date				27-Nov-12	27-Nov-13	27-Jul-11	26-Oct-11	23-Nov-12	3-Sep-10	17-Nov-10	27-Oct-11	21-Nov-12	26-Nov-13	3-Sep-10	17-Nov-10	27-Oct-11	22-Nov-12	26-Nov-13	3-Sep-10	17-Nov-10	27-Oct-11	22-Nov-12	26-Nov-13
Field Duplicate Label																							
Dissolved Aluminum (Al)	ug/L	-	-	13	16	44	39	9.7	220	170	94	130	130	60	85	130	150	170	31	24	200	45	42
Dissolved Antimony (Sb)	ug/L	-	20000	<0.40	<1.0	<0.40	<0.40	<0.40	5.3	<0.40	<0.40	<0.40	<1.0	0.63	<0.40	1.2	<0.40	<1.0	0.54	<0.40	2.9	<0.40	<1.0
Dissolved Arsenic (As)	ug/L	-	1900	2.4	3.3	1	1.6	2.2	14	11	11	15	13	7.9	9.2	9.1	10	9.3	11	13	16	16	15
Dissolved Barium (Ba)	ug/L	-	29000	46	95	83	99	49	77	87	85	98	89	27	34	37	41	31	28	20	21	18	19
Dissolved Beryllium (Be)	ug/L	-	67	<0.50	<1.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	280	360	510	560	570	<1000	<100	<100	<100	57	<100	110	<100	<100	100	<100	<100	<100	<100	78
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.017	<0.010	0.040	<0.017	0.054	0.29	0.19	<0.017	<0.017	<0.010	<0.017	<0.017	<0.017	<0.017	<0.010	<0.017	<0.017	0.018	<0.017	<0.010
Dissolved Calcium (Ca)	ug/L	-	-	150000	160000	190000	450000	360000	160000	140000	120000	150000	130000	170000	160000	140000	160000	150000	320000	280000	210000	210000	210000
Dissolved Chromium (Cr)	ug/L	-	810	<1.0	1.7	<1.0	<1.0	<1.0	<10	<1.0	3.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5	33	<1.0
Dissolved Cobalt (Co)	ug/L	-	66	<1.0	0.45	<1.0	3.8	3.6	<10	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<0.40
Dissolved Copper (Cu)	ug/L	-	87	<2.0	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	<100	570	5300	38000	41000	<1000	<100	<100	<100	<50	<100	<100		<100	<50	<100	<100	440	160	<50
Dissolved Lead (Pb)	ug/L	-	25	<1.0	<0.50	<1.0	<1.0	15	<10	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	1.8	<1.0	<0.50	<1.0	<1.0	2.1	<1.0	<0.50
Dissolved Lithium (Li)	ug/L	-	-	42	---	310	190	230	<10	3.2	1.8	4.2	---	3.3	3.3	4.0	4	---	4.8	3.6	2.5	2.9	---
Dissolved Magnesium (Mg)	ug/L	-	-	47000	46000	45000	87000	99000	<600	<60	<60	<60	<100	<60	<60	<60	<60	<100	520	440	420	<60	<100
Dissolved Manganese (Mn)	ug/L	-	-	1100	1200	1400	6500	3600	<40	<4.0	<4.0	<4.0	<2.0	<4.0	<4.0	<4.0	<4.0	<2.0	9.5	15	31	4.5	<2.0
Dissolved Molybdenum (Mo)	ug/L	-	9200	12	8.2	6.4	<4.0	17	85	30	84	57	47	54	63	63	41	40	43	49	42	41	42
Dissolved Nickel (Ni)	ug/L	-	490	<3.0	<2.0	<3.0	14	9.3	46	40	32	39	35	22	23	44	49	31	7.4	3.3	8.3	6.3	5.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	<100	<100	<100	<100	<1000	<100	<100	<100	140	200	240	260	210	330	<100	<100	100	<100	110
Dissolved Potassium (K)	ug/L	-	-	43000	42000	68000	61000	62000	41000	40000	36000	50000	47000	15000	20000	22000	30000	27000	15000	14000	13000	16000	15000
Dissolved Selenium (Se)	ug/L	-	63	2.7	2.1	<1.0	<1.0	<1.0	<10	9.1	11	2.8	<1.0	2.2	11	14	2.9	4.3	<1.0	1.1	<1.0	1.2	<1.0
Silicon (Si)	ug/L	-	-	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<1.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	100000	60000	46000	40000	54000	310000	190000	150000	150000	140000	56000	58000	56000	51000	51000	58000	50000	40000	43000	41000
Dissolved Strontium (Sr)	ug/L	-	-	940	780	1200	1900	1900	1800	1800	1500	1800	1500	470	530	550	690	620	770	690	540	530	530
Dissolved Thallium (Tl)	ug/L	-	510	<0.80	<0.10	<0.80	<0.80	<0.80	<8.0	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10
Dissolved Tin (Sn)	ug/L	-	-	<20	<2.0	<20	<20	<20	<200	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0
Dissolved Titanium (Ti)	ug/L	-	-	<3.0	<2.0	<3.0	7.1	<3.0	<30	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	9.8	<3.0	<2.0
Dissolved Uranium (U)	ug/L	-	420	3.1	2.7	1.5	2.6	6.9	<1.5	<0.15	<0.15	<0.15	<0.10	<0.15	<0.15	<0.15	<0.15	<0.10	<0.15	<0.15	<0.15	<0.15	<0.10
Dissolved Vanadium (V)	ug/L	-	250	<2.0	<2.0	<2.0	<2.0	<2.0	46	46	33	29	21	8.1	7.3	<2.0	5	2.1	59	5.8	5.5	3.6	<2.0
Dissolved Zinc (Zn)	ug/L	-	1100	5.7	13	<5.0	460	110	<50	<5.0	<5.0	<5.0	5.5	<5.0	<5.0	<5.0	<5.0	6.6	<5.0	<5.0	<5.0	<5.0	<5.0
Zinc total (Zn)	ug/L	-	1100	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mercury total (Hg)	ug/L	-	0.29	---	<0.013	---	<0.013	0.022	---	0.026	0.036	0.017	0.013	---	0.071	0.057	0.039	0.048	---	<0.013	0.017	<0.013	<0.013
Dissolved Mercury (Hg)	ug/L	-	0.29	0.013	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulphur (S)	ug/L	-	-	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

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MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU20-016-MW	SCU20-016-MW	SCU20-016-MW	SCU20-016-MW	SCU20-016-MW	SCU20-017-MW	SCU20-017-MW	SCU20-017-MW	SCU20-017-MW	SCU20-017-MW	SCU20-018-MW	SCU20-018-MW	SCU20-018-MW	SCU20-018-MW	SCU20-018-MW	SCU25-001-MW	SCU25-001-MW	SCU25-001-MW	SCU25-001-MW	SCU25-001-MW
Sampling Date				7-Sep-10	17-Nov-10	27-Oct-11	22-Nov-12	26-Nov-13	7-Sep-10	17-Nov-10	27-Oct-11	21-Nov-12	26-Nov-13	7-Sep-10	17-Nov-10	27-Oct-11	21-Nov-12	26-Nov-13	26-Jul-07	16-Nov-09	17-Nov-10	27-Oct-11	6-Dec-13
Field Duplicate Label																							
Dissolved Aluminum (Al)	ug/L	-	-	130	26	30	31	95	180	230	49	23	100	<50	14	15	100	13	130	38	35	29	110
Dissolved Antimony (Sb)	ug/L	-	20000	<0.40	<0.40	1.1	<0.40	<1.0	<0.40	<0.40	0.86	<0.40	<1.0	<4.0	<0.40	1.3	<0.40	<1.0	4.7	<0.40	<0.40	<0.40	<1.0
Dissolved Arsenic (As)	ug/L	-	1900	5.8	6.4	8.8	8	9.0	4.6	6.4	5.2	4.4	7.9	<6.0	2.4	2.6	3.7	2.2	8.9	<0.60	<0.60	0.78	<1.0
Dissolved Barium (Ba)	ug/L	-	29000	42	30	32	32	34	62	59	62	69	56	38	37	32	34	26	410	150	150	150	140
Dissolved Beryllium (Be)	ug/L	-	67	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	5.0	<0.50	<0.50	<0.50	<1.0	6.9	<0.50	<0.50	<0.50	<1.0
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	<100	130	160	140	140	<100	<100	<100	<100	110	1000	<100	<100	<100	88	<100	<100	<100	<100	<50
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.017	0.024	0.024	<0.017	<0.010	<0.017	<0.017	<0.017	<0.017	<0.010	0.17	<0.017	<0.017	<0.017	<0.010	**6.2**	<0.017	<0.017	<0.017	<0.010
Dissolved Calcium (Ca)	ug/L	-	-	200000	130000	140000	130000	140000	160000	160000	110000	140000	160000	330000	290000	350000	520000	380000	310000	200000	220000	220000	250000
Dissolved Chromium (Cr)	ug/L	-	810	<1.0	<1.0	3.4	<1.0	<1.0	<1.0	3.1	2.8	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	4.8	<1.0
Dissolved Cobalt (Co)	ug/L	-	66	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<0.40	<10	<1.0	<1.0	1.1	<0.40	<1.0	<1.0	<1.0	<1.0	<0.40
Dissolved Copper (Cu)	ug/L	-	87	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	<100	<100	<100	<100	<50	<100	<100	<100	<100	<50	<1000	<100	<100	<100	180	<100	<100	<100	<100	160
Dissolved Lead (Pb)	ug/L	-	25	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<10	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50
Dissolved Lithium (Li)	ug/L	-	-	14	25	20	26	---	20	15	18	22	---	22	24	21	11	---	<1.0	46	54	50	---
Dissolved Magnesium (Mg)	ug/L	-	-	280	2800	840	1200	160	<60	<60	3200	7800	<100	13000	21000	22000	22000	25000	<60	<60	<60	<60	<100
Dissolved Manganese (Mn)	ug/L	-	-	<4.0	4.3	<4.0	<4.0	<2.0	<4.0	<4.0	<4.0	11	<2.0	<40	46	160	400	300	120	<4.0	<4.0	4.6	4.9
Dissolved Molybdenum (Mo)	ug/L	-	9200	66	53	53	38	38	6.9	30	6.3	8.8	14	<40	6.9	5.4	4.8	3.5	<4.0	6.6	7.4	6.6	5.2
Dissolved Nickel (Ni)	ug/L	-	490	46	38	30	14	25	6.3	8.6	3.9	<3.0	26	<30	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	<100	<100	<100	110	<100	<100	<100	<100	170	<1000	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dissolved Potassium (K)	ug/L	-	-	32000	24000	23000	25000	28000	11000	13000	7000	8600	13000	7700	6000	5500	4300	5100	11000	11000	13000	13000	15000
Dissolved Selenium (Se)	ug/L	-	63	3.0	3.4	1.6	1.2	<1.0	5.0	14	1.2	3.1	2.4	<10	4.3	<1.0	1.3	1.2	<1.0	9.2	17	20	5.6
Silicon (Si)	ug/L	-	-	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1500	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<1.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	67000	39000	36000	36000	37000	27000	32000	18000	21000	36000	13000	10000	14000	16000	14000	33000	23000	37000	31000	37000
Dissolved Strontium (Sr)	ug/L	-	-	950	730	750	670	870	890	820	770	900	910	1100	1700	3700	9300	5500	1400	930	1100	1000	1200
Dissolved Thallium (Tl)	ug/L	-	510	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<8.0	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10
Dissolved Tin (Sn)	ug/L	-	-	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0	<200	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0
Dissolved Titanium (Ti)	ug/L	-	-	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<30	<3.0	3.3	4.2	<2.0	<3.0	<3.0	<3.0	<3.0	2.0
Dissolved Uranium (U)	ug/L	-	420	<0.15	<0.15	<0.15	<0.15	<0.10	<0.15	<0.15	0.32	1.2	<0.10	<1.5	1.7	2.6	2.1	2.3	4.9	<0.15	<0.15	<0.15	<0.10
Dissolved Vanadium (V)	ug/L	-	250	2.2	11	9.6	11	11	4.2	3.1	<2.0	4.8	2.7	<20	10	8	4.8	6.7	<2.0	2.1	2.4	4.7	2.5
Dissolved Zinc (Zn)	ug/L	-	1100	<5.0	6.0	<5.0	<5.0	6.8	<5.0	<5.0	<5.0	<5.0	7.6	<5.0	<5.0	<5.0	<5.0	7.5	130	<5.0	<5.0	<5.0	11
Zinc total (Zn)	ug/L	-	1100	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mercury total (Hg)	ug/L	-	0.29	---	<0.013	<0.013	<0.013	<0.013	---	<0.013	0.015	<0.013	<0.013	---	<0.013	<0.013	<0.013	<0.013	<0.013	0.021	<0.013	<0.013	<0.013
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulphur (S)	ug/L	-	-	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	56000	---	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU25-004-MW	SCU25-004-MW	SCU25-004-MW	SCU25-004-MW	SCU25-004-MW	SCU25-004-MW	SCU25-004-MW	SCU25-007-MW	SCU25-007-MW	SCU25-007-MW	SCU25-007-MW	SCU25-007-MW	SCU26-001-MW	SCU26-001-MW	SCU26-001-MW	SCU26-001-MW	SCU26-002-MW	SCU26-002-MW	SCU26-002-MW	SCU26-002-MW
Sampling Date				23-Jul-07	26-Nov-08	25-Nov-09	16-Nov-10	27-Oct-11	28-Nov-12	6-Dec-13	24-Jul-07	25-Nov-09	16-Nov-10	25-Oct-11	6-Dec-13	26-Jul-03	11-Jul-12	26-Nov-12	5-Dec-13	11-Jul-12	26-Nov-12	26-Nov-12	5-Dec-13
Field Duplicate Label																						FD-05	
Dissolved Aluminum (Al)	ug/L	-	-	160	15	26	17	16	21	38	87	77	75	120	77	42	42	29	25	22	80	94	49
Dissolved Antimony (Sb)	ug/L	-	20000	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	<0.40	<0.40	<0.40	<0.40	<1.0	<0.40	<0.40	<0.40	<1.0	<0.40	<0.40	<0.40	<1.0
Dissolved Arsenic (As)	ug/L	-	1900	<0.60	<0.60	<0.60	<0.60	0.71	<0.60	<1.0	<0.60	3.1	<0.60	2.8	2.6	<0.60	<0.60	1.7	<1.0	<0.60	<0.60	1	<1.0
Dissolved Barium (Ba)	ug/L	-	29000	360	290	200	160	150	150	200	150	150	140	110	130	520	450	440	440	420	420	420	420
Dissolved Beryllium (Be)	ug/L	-	67	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<1.0
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	<100	<100	<100	<100	<100	<100	<50	<100	<100	<100	<100	<50	<100	<100	<100	<50	<100	<100	<100	<50
Dissolved Cadmium (Cd)	ug/L	-	2.7	1.5	<0.017	<0.017	<0.017	<0.017	<0.017	<0.010	1.5	<0.017	<0.017	0.037	<0.010	<0.017	<0.017	<0.017	<0.010	<0.017	<0.017	<0.017	<0.010
Dissolved Calcium (Ca)	ug/L	-	-	260000	310000	220000	260000	260000	230000	290000	200000	180000	190000	180000	200000	320000	420000	380000	370000	450000	400000	400000	390000
Dissolved Chromium (Cr)	ug/L	-	810	<1.0	1.4	<1.0	14	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.4	<1.0	<1.0	<1.0	3.1	3.6	<1.0	<1.0	2.5	<1.0
Dissolved Cobalt (Co)	ug/L	-	66	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	<0.40
Dissolved Copper (Cu)	ug/L	-	87	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	<100	<100	<100	<100	<100	<100	<50	5200	<100	<100	130	<50	720	150	310	<50	100	<100	<100	<50
Dissolved Lead (Pb)	ug/L	-	25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	0.53	<1.0	<1.0	<1.0	<0.50
Dissolved Lithium (Li)	ug/L	-	-	70	49	52	68	60	49	---	<1.0	81	94	75	---	91	110	110	---	150	150	170	---
Dissolved Magnesium (Mg)	ug/L	-	-	<60	<60	<60	<60	<60	<60	<100	<60	<60	<60	440	<100	<60	<60	110	<100	<60	<60	<60	<100
Dissolved Manganese (Mn)	ug/L	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<2.0	<4.0	<4.0	<4.0	7.3	<2.0	<4.0	<4.0	<4.0	<2.0	<4.0	<4.0	<4.0	<2.0
Dissolved Molybdenum (Mo)	ug/L	-	9200	<4.0	7.7	8.1	12	10	10	8.2	65	100	110	90	86	6.4	4.5	4.2	3.8	4.3	<4.0	4.4	5.1
Dissolved Nickel (Ni)	ug/L	-	490	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	3.2	<3.0	<2.0	4.1	<3.0	<3.0	<2.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dissolved Potassium (K)	ug/L	-	-	<600	13000	9500	13000	11000	10000	10000	24000	24000	29000	26000	28000	20000	28000	26000	27000	37000	35000	37000	35000
Dissolved Selenium (Se)	ug/L	-	63	<1.0	3.1	1.3	3.8	4.8	2	1.6	<1.0	1.6	<1.0	14	2.6	1.5	3.5	7.7	5.1	4.7	<1.0	5.4	4.3
Silicon (Si)	ug/L	-	-	---	---	1100	---	---	---	---	---	1800	---	---	---	500	---	---	---	---	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	42000	43000	17000	31000	21000	20000	17000	49000	31000	34000	37000	28000	23000	28000	31000	29000	30000	32000	35000	33000
Dissolved Strontium (Sr)	ug/L	-	-	1000	1200	1100	1400	1200	1200	1400	1000	1200	1400	1200	1400	2200	2700	2900	2700	3200	3100	3300	3100
Dissolved Thallium (Tl)	ug/L	-	510	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	<0.10
Dissolved Tin (Sn)	ug/L	-	-	<20	<20	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	7.5	<20	<20	<20	<2.0
Dissolved Titanium (Ti)	ug/L	-	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	<2.0
Dissolved Uranium (U)	ug/L	-	420	2.6	<0.15	<0.15	<0.15	<0.15	<0.15	<0.10	2.6	<0.15	<0.15	<0.15	<0.10	<0.15	<0.15	<0.15	<0.10	<0.15	<0.15	<0.15	<0.10
Dissolved Vanadium (V)	ug/L	-	250	<2.0	<2.0	<2.0	2.1	<2.0	2	<2.0	<2.0	6.7	<2.0	6.3	7.0	<2.0	<2.0	7.5	<2.0	<2.0	<2.0	3.9	<2.0
Dissolved Zinc (Zn)	ug/L	-	1100	<5.0	<5.0	---	<5.0	<5.0	<5.0	5.0	<5.0	---	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.9	<5.0
Zinc total (Zn)	ug/L	-	1100	---	---	<5.0	---	---	---	---		<5.0	---	---	---	---	---	---	---	---	---	---	---
Mercury total (Hg)	ug/L	-	0.29	<0.013	0.05	0.13	0.14	0.057	---	0.027	0.014	0.021	<0.013	<0.013	<0.013	<0.013	0.059	---	0.027	<0.013	---	---	0.045
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	0.076	---	---	---	---	---	---	---	---	0.16	---	---	0.085	0.047	---
Sulphur (S)	ug/L	-	-	55000	---	---	---	---	---	---		---	---	---	---	---	---	---	---	---	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

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MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU27-002-MW	SCU27-002-MW	SCU27-002-MW	SCU27-002-MW	SCU27-002-MW	SCU31-002-MWB*	SCU31-002-MWB	SCU31-002-MWB	SCU31-002-MWB	SCU31-002-MWB	SCU31-002-MWB	SCU31-013-MWB	SCU31-013-MWB	SCU31-013-MWB	SCU31-013-MWC	SCU31-013-MWC	SCU31-013-MWC	SCU31-013-MWC	SCU31-013-MWC	SCU31-013-MWC
Sampling Date				26-Jul-03	4-Jul-12	4-Jul-12	26-Nov-12	5-Dec-13	17-Aug-05	16-Nov-10	25-Oct-11	21-Nov-12	7-Dec-13	7-Dec-13	18-Nov-10	25-Oct-11	4-Dec-13	26-Jul-07	23-Nov-09	18-Nov-10	25-Oct-11	25-Oct-11	4-Dec-13
Field Duplicate Label						FD1								FD #6								FD-01	
Dissolved Aluminum (Al)	ug/L	-	-	<5.0	<5.0	<5.0	<5.0	<50	<5.0	15	440	8.7	14	23	14	<5.0	37	---	16	28	30	21	61
Dissolved Antimony (Sb)	ug/L	-	20000	<0.40	<0.40	<0.40	<0.40	<10	<0.40	<0.40	9.1	<0.40	<1.0	<1.0	<0.40	<0.40	<1.0	---	<0.40	<0.40	<0.40	<0.40	<1.0
Dissolved Arsenic (As)	ug/L	-	1900	30	<0.60	21	23	<10	<0.60	<0.60	<0.60	6.4	1.5	1.5	6.1	6.3	5.0	---	2.7	11	14	14	16
Dissolved Barium (Ba)	ug/L	-	29000	15000	8700	9300	7300	23000	3200	29	28	47	29	29	69	72	110	---	13	12	10	9.9	13
Dissolved Beryllium (Be)	ug/L	-	67	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<1.0	---	<0.50	<0.50	<0.50	<0.50	<1.0
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Boron (B)	ug/L	-	45000	3100	<100	3100	2900	2700	<100	520	<100	560	540	540	410	540	730	---	510	460	450	400	590
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.017	<0.017	<0.017	<0.017	<0.10	<0.017	0.025	<0.017	<0.017	<0.010	0.012	<0.017	<0.017	<0.010	---	<0.017	<0.017	<0.017	<0.017	<0.010
Dissolved Calcium (Ca)	ug/L	-	-	1200000	1400000	1400000	1200000	1200000	1200000	510000	380000	500000	480000	490000	240000	330000	350000	610000	620000	710000	550000	550000	330000
Dissolved Chromium (Cr)	ug/L	-	810	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	1.0	<1.0	1.4	<1.0
Dissolved Cobalt (Co)	ug/L	-	66	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	1.3	<1.0	1.1	<0.40	<0.40	<1.0	<1.0	<0.40	---	1.0	1.5	1.3	1.3	<0.40
Dissolved Copper (Cu)	ug/L	-	87	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Iron (Fe)	ug/L	-	-	49000	63000	61000	65000	44000	<100	<100	<100	<100	100	100	<100	<100	<50	<100	700	920	1100	1700	1700
Dissolved Lead (Pb)	ug/L	-	25	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0	<0.50	---	1.0	<1.0	<1.0	<1.0	<0.50
Dissolved Lithium (Li)	ug/L	-	-	220	250	230	220	---	<1.0	52	53	56	---	---	20	33	---	---	89	90	74	74	---
Dissolved Magnesium (Mg)	ug/L	-	-	630000	770000	730000	660000	700000	11000	110000	96000	100000	99000	98000	43000	100000	120000	72000	100000	110000	98000	97000	66000
Dissolved Manganese (Mn)	ug/L	-	-	8600	7300	7200	7900	4900	<4.0	520	440	560	530	530	170	480	600	310	460	430	330	340	270
Dissolved Molybdenum (Mo)	ug/L	-	9200	4.5	<4.0	<4.0	<4.0	<20	<4.0	<4.0	<4.0	4	3.0	3.0	12	5.5	4.9	---	5.6	5.7	5.6	5.5	8.2
Dissolved Nickel (Ni)	ug/L	-	490	**1000**	<3.0	<3.0	<3.0	<20	<3.0	<3.0	47	<3	<2.0	<2.0	<3.0	<3.0	<2.0	---	<3.0	<3.0	<3.0	<3.0	<2.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	<100	<100	<100	<1000	<100	<100	<100	<100	<100	100	<100	<100	150	---	<100	<100	<100	<100	<100
Dissolved Potassium (K)	ug/L	-	-	91000	110000	110000	100000	96000	<600	21000	17000	23000	21000	21000	32000	39000	38000	<600	18000	19000	17000	17000	15000
Dissolved Selenium (Se)	ug/L	-	63	<1.0	<1.0	28	21	<10	<1.0	<1.0	13	15	<1.0	<1.0	9.3	1.8	<1.0	---	<1.0	<1.0	<1.0	9.2	<1.0
Silicon (Si)	ug/L	-	-	6500	---	---	---	---	33	---	---	---	---	---	---	---	---	---	6200	---	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<1.0	<0.10	0.28	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Sodium (Na)	ug/L	-	2300000	**5100000**	**5700000**	**4800000**	**4900000**	**5200000**	<300	1500000	1300000	1600000	1500000	1500000	480000	770000	890000	1000000	830000	880000	810000	800000	1500000
Dissolved Strontium (Sr)	ug/L	-	-	70000	84000	83000	76000	78000	850	19000	13000	18000	17000	17000	5400	8800	12000	---	24000	25000	19000	19000	14000
Dissolved Thallium (Tl)	ug/L	-	510	<0.80	<0.80	<0.80	<0.80	<1.0	<0.80	<0.80	<0.80	<0.80	<0.10	<0.10	<0.80	<0.80	<0.10	---	<0.80	<0.80	<0.80	<0.80	<0.10
Dissolved Tin (Sn)	ug/L	-	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<2.0	<2.0	<20	<20	<2.0	---	<20	<20	<20	<20	<2.0
Dissolved Titanium (Ti)	ug/L	-	-	9	<3.0	<3.0	<3.0	<20	<3.0	<3.0	<3.0	<3.0	<2.0	<2.0	<3.0	<3.0	<2.0	---	<3.0	3.2	5.8	7.7	2.1
Dissolved Uranium (U)	ug/L	-	420	14	<0.15	<0.15	3.5	3.8	3	8.4	7.1	6.5	7.0	7.1	<0.15	0.53	0.90	---	0.99	0.95	0.94	0.93	1.5
Dissolved Vanadium (V)	ug/L	-	250	<2.0	<2.0	<2.0	<2.0	<20	**650**	<2.0	<2.0	4.4	<2.0	<2.0	<2.0	<2.0	2.3	---	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Zinc (Zn)	ug/L	-	1100	<5.0	<5.0	<5.0	<5.0	<50	---	<5.0	32	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	---	---	<5.0	<5.0	<5.0	5.8
Zinc total (Zn)	ug/L	-	1100	---	---	---	---	---	<5.0	---	---	---	---	---	---	---	---	---	<5.0	---	---	---	---
Mercury total (Hg)	ug/L	-	0.29	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulphur (S)	ug/L	-	-	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1200000	---	---	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 3 (continued)
Groundwater Metals Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU32-001-MWA	SCU32-001-MWA	SCU32-001-MWB	SCU32-001-MWB	SCU32-002-MWA	SCU32-002-MW	SCU32-003-MW	SCU32-003-MW	SCU32-004-MW	SCU32-004-MW	SCU32-004-MW	SCU33-001-MW	SCU33-001-MW	SCU33-001-MW	SCU33-001-MW	SCU33-001-MW	MCES-007-MW-001	MCES-007-MWB	MCES-007-MW	MCES-007-MW
Sampling Date				24-Nov-11	5-Dec-13	24-Nov-11	5-Dec-13	25-Nov-11	5-Dec-13	25-Nov-11	5-Dec-13	25-Nov-11	5-Dec-13	5-Dec-13	27-Jul-07	25-Nov-09	16-Nov-10	25-Oct-11	7-Dec-13	26-Jul-03	11-Jul-12	27-Nov-12	5-Dec-13
Field Duplicate Label														FD #5									
Dissolved Aluminum (Al)	ug/L	-	-	25	360	<50	44	680	670	<50	79	33	360	1000	600	53	30	32	30	<5.0	10	38	5.0
Dissolved Antimony (Sb)	ug/L	-	20000	<0.40	<1.0	<4.0	<1.0	<0.40	<1.0	<4.0	<1.0	<0.40	<1.0	<1.0	<0.40	<0.40	<0.40	<0.40	<1.0	<0.40	1.2	1.1	1.0
Dissolved Arsenic (As)	ug/L	-	1900	1	1.6	<6.0	2.3	4.7	5.0	<6.0	<1.0	<0.60	<1.0	<1.0	<0.60	<0.60	<0.60	0.67	<1.0	<0.60	2.3	2.2	1.0
Dissolved Barium (Ba)	ug/L	-	29000	98	94	180	290	46	47	150	130	200	300	310	200	75	100	93	130	490	23	63	1.0
Dissolved Beryllium (Be)	ug/L	-	67	<0.50	<1.0	<5.0	<1.0	<0.50	<1.0	<5.0	<1.0	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	1.0
Dissolved Bismuth (Bi)	ug/L	-	-	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0
Dissolved Boron (B)	ug/L	-	45000	<100	<50	<1000	190	<100	<50	<100	<50	<100	<50	<50	<100	<100	<100	<100	<50	<100	<100	<100	50
Dissolved Cadmium (Cd)	ug/L	-	2.7	<0.017	0.011	<0.17	0.028	<0.017	<0.010	<0.17	0.014	<0.017	0.015	0.026	**2.9**	<0.017	<0.017	<0.017	<0.010	<0.017	<0.017	<0.017	0.010
Dissolved Calcium (Ca)	ug/L	-	-	270000	220000	3500000	3300000	210000	200000	250000	250000	300000	300000	310000	250000	190000	230000	220000	300000	380000	22000	56000	100
Dissolved Chromium (Cr)	ug/L	-	810	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<1.0	9.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.8	9.6	1.0
Dissolved Cobalt (Co)	ug/L	-	66	<1.0	<0.40	<10	1.9	<1.0	<0.40	<10	<0.40	<1.0	<0.40	0.44	<1.0	<1.0	<1.0	<1.0	<0.40	<1.0	<1.0	<1.0	0.40
Dissolved Copper (Cu)	ug/L	-	87	<2.0	5.8	<20	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0
Dissolved Iron (Fe)	ug/L	-	-	<100	<50	5800	2900	<100	180	<1000	<50	<100	180	4000	3200	<100	<100	<100	<50	690	<100	<100	50
Dissolved Lead (Pb)	ug/L	-	25	<1.0	<0.50	<10	0.68	<1.0	<0.50	<10	<0.50	<1.0	2.5	6.3	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	0.50
Dissolved Lithium (Li)	ug/L	-	-	140	---	250	---	83	---	170	---	160	---	---	75	52	64	55	---	---	9.2	25	---
Dissolved Magnesium (Mg)	ug/L	-	-	<60	180	720000	660000	<60	<100	<600	<100	<60	360	530	<60	65	<60	<60	<100	<60	600	<60	100
Dissolved Manganese (Mn)	ug/L	-	-	<4.0	2.0	2700.0	2600	<4.0	2.1	<40	<2.0	<4.0	11	180	<4.0	<4.0	<4.0	<4.0	<2.0	<4.0	<4.0	<4.0	2.0
Dissolved Molybdenum (Mo)	ug/L	-	9200	71	58	<40	5.9	48	42	130	58	29	30	12	51	31	63	53	54	1.8	<4.0	6.2	2.0
Dissolved Nickel (Ni)	ug/L	-	490	<3.0	<2.0	<30	3.5	<3.0	<2.0	<30	<2.0	<3.0	<2.0	2.5	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	2.0
Dissolved Phosphorus (P)	ug/L	-	-	<100	<100	<1000	<100	<100	<100	<1000	<100	<100	100	400	<100	<100	<100	<100	<100	<100	<100	<100	100
Dissolved Potassium (K)	ug/L	-	-	68000	45000	39000	43000	24000	29000	80000	67000	47000	50000	49000	16000	14000	21000	21000	22000	31000	4100	8200	100
Dissolved Selenium (Se)	ug/L	-	63	17	4.7	<10	<1.0	7.3	3.9	28	7.1	15	16	19	21	6.2	4.2	15	1.7	<1.0	1.2	1.1	1.0
Silicon (Si)	ug/L	-	-	---	---	---	---	---	---	---	---	---	---	---	---	1400	---	---	---	<100	---	---	---
Dissolved Silver (Ag)	ug/L	-	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<1.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10
Dissolved Sodium (Na)	ug/L	-	2300000	97000	64000	**3000000**	**2300000**	84000	76000	98000	90000	56000	83000	82000	120000	66000	49000	48000	480000	35000	21000	54000	100
Dissolved Strontium (Sr)	ug/L	-	-	1900	2300	170000	170000	960	920	2200	2700	2500	2600	2600	980	780	1100	960	1400	2500	160	510	2.0
Dissolved Thallium (Tl)	ug/L	-	510	<0.80	<0.10	<8.0	<0.10	<0.80	<0.10	<8.0	<0.10	<0.80	<0.10	<0.10	<0.80	<0.80	<0.80	<0.80	<0.10	<0.80	<0.80	<0.80	0.10
Dissolved Tin (Sn)	ug/L	-	-	20	8.6	<200	<2.0	<20	7.8	<200	6.9	<20	<2.0	<2.0	<20	<20	<20	<20	<2.0	<20	<20	<20	2.0
Dissolved Titanium (Ti)	ug/L	-	-	<3.0	<2.0	<30	2.3	<3.0	<2.0	<30	<2.0	<3.0	8.9	42	<3.0	<3.0	<3.0	<3.0	<2.0	<3.0	<3.0	<3.0	2.0
Dissolved Uranium (U)	ug/L	-	420	<0.15	<0.10	<1.5	1.1	<0.15	<0.10	<1.5	<0.10	<0.15	<0.10	0.20	<0.15	<0.15	<0.15	<0.15	<0.10	<0.15	0.24	<0.15	0.10
Dissolved Vanadium (V)	ug/L	-	250	3.7	9.4	<20	<2.0	<2.0	<2.0	<20	3.9	<2.0	2.1	26	<2.0	3.3	2.4	3.5	2.1	<2.0	32	34	2.0
Dissolved Zinc (Zn)	ug/L	-	1100	<5.0	5.2	<50	15	<5.0	<5.0	<50	<5.0	<5.0	5.9	9.2	<5.0	---	<5.0	<5.0	<5.0	---	<5.0	<5.0	5.0
Zinc total (Zn)	ug/L	-	1100	---	---	---	---	---	---	---	---	---	---	---	---	<5.0	---	---	---	<5.0	---	---	---
Mercury total (Hg)	ug/L	-	0.29	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.013	0.023	0.014	0.02	<0.013	<0.013	<0.013	<0.013	0.013	---	<0.013
Dissolved Mercury (Hg)	ug/L	-	0.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.045	---
Sulphur (S)	ug/L	-	-	---	---	---	---	---	---	---	---	---	---	---	110000	---	---	---	---	---	---	---	---

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* analysed for total metals

MWB)

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Table 4
Groundwater VOC Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	NSE Tier 1 EQS[1]	Standard MOE Table 3[2]	SCU10-001-MW	SCU10-001-MW	SCU10-001-MW	SCU10-001-MW	SCU10-001-MW	SCU10-001-MW	SCU10-001-MW	SCU10-001-MW
Sampling Date				17-Sep-03	8-Jul-05	19-Nov-08	17-Nov-09	10-Nov-10	25-Oct-11	20-Nov-12	2-Dec-13
Chlorobenzenes											
1,2-Dichlorobenzene	ug/L	64000	4600	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50
1,3-Dichlorobenzene	ug/L	-	9600	<1	<1	<1	<1	<1	<1	<1	<1.0
1,4-Dichlorobenzene	ug/L	2600	8	<1	<1	<1	<1	<1	<1	<1	<1.0
Chlorobenzene	ug/L	180	630	<1	<1	<1	<1	<1	<1	<1	<1.0
Volatile Organics											
1,1,1-Trichloroethane	ug/L	13000	640	<1	<1	<1	<1	<1	<1	<1	<1.0
1,1,2,2-Tetrachloroethane	ug/L	630	3.2	---	<1	<1	<1	<1	<1	<1	<0.50
1,1,2-Trichloroethane	ug/L	910	4.7	<1	<1	<1	<1	<1	<1	<1	<1.0
1,1-Dichloroethane	ug/L	6600	320	7.8	5	3	2	2	<2	<2	2.1
1,1-Dichloroethylene	ug/L	490	1.6	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50
1,2-Dichloroethane	ug/L	300	1.6	<1	<1	<1	<1	<1	<1	<1	<1.0
1,2-Dichloropropane	ug/L	330	16	<1	---	<1	<1	<1	<1	<1	<0.50
Benzene	ug/L	20000	44	<1	1	<1	<1	<1	<1	<1	<1.0
Bromodichloromethane	ug/L	-	85000	<1	<1	<1	<1	<1	<1	<1	<1.0
Bromoform	ug/L	84000	380	<1	<1	<1	<1	<1	<1	<1	<1.0
Bromomethane	ug/L	33	5.6	<3	<3	<3	<3	<3	<3	<3	<0.50
Carbon Tetrachloride	ug/L	6.8	0.79	<1	<1	<1	<1	<1	<1	<1	<0.50
Chloroethane	ug/L	-	-	<8	<8	<8	<8	<8	<8	<8	<8.0
Chloroform	ug/L	40	2.4	<1	<1	<1	<1	<1	<1	<1	<1.0
Chloromethane	ug/L	-	-	<8	<8	<8	<8	<8	<8	<8	<8.0
cis-1,2-Dichloroethylene	ug/L	30	1.6	**88**	**90**	**83**	**79**	**80**	**77**	**88**	**92**
cis-1,3-Dichloropropene	ug/L	100	-	<2	<2	<2	<2	<2	<2	<2	<0.50
Dibromochloromethane	ug/L	10000	82000	<1	<1	<1	<1	<1	<1	<1	<1.0
Ethylbenzene	ug/L	20000	2300	<1	<1	<1	<1	<1	<1	<1	<1.0
Ethylene Dibromide	ug/L	51	0.25	---	---	<1	<1	<1	<1	<1	<0.20
Methylene Chloride(Dichloromethane)	ug/L	43000	610	---	<3	<3	<3	<3	<3	<3	<3.0
o-Xylene	ug/L	-	-	<1	<1	<1	<1	<1	<1	<1	<1.0
p+m-Xylene	ug/L	-	-	<2	<2	<2	<2	<2	<2	<2	<2.0
Styrene	ug/L	26000	1300	<1	<1	<1	<1	<1	<1	<1	<1.0
Tetrachloroethylene	ug/L	1300	1.6	**2.7**	**2**	**2**	1	**2**	**2**	<1	<1.0
Toluene	ug/L	20000	18000	<1	<1	<1	<1	<1	<1	<1	<1.0
trans-1,2-Dichloroethylene	ug/L	30	1.6	---		**3**	**2**	**4**	**3**	**2.3**	**1.8**
trans-1,3-Dichloropropene	ug/L	100	-	<1	<1	<1	<1	<1	<1	<1	<0.50
Trichloroethylene	ug/L	1300	1.6	**5.9**	**4**	**4**	**3**	**3**	**3**	**2.4**	**1.9**
Trichlorofluoromethane (FREON 11)	ug/L	-	2500	<8	<8	<8	<8	<8	<8	<8	<8.0
Vinyl Chloride	ug/L	13	0.5	**2.3**	**8**	**8**	**5.7**	**9**	**9**	**3.5**	*<4.0**

Notes:

ug/L - micrograms per litre

ND = Not detected

ND(1) = elevated RDL to concentration in brackets

RDL = Reportable Detection Limit

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

'-' - no guideline available

'---' - sample not analyzed for parameter indicated

* Elevated VOC RDL(s) due to matrix interference.

Exceeds NSE Tier 1 EQS

Exceeds MOE Table 3

Reportable detectable Limit Exceeds applicable guidelines.

Table 5
Groundwater PCB Analysis
Harbourside Commercial Park
Groundwater Monitoring Program

Monitor Well ID	Units	Sampling Date	PCBs
SCU19-029-MW	ug/L	28-Jul-11	<0.05
SCU19-029-MW	ug/L	28-Oct-11	<0.05
SCU19-029-MW	ug/L	27-Nov-12	<0.05*
SCU19-029-MW	ug/L	7-Dec-13	<0.050*
SCU19-030-MW	ug/L	28-Jul-11	<0.05
SCU19-030-MW	ug/L	28-Oct-11	<0.05
SCU19-030-MW	ug/L	27-Nov-12	<0.05
SCU19-030-MW	ug/L	7-Dec-13	<0.050
NSE Tier 1 EQS[1]			180
Standard MOE Table 3[2]			7.8

Notes:

ug/L = microgram per litre

ND = Not detected

RDL = Reportable Detection Limit

* Sample contained sediment.

[1] - NSE Tier 1 Environmental Quality Standards for Groundwater (Coarse Grained Soil, Non-Potable Groundwater Commercial/Industrial Site), 2013

[2] - Ontario Ministry of Environment, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water (coarse-grained soil), 2011

Exceeds NSE tier 1 EQS

Exceeds MOE Table 3

APPENDIX A

Groundwater Sampling Summary and Field Records

2013 Groundwater Monitoring Program
Harbourside Commercial Park, Sydney, NS
SLR Project No.: 210.05890.00000

Table A-1
2013 Groundwater Monitoring Summary of Field Forms

BH ID	Date	Monitoring Data			Purge Water Parameter Stabilization Data							Sampling Data						Comments
		Depth (m)																
		to Product	to GW	to EOH	Purge Method	T (^{0}C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Redox (mV)	Sampling Method	BTEX/TPH	PAH	Metals & Hg	VOCs	PCB's	
SCU6-004-MW	Dec-02-2013	-	4.480	5.601	LF	11.46	7.29	1.69	1.26	90.4	-115	LF		x				
SCU7-006-MW	Dec-02-2013	-	1.193	4.885	LF	10.15	7.09	0.882	3.07	1.7	-47	LF		x				
SCU8-002-MW	Dec-02-2013	-	0.661	3.076	LF	9.87	7.19	0.931	3.01	4.0	142	LF	x	x	x			
SCU10-001-MW	Dec-02-2013	-	1.786	3.761	LF	8.96	6.64	0.922	0.00	6.9	-4	LF				x		
SCU10-004-MW	Dec-02-2013	-	2.519	5.771	LF	nm	nm	nm	nm	nm	nm	LF	x	x	x			Did not use flow through cell due to product in water
SCU11-003-MW	Dec-02-2013	-	2.752	4.379	LF	9.93	7.40	0.749	0.24	3.8	102	LF	x	x	x			
SCU15-001-MWB	Dec-07-2013	-	6.751	14.529	LF	9.96	8.21	0.353	0.00	15.3	-81	LF	x	x				
SCU15-004-MWA	Dec-03-2013	-	6.289	9.045	LF	9.62	9.73	0.696	0.00	3.4	-275	LF	x	x	x			FD #3
SCU15-004-MWB	Dec-03-2013	-	6.384	14.041	LF	9.23	7.36	0.836	0.00	0.5	-133	LF	x	x	x			
SCU15-008-MWB	Dec-09-2013	-	6.362	10.131	LF	10.57	7.72	0.720	0.00	12.5	-153	LF	x	x				
SCU15-012-MW	Dec-09-2013	-	5.822	7.014	LF	11.09	6.91	1.32	2.62	281.0	124	LF	x	x				
SCU15-018-MW	Dec-03-2013	-	3.789	8.209	LF	10.67	6.89	1.17	0.00	>1000	-59	LF	x	x	x			
SCU16-001-MW	Dec-03-2013	-	0.969	2.059	LF	8.81	10.23	0.375	11.05	60.5	-20	LF	x	x	x			
SCU16-004-MW	Dec-03-2013	-	1.488	5.515	LF	9.94	8.55	0.663	9.15	24.8	102	LF	x	x	x			
SCU16-006-MW	Dec-03-2013	-	2.218	5.361	LF	10.81	7.23	3.52	0.00	62.5	-123	LF	x	x	x			FD #4
SCU16-011-MWA	Dec-04-2013	-	1.771	5.602	LF	11.29	10.18	0.545	2.51	0.7	-43	LF	x	x	x			
SCU16-011-MWB	Dec-04-2013	-	3.916	11.167	LF	11.05	11.70	0.931	0.00	8.7	-279	LF	x	x	x			
SCU16-011-MWC	Dec-04-2013	-	6.009	14.006	LF	11.10	11.12	0.673	0.00	4.5	-251	LF	x	x	x			
SCU16-013-MW	Dec-04-2013	-	5.232	6.759	LF	11.27	12.51	2.66	5.77	5.0	-99	LF	x	x	x			
SCU16-014-MW	Dec-06-2013	-	6.893	8.578	LF	10.78	8.38	0.911	0.00	2.1	-220	LF	x	x	x			
SCU17-004-MW	Dec-02-2013	-	6.578	9.252	LF	10.14	12.09	1.42	0.00	0.0	-275	LF	x	x	x			
SCU17-010-MWA	Dec-01-2013	-	5.871	8.280	LF	11.80	9.21	0.798	2.52	2.5	-37	LF	x	x	x			FD #2
SCU17-010-MWB	Dec-01-2013	-	6.435	19.884	LF	10.91	6.75	6.39	0.07	3.0	-35	LF	x	x	x			
SCU17-010-MWC	Dec-01-2013	-	6.944	23.241	LF	10.71	6.99	8.00	0.00	1.8	-87	LF	x	x	x			
SCU18-001-MW	Nov-29-2013	-	2.324	6.617	LF	7.29	6.75	2.27	0.00	17.5	1	LF	x	x	x			
SCU18-002-MWA	Nov-29-2013	-	2.735	5.059	LF	10.09	7.12	1.46	0.44	15.0	105	LF	x	x	x			FD #1
SCU18-007-MW	Dec-02-2013	-	1.318	2.731	LF	10.05	7.63	0.739	5.58	19.9	108	LF	x	x	x			
SCU18-009-MW	Dec-01-2013	-	2.349	5.767	LF	9.74	9.73	0.868	0.00	0.0	-288	LF	x	x	x			
SCU18-010-MW	Nov-29-2013	-	2.559	4.941	LF	9.81	10.36	1.11	0.30	19.9	-85	LF	x	x	x			
SCU18-011-MW	Nov-29-2013	-	1.694	4.392	LF	9.77	8.36	1.16	0.00	14.5	-249	LF	x	x	x			
SCU19-002-MWA	Nov-27-2013	-	6.654	8.459	LF	10.46	8.41	6.24	0.51	11.9	-242	LF	x	x	x			
SCU19-002-MWB	Nov-27-2013	-	6.554	21.129	LF	10.32	7.05	12.60	0.00	6.6	-87	LF	x	x	x			
SCU19-010-MW	Dec-01-2013	-	3.111	8.142	LF	11.07	9.30	1.01	1.49	0.0	126	LF	x	x	x			
SCU19-015-MW	Nov-29-2013	-	6.011	6.479	LF	8.17	7.73	2.15	7.40	0.1	78	LF	x	x	x			
SCU19-029-MW	Dec-07-2013	-	1.652	5.633	LF	10.82	7.68	1.42	0.00	143	-176	LF	x	x	x		x	
SCU19-030-MW	Dec-07-2013	-	2.044	4.993	LF	10.56	7.59	1.42	0.00	5.6	-211	LF	x	x	x		x	
SCU19-031-MW	Nov-27-2013	-	3.778	7.398	LF	11.14	7.44	1.56	0.22	6.3	-101	LF	x	x	x			
SCU19-032-MW	Nov-29-2013	-	-	6.084	-	nm	nm	nm	nm	nm	nm	-						red sediment at bottom of well
SCU20-013-MW	Nov-26-2013	-	3.439	7.952	LF	9.15	12.40	2.62	0.00	27.1	-300	LF	x	x	x			
SCU20-014-MW	Nov-27-2013	-	4.072	7.777	LF	13.28	11.50	1.26	0.00	7.6	-297	LF	x	x	x			
SCU20-015-MW	Nov-27-2013	-	6.483	9.617	LF	10.25	10.95	1.36	0.00	18.8	-277	LF	x	x	x			
SCU20-016-MW	Nov-26-2013	-	4.862	9.524	LF	11.74	11.24	1.12	0.00	1.5	-300	LF	x	x	x			
SCU20-017-MW	Nov-26-2013	-	3.322	7.311	LF	12.12	11.38	1.17	0.00	24.5	-325	LF	x	x	x			
SCU20-018-MW	Nov-26-2013	-	2.239	5.054	LF	10.65	7.74	2.02	0.80	0.6	-68	LF	x	x	x			
SCU25-001-MW	Dec-06-2013	-	7.848	12.631	LF	10.14	12.66	3.00	0.00	8.7	-298	LF	x	x	x			
SCU25-003-MW	Dec-06-2013	-	7.366	8.329	LF	9.97	12.89	3.97	3.46	1.9	-205	LF		x				
SCU25-004-MW	Dec-06-2013	-	7.508	9.502	LF	10.22	12.77	3.39	2.53	5.3	-148	LF			x			
SCU25-007-MW	Dec-06-2013	-	8.174	9.889	LF	10.49	12.60	2.51	1.84	0.3	-184	LF	x	x	x			
SCU26-001-MW	Dec-05-2013	-	22.35	25.16	SP	nm	nm	nm	nm	nm	nm	B	x	x	x			
SCU26-002-MW	Dec-05-2013	-	25.50	30.33	SP	nm	nm	nm	nm	nm	nm	B	x	x	x			
SCU26-007-MW	Dec-06-2013	-	11.29	12.39	B	nm	nm	nm	nm	nm	nm	B		x				
SCU27-002-MW	Dec-05-2013	-	22.75	44.98	SP	nm	nm	nm	nm	nm	nm	B	x	x	x			
SCU31-002-MWB	Dec-07-2013	-	6.868	23.445	LF	10.47	7.02	10.40	0.00	13.6	-13	LF	x	x	x			FD #6
SCU31-013-MWB	Dec-04-2013	-	6.264	18.358	LF	11.08	8.15	7.47	3.69	473	-144	LF	x	x	x			
SCU31-013-MWC	Dec-04-2013	-	6.366	23.034	LF	11.27	7.37	9.10	0.00	182	-127	LF	x	x	x			
SCU32-001-MWA	Dec-05-2013	-	16.37	22.17	B	nm	nm	nm	nm	nm	nm	B	x	x	x			
SCU32-001-MWB	Dec-05-2013	16.16	nm	36.18	B	nm	nm	nm	nm	nm	nm	B	x	x	x			probe did not measure water level due to product
SCU32-002-MW	Dec-05-2013	-	16.42	21.50	SP	nm	nm	nm	nm	nm	nm	B	x	x	x			
SCU32-003-MW	Dec-05-2013	-	16.28	22.74	SP	nm	nm	nm	nm	nm	nm	B	x	x	x			
SCU32-004-MW	Dec-05-2013	-	16.88	23.04	SP	nm	nm	nm	nm	nm	nm	B	x	x	x			FD #5
SCU33-001-MW	Dec-07-2013	-	8.604	11.601	LF	9.68	12.70	6.07	0.00	1.1	-288	LF	x	x	x			
MCES-007-MW	Dec-05-2013	-	21.90	30.83	SP	nm	nm	nm	nm	nm	nm	B	x	x	x			

Note: EOH = end of hole
nm = not measured

LF = low flow
SP = submersible pump
B = bailer

Table A-2
Product Check Observations

MW ID	Date	Depth (m)			Comments
		to Product	to GW	to EOH	
SCU15-001-MWA	Nov-15-2013	-	7.281	7.604	probe did not detect product, product present on tape, rust colored sediment on top of probe, thick black product on end of probe, slight hydrocarbon odor
SCU31-002-MWA	Nov-15-2013	-	6.366	10.011	probe did not detect product, product present on tape and probe, slight hydrocarbon odor; attempted to bail product- water was clear while the outside of the bailer came up covered in thick black product
SCU15-016-MW	Nov-15-2013	-	5.081	6.954	probe did not detect product, no product present on tape or probe, no hydrocarbon odor, rust colored sediment on probe; when bailed, rust colored sediment was present within and on the outside of the bailer
SCU11-001-MWA	Nov-15-2013	-	3.195	4.744	probe did not detect product, no product present on tape or probe, no hydrocarbon odor
SCU11-001-MWB	Nov-15-2013	-	2.167	4.986	probe did not detect product, no product present on tape or probe, no hydrocarbon odor
SCU15-008-RW	Nov-18-2013	-	2.745	3.559	probe did not detect product, bottom 2m of tape and probe were covered in thick, black product, slight hydrocarbon odor; attempted to bail product- outside of bailer covered in product, slight layer in top of bailer
RW1	Nov-18-2013	-	2.910	4.545	probe did not detect product, no product present on tape or probe, slight hydrocarbon odor
RW2	Nov-18-2013	-	2.805	4.690	probe did not detect product, no product present on tape or probe, no hydrocarbon odor
SCU10-003-MW	Nov-18-2013	-	2.556	4.967	probe did not detect product, no product present on tape or probe, no hydrocarbon odor
SCU10-002-MW	Nov-18-2013	-	3.140	4.322	probe did not detect product, product present on probe, strong hydrocarbon odor; attempted to bail product- water was clear, product present on outside of bailer

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: November 26, 2013
Weather: 3°C overcast
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (L)	T (°C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Redox (mV)	Appear / Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	# of bottles	Comments
1 SCU20-018-MW			1	2.239	5.054		LF	10:25	0	0	11.43	6.92	2.67	1.18	436	-72	dark brown	SCU20-018-MW	LF	11:00	BTEX, TPH, PAH, Metals, Hg	9	
									3	4	11.30	7.22	2.65	0.64	199	-25	cloudy						
									12	5	11.10	7.42	2.40	0.82	85.5	-100	clear						
									17	7	10.89	7.67	2.07	1.08	19.6	-71							
									21	8	10.70	7.73	2.00	0.95	4.6	-51							
									24	8.5	10.66	7.73	2.02	0.82	3.2	-68							
									27	9	10.63	7.74	2.02	0.83	1.7	-68							
									30	9.5	10.68	7.74	2.02	0.83	1.0	-68							
									33	10	10.65	7.74	2.02	0.80	0.6	-68							
2 SCU20-013-MW			1	3.439	7.952		LF	12:16	0	0	8.92	12.07	2.66	0.45	139	-296	clear	SCU20-013-MW	LF	12:33	BTEX, TPH, PAH, Metals, Hg	9	* cap & replaced lock
									3	1	9.09	12.37	2.67	0.00	180	-301							
									6	2	9.15	12.39	2.66	0.00	71.3	-303							
									9	3	9.16	12.40	2.65	0.00	56.0	-305							
									12	4	9.14	12.40	2.65	0.00	45.6	-305							
									15	5	9.13	12.40	2.63	0.00	34.0	-361							
									18	6	9.15	12.40	2.62	0.00	27.1	-300							
3 SCU20-017-MW			1	3.322	7.311		LF	14:58	0	0	11.30	11.47	1.19	0.00	650	-302	dark brown	SCU20-017-MW	LF	15:35	BTEX, TPH, PAH, Metals, Hg	9	
									3	1	11.70	11.40	1.17	0.00	345	-310	cloudy						
									6	2	12.17	11.37	1.15	0.00	193	-313	clear						
									9	3	12.28	11.36	1.15	0.00	143	-314							
									12	4	12.26	11.36	1.15	0.00	86.7	-322							
									15	5	12.23	11.37	1.16	0.00	62.1	-324							
									18	6	12.24	11.37	1.16	0.00	47.0	-324							
									21	7	12.19	11.37	1.16	0.00	44.2	-324							
									24	8	12.18	11.37	1.16	0.00	40.9	-323							
									27	9	12.18	11.37	1.17	0.00	33.3	-325							
									30	10	12.12	11.38	1.17	0.00	24.5	-325							

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: Nov 26-27 2013
Weather: overcast, raining
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Redox (mV)	Appear./Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
SCU20-016-MW			1	4.862	9.524		LF	16:06	0	0	10.27	11.06	1.11	0.09	134	-221	clear	SCU20-016-MW	LF	16:27	BTEX, TPH, PAH, metals, Hg	9
									3	1	11.48	11.21	1.12	0.00	25.6	-280					
									6	2	11.66	11.23	1.12	0.00	11.6	-290					
									9	3	11.75	11.23	1.12	0.00	4.0	-295					
									12	4	11.74	11.24	1.12	0.00	2.8	-298					
									15	5	11.74	11.24	1.12	0.00	1.5	-300					
SCU20-014-MW			1	4.072	7.717		LF	8:34	0	0	20.12	11.60	1.17	1.68	84.0	-295	clear	SCU20-014-MW	LF	9:10	BTEX, TPH, PAH, Metals, Hg	9
									3	1	19.11	11.67	1.29	0.85	60.4	-292					
									6	2	18.16	11.69	1.32	0.54	38.2	-293					
									9	3	17.39	11.68	1.30	0.39	32.2	-287					
									12	4	16.61	11.66	1.30	0.28	23.7	-289					
									15	5	15.96	11.61	1.24	0.21	14.0	-291					
									18	6	15.40	11.57	1.22	0.16	10.3	-295					
									21	7	15.00	11.55	1.24	0.12	10.1	-291					
									24	8	14.35	11.53	1.24	0.06	10.4	-296					
									27	9	13.95	11.51	1.24	0.01	9.0	-299					
									30	10	13.71	11.50	1.25	0.00	9.9	-299					
									33	11	13.28	11.50	1.26	0.00	7.6	-297					
SCU20-015-MW			1	6.483	9.617		LF	11:42	0	0	10.38	12.29	2.54	1.47	>1000	-279	slightly silty	SCU20-015-MW	LF	12:10	BTEX, TPH, PAH, Metals, Hg	9
									3	1	10.31	12.13	1.95	0.94	586	-295	(clearing				
									6	2	10.26	11.75	1.56	0.52	181	-290	clear)				
									9	3	10.25	11.47	1.47	0.33	140	-285					
									12	4	10.25	11.35	1.44	0.19	109	-285					
									15	5	10.25	11.19	1.40	0.06	44.1	-283					
									18	6	10.25	11.09	1.37	0.00	24.6	-280					
									21	7	10.25	10.99	1.36	0.00	19.3	-278					
									24	8	10.25	10.95	1.36	0.00	18.8	-277					

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: Nov 27, 2013
Weather: overcast, light rain 4°C
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	Depth (m): to GW	Depth (m): to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
7 SCU19-031-MW			—	3.778	7.398		LF	13:33	0	0	10.79	8.06	1.62	1.91	580	-135	slight silt	SCU19-031-MW	LF	14:02	BTEX, TPH, Metals, Hg, PAH	9
									3	1	10.80	7.78	1.61	0.80	186	-145	cleaning					
									6	2	10.83	7.69	1.61	0.38	105	-144						
									9	3	10.92	7.63	1.60	0.19	61.1	-141						
									12	4	10.99	7.59	1.60	0.07	37.0	-136						
									15	5	11.05	7.56	1.59	0.03	24.9	-133						
									18	6	11.07	7.54	1.58	0.10	17.7	-123						
									21	7	11.09	7.50	1.56	0.19	9.2	-108						
									24	8	11.14	7.44	1.56	0.22	6.3	-101						
8 SCU19-002-MWB			—	6.554	21.129		LF	14:50	0	0	10.37	9.55	10.5	3.53	18.3	-88	clear	SCU19-002-MWB	LF	15:04	BTEX, TPH, Metals, Hg, PAH	9
									3	1	10.35	7.16	11.7	0.88	11.6	-94						
									6	2	10.33	7.10	12.2	0.49	6.6	-96						
									9	3	10.33	7.06	12.5	0.20	5.6	-92						
									12	4	10.33	7.05	12.6	0.00	6.2	-88						
									15	5	10.33	7.05	12.6	0.00	6.1	-87						
									18	6	10.32	7.05	12.6	0.00	6.6	-87						
9 SCU19-002-MWA			—	6.654	8.459		LF	15:32	0	0	10.34	8.19	6.31	2.95	39.5	-202	clear	SCU19-002-MWA	LF		BTEX, TPH, Metals, Hg, PAH	9
									3	1	10.39	8.30	6.27	1.58	24.1	-221						
									6	2	10.39	8.32	6.26	1.34	18.5	-226						
									9	3	10.42	8.34	6.25	1.15	16.1	-231						
									12	4	10.42	8.37	6.24	0.86	14.0	-234						
									15	5	10.44	8.39	6.24	0.69	13.4	-238						
									18	6	10.45	8.40	6.24	0.64	15.1	-240						
									21	7	10.46	8.41	6.24	0.51	11.9	-242						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

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Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: Nov 29 2013
Weather: overcast light snow -2°C
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
SCU18-006-MW			-	1.262	6.643		LF	8:41	0	0	12.34	7.78	1.99	3.04	979	21	brown silt	—				wasp nest in stick up, grass in well(?)
									3	1	12.18	7.54	1.96	2.15	470	18	cleaning					*not part of program
									9	3	10.64	7.46	2.02	2.55	>1000	61	clear					
SCU18-011-MW			-	1.694	4.392		LF	9:17	0	0	9.47	8.39	1.19	0.21	314	-40	brown silty	SCU18-011-MW	LF	9:43	BTEX, TPH, Metals, PAH	9
									3	1	9.65	8.21	1.17	0.07	159	-119	cleaning					
									6	2	9.69	8.20	1.15	0.00	76.6	-182	cleaning					
									9	3	9.75	8.26	1.13	0.00	46.4	-214	clear					
									12	4	9.75	8.29	1.15	0.00	32.3	-227						
									15	5	9.80	8.32	1.15	0.00	24.2	-235						
									18	6	9.79	8.34	1.15	0.00	19.3	-241						
									21	7	9.78	8.36	1.15	0.00	14.5	-246						
									24	8	9.77	8.36	1.16	0.00	14.5	-249						
SCU18-002-MW			-	2.735	5.059		LF	10:10	0	0	8.89	7.34	1.48	4.58	185	96	clear	SCU18-002-MW / FD#1	LF	10:47	BTEX, TPH, Metals, Hg, PAH	*FD#1
									3	1	9.45	7.20	1.48	4.15	391	103						9
									6	2	9.73	7.14	1.49	1.02	271	104						15
									9	3	9.80	7.13	1.47	0.63	145	102						
									12	4	9.83	7.13	1.47	0.68	71.5	102						
									15	5	9.82	7.13	1.47	0.25	43.6	102						
									18	6	9.89	7.12	1.46	0.60	35.1	102						
									21	7	9.96	7.13	1.47	0.65	20.1	103						
									24	8	10.03	7.12	1.46	0.36	17.2	104						
									27	9	10.03	7.12	1.46	0.53	17.7	104						
									30	10	10.09	7.12	1.46	0.44	15.0	105						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Redox: +/- 20mV; Temp: +/- 0.1°C; D/O: +/- 0.2mg/L; Conductivity: +/- 3%; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

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PSAS

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: Nov 29, 2013
Weather: overcast
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
12 SCU18-010-MW3			—	2.559	4.971		LF	12:07	0	0	9.32	10.03	1.20	0.09	575	87	red/brown	SCU18-010-MW3	LF	12:34	BTEX, TPH, PAH, Metals, Hg	9
									3	1	9.34	10.28	1.12	0.00	199	49	cleaning					
									6	2	9.61	10.22	1.07	0.15	80.0	32	clear					
									9	3	9.78	10.20	1.04	0.54	45.4	-3						
									12	4	9.92	10.24	1.04	0.62	37.3	-30						
									15	5	9.77	10.29	1.06	0.57	28.8	-50						
									18	6	9.80	10.30	1.08	0.48	22.4	-65						
									21	7	9.82	10.34	1.10	0.37	16.9	-78						
									24	8	9.81	10.36	1.11	0.30	19.9	-85						
13 SCU18-001-MW3			—	2.324	6.617		LF	12:54	0	0	7.49	7.66	2.12	0.00	71000	-60	oxidized iron	SCU18-001-MW3	LF	13:17	BTEX, TPH, PAH, Metals, Hg	9
									3	1	7.42	7.17	2.14	0.00	376	-34	clearing					
									6	2	7.41	6.98	2.14	0.00	156	-16	clear					
									9	3	7.38	6.88	2.17	0.00	94.7	-9						
									12	4	7.36	6.91	2.21	0.00	20.1	-1						
									15	5	7.32	6.76	2.24	0.00	6.5	2						
									18	6	7.29	6.75	2.27	0.00	17.5	1						
14 SCU19-015-MW3			—	6.011	6.479		LF	14:46	0	0	7.29	7.38	2.22	5.59	11.3	145	clear	SCU19-015-MW3	LF	14:04	BTEX, TPH, PAH, Metals, Hg	9
									3	1	7.42	7.65	2.20	7.30	6.3	153						
									6	2	7.61	7.72	2.24	5.16	3.0	160						
									9	3	8.09	7.74	2.16	7.37	2.2	137						
									12	4	8.16	7.74	2.15	7.47	0.5	106						
									15	5	8.19	7.73	2.15	7.40	0.1	78						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

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Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: Nov 29, 2013
Weather: overcast -3°C snow light
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (1)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
15 SCM19-032-MW	—	—	6.084																			RB lid gone, RB squashed, red sediment on probe
16 SCM19-029-MW																						
17 SCM19-030-MW	chl * returned Dec 1, 2013, wells were uncovered *																					

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Redox: +/- 20mV; Temp: +/- 0.1°C; D/O: +/- 0.2mg/L; Conductivity: +/- 3%; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

6/21

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: Dec 1, 2013
Weather: overcast -3°C
Field Staff: KM

	BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear / Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
18	SCU17-010-MW3A			—	5.871	8.280		LF	9:49	0	0	18.07	9.88	0.840	2.12	322	-79	clear	SCU17-010-MW3A/FD#2	LF	10:18	BTEX, TPH, PAH, Metals, Hg	* FD #2
										3	1	16.91	9.84	0.845	1.18	130	60						9
										6	2	15.84	9.71	0.829	1.08	144	27						9
										9	3	15.05	9.52	0.800	1.52	22.0	-1						
										12	4	14.20	9.26	0.772	2.21	27.2	-19						
										15	5	13.70	9.22	0.770	2.37	5.7	-26						
										18	6	13.35	9.19	0.779	2.32	6.5	-28						
										21	7	12.88	9.16	0.777	2.49	5.1	-31						
										24	8	12.06	9.22	0.804	2.45	1.8	-35						
										27	9	11.80	9.21	0.798	2.52	2.5	-37						
19	SCU17-010-MW3B			—	6.436	9.884		LF	10:45	0	0	10.45	7.67	5.01	0.72	1.0	11	clear	SCU17-010-MW3B	LF	11:01	BTEX, TPH, PAH, Metals, Hg	9
										3	1	10.73	6.93	5.51	0.27	0.3	-23						
										6	2	10.84	6.77	6.20	0.15	0.4	-40						
										9	3	10.84	6.75	6.37	0.14	0.7	-38						
										12	4	10.87	6.75	6.38	0.16	1.1	-36						
										15	5	10.91	6.75	6.39	0.07	3.0	-35						
										36	12	10.62	6.99	7.13	0.00	1.0	-89	clear					
										39	13	10.64	6.96	7.62	0.00	0.8	-86						
										42	14	10.66	6.97	7.91	0.00	1.5	-87						
										45	15	10.71	6.99	8.00	0.00	1.8	-87						
20	SCU17-010-MW3C			—	6.944	23.241		LF	11:11	0	0	10.37	7.63	2.15	7.60	6.2	-4	clear	SCU17-010-MW3C	LF		BTEX, TPH, PAH, Metals, Hg	9
										3	1	10.50	7.64	2.12	7.53	2.0	37						
										6	2	10.52	7.64	2.13	7.44	1.8	52						
										9	3	10.52	7.60	2.26	6.77	1.0	28						
										12	4	10.59	7.53	2.43	5.84	1.2	-13						
										15	5	10.53	7.38	2.96	4.03	1.5	-37						
										18	6	10.55	7.24	3.62	1.94	1.0	-54						
										21	7	10.57	7.14	4.43	0.65	0.6	-67						
										24	8	10.54	7.10	4.93	0.22	0.3	-74						
										27	9	10.56	7.07	5.52	0.02	0.3	-81						
										30	10	10.57	7.04	5.99	0.00	0.1	-84						
										33	11	10.60	7.00	6.67	0.00	1.0	-86						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Redox: +/- 20mV; Temp: +/- 0.1°C; D/O: +/- 0.2mg/L; Conductivity: +/- 3%; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

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Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 1, 2013
Weather: overcast -5°C
Field Staff: KM

	BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	Depth (m): to GW	Depth (m): to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul Purge Vol. (1)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
21	SCU19-010-MW			—	3.111	8.142		LF	12:38	0	0	10.26	8.74	1.11	0.75	9.6	-71	clear	SCU19-010-MW	LF	13:12	BTEX, PAH, TPH, Hg, metals	9
										3	1	10.89	9.24	1.03	0.00	5.0	-80						
										6	2	11.04	9.25	1.01	0.00	4.3	-77						
										9	3	11.03	9.24	1.01	0.00	2.8	-69						
										12	4	11.05	9.23	1.01	0.00	2.3	-58						
										15	5	11.00	9.22	1.01	0.00	1.5	-25						
										18	6	11.01	9.24	1.01	0.00	1.2	16						
										21	7	11.03	9.24	1.02	1.08	0.6	65						
										24	8	11.08	9.28	1.02	1.30	0.1	86						
										27	9	11.06	9.29	1.01	1.64	0.4	108						
										30	10	11.06	9.30	1.01	1.56	0.1	119						
										33	11	11.07	9.30	1.01	1.49	0.00	126						
22	SCU18-009-MW			—	2.349	5.767		LF	14:36	0	0	9.03	9.76	0.716	5.25	209	-166	clear	SCU18-009-MW	LF	15:17	BTEX, PAH, TPH, Hg, Metals	old tubing fell down well, put new tubing in well - is not touching water; 9
										3	1	9.84	11.73	0.977	2.90	71.7	-295						
										6	2	10.04	11.86	0.994	1.59	77.3	-314						
										9	3	10.13	11.86	0.845	1.30	36.5	-312						
										12	4	10.19	11.38	0.806	1.10	19.6	-300						
										15	5	10.18	11.05	0.794	0.98	14.7	-295						
										18	6	10.14	10.43	0.799	0.82	5.9	-284						
										21	7	10.11	10.25	0.816	0.72	3.7	-283						
										24	8	10.03	10.02	0.834	0.63	1.7	-281						
										27	9	9.99	9.90	0.844	0.32	3.4	-282						
										30	10	9.93	9.88	0.849	0.16	1.8	-283						
										33	11	9.85	9.79	0.859	0.03	1.0	-284						
	SCU17-004-MW			—	6.578	9.257		LF		36	12	9.80	9.74	0.865	0.00	0.1	-286						old tubing fell down well, put new tubing in well - is not touching water; went back Dec 2
										39	13	9.74	9.73	0.868	0.00	0.0	-288						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Redox: +/- 20mV; Temp: +/- 0.1°C; D/O: +/- 0.2mg/L; Conductivity: +/- 3%; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

8/21

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 2, 2013
Weather: overcast, light rain, 3°C
Field Staff: KM

	BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	Depth (m): to GW	Depth (m): to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear / Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
23	SCW8-002-MW			–	0.661	3.076		LF	8:08	0	0	14.53	7.96	0.695	4.92	27.6	97	clear	SCW8-002-MW	LF	8:40	BTEX, TPH, PAH, Metals, Hg	9
									8:10	3	1	12.79	7.49	0.770	3.04	32.4	115					
										6	2	10.45	7.40	0.819	2.60	10.8	121					
										9	3	10.22	7.34	0.861	2.69	3.9	125					
										12	4	10.08	7.29	0.868	2.82	4.2	131					
										15	5	9.99	7.23	0.909	2.91	2.3	136					
										18	6	9.94	7.21	0.925	3.04	1.9	136					
										21	7	9.87	7.19	0.931	3.01	4.0	142					
24	SCW7-006-MW			–	1.193	4.885		LF	9:15	0	0	10.94	7.31	0.886	7.05	87.2	145	brown silt	SCW7-006-MW	LF	9:44	PAH	2
										3	1	10.11	7.09	0.883	4.82	70.3	41	clear				
										6	2	10.16	7.07	0.882	4.32	40.5	9					
										9	3	10.21	7.08	0.882	4.18	25.5	-11					
										12	4	10.22	7.08	0.880	3.91	14.4	-25					
										15	5	10.23	7.08	0.880	3.74	9.3	-29					
										18	6	10.21	7.09	0.879	3.58	4.3	-34					
										21	7	10.18	7.09	0.880	3.26	2.9	-36					
										24	8	10.17	7.09	0.881	3.20	1.9	-41					
										27	9	10.15	7.09	0.882	3.09	1.7	-49					
25	SCW10-004-MW			–	7.510	5.771	20	LF	10:22									heavy HC odor sheen	SCW10-004-MW	LF	10:54	BTEX, TPH, PAH, Metals, Hg	*odour & sheen on O/W probe, product bubbles came up in tubing and sticking inside tubing *did not run through flow through cell purged only 9
										odor & sheen through cell		not run through flow											

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

9/21

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 2, 2013
Weather: overcast, light rain 3°C
Field Staff: KM

	BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	Depth (m): to GW	Depth (m): to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
26	SCU10-001-MW			—	1.786	3.761		LF	11:18	0	0	7.39	7.25	0.858	2.54	49.6	14	clear	SCU10-001-MW	LF	11:38	VOC	3
										3	1	7.89	6.77	0.962	0.75	41.8	26						
										6	2	8.23	6.70	0.888	0.33	27.0	13						
										9	3	8.50	6.66	0.910	0.10	19.1	4						
										12	4	8.77	6.65	0.923	0.00	12.7	-2						
										15	5	8.89	6.64	0.926	0.00	10.1	-2						
										18	6	8.96	6.64	0.932	0.00	6.9	-4						
27	SCU11-003-MW			—	2.357	4.379		LF	12:38	0	0	9.07	7.50	0.760	3.95	22.6	65	clear	SCU11-003-MW	LF	12:57	BTEX, TPH, PAH, metals	9
										3	1	9.29	7.71	0.733	3.96	19.5	63						
										6	2	9.52	7.87	0.724	3.48	7.2	-71						
										9	3	9.65	7.90	0.721	3.17	8.9	-79						
										12	4	9.74	7.79	0.732	1.89	3.1	-88						
										15	5	9.82	7.63	0.737	1.05	2.6	-96						
										18	6	9.86	7.56	0.742	0.57	3.2	-100						
										21	7	9.88	7.46	0.745	0.38	2.4	-105						
										24	8	9.91	7.47	0.747	0.28	2.9	-109						
										27	9	9.93	7.40	0.749	0.24	3.8	-102						
28	SCU6-004-MW			—	4.480	5.601		LF	13:49	0	0	10.58	7.51	1.76	6.04	382	48	light silt	SCU6-004-MW	LF	15:31	BAH	2
										3	0.75	11.45	7.22	1.75	4.57	182	29	clearing					
										6	1.5	11.40	7.20	1.73	4.84	225	28	clear					
										9	2.25	11.05	7.22	1.76	5.06	565	-16						
										12	3	11.35	7.20	1.75	4.02	197	-7						
										15	3.75	11.41	7.21	1.72	2.61	57.6	-69						
										18	4	11.42	7.27	1.70	1.30	36.9	-107						
										21	4.5	11.46	7.29	1.69	1.26	90.4	-115						
												10m	dry										

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 2, 2013
Weather: overcast, light rain 3°C
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	Depth (m): to GW	Depth (m): to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
29 SCU17-004-MW			1	6.578	9.252		LF	14:41	0	0	10.04	11.73	1.40	2.32	16.3	+190	clear	SCU17-004-MW	LF	14:59	BTEX, TPH, PAH (reduced)	*monitored Dec 9 old tubing had fallen down well, removed and put new tubing down
									3	1	10.18	12.00	1.42	0.50	1.2	-247						
									6	2	10.21	12.05	1.42	0.09	0.0	-262						
									9	3	10.19	12.01	1.42	0.00	0.0	-269						
									12	4	10.18	12.08	1.42	0.00	0.0	-272						
									15	5	10.14	12.09	1.42	0.00	0.0	-275						
30 SCU18-007-MW			1	1.318	2.731		LF	9:00	0	0	10.07	8.74	0.769	6.60	>1000	12	brown silty	SCU18-007-MW	LF		BTEX, TPH, PAH, Hg, Pb, EC	9
									3	0.75	10.08	8.12	0.767	6.62	748	48	clearing					
									6	1.5	10.10	7.97	0.766	6.64	565	62	clearing					
									9	2.25	9.99	7.87	0.762	6.54	324	75	clear					
									12	3.0	9.94	7.81	0.755	6.30	74.6	85						
									15	3.75	9.93	7.76	0.748	6.06	40.3	92						
									18	4.5	9.98	7.72	0.744	5.94	35.1	96						
									21	5.0	10.01	7.68	0.741	5.75	30.4	101						
									24	5.5	10.03	7.66	0.740	5.67	28.6	103						
									27	6	10.05	7.63	0.739	5.58	19.9	103						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Redox: +/- 20mV; Temp: +/- 0.1°C; D/O: +/- 0.2mg/L; Conductivity: +/- 3%; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 3, 2013
Weather: overcast, fog
Field Staff: KM

	BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear / Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
31	SCUIS-004-MW1A			—	6.284	9.045		LF	10:48	0	0	10.56	8.64	1.24	2.77	623	-249	slight brown	SCUIS-004-MW1A/FD#3	LF	11:17	BTEX, TPH, PAH, Metals	*FD #3
										3	1	9.68	8.78	1.14	1.19	426	-274	cleaning					
										6	2	9.70	8.86	1.03	0.66	172	-233	clear					
										9	3	9.67	9.01	0.972	0.39	114	-296						
										12	4	9.71	9.49	0.760	0.26	126	-295						
										15	5	9.66	9.63	0.724	2.18	50.0	-252	rotten egg odour					
										18	6	9.69	9.69	0.711	0.09	28.6	-279						
										21	7	9.66	9.71	0.706	0.01	5.4	-278						
										24	8	9.63	9.73	0.699	0.00	6.5	-277						
										27	9	9.62	9.73	0.696	0.00	3.4	-275						
32	SCUIS-004-MW1B			—	6.384	14.041		LF	11:35	0	0	9.57	8.10	0.799	1.10	18.1	-132	clear	SCUIS-004-MW1B	LF	11:58	BTEX, TPH, PAH, Metals	
										3	1	9.35	7.63	0.798	0.89	9.4	-119						
										6	2	9.31	7.52	0.808	0.69	10.7	-118						
										9	3	9.29	7.45	0.817	0.40	5.5	-124						
										12	4	9.28	7.42	0.824	0.21	3.5	-127						
										15	5	9.26	7.39	0.828	0.09	3.1	-129						
										18	6	9.25	7.38	0.833	0.00	3.0	-131						
										21	7	9.23	7.36	0.836	0.00	0.5	-133						
33	SCUIS-018-MW3			1	3.789	8.209		LF	12:53	0	0	10.20	7.56	1.15	0.10	601	0	slightly brown	SCUIS-018-MW3	LF	13:19	BTEX, TPH, PAH, Metals	v silty
										3	1	10.45	7.22	1.15	0.00	238	-16	clearing					
										6	2	10.56	7.17	1.16	0.00	467	-58	silty					
										9	3	10.56	7.15	1.15	0.00	729	-60						
										12	4	10.60	7.11	1.15	0.00	795	-58						
										15	5	10.62	7.00	1.15	0.00	>1000	-54						
										18	6	10.61	6.97	1.15	0.00	71000	-55						
										21	7	10.62	6.89	1.17	0.00	71000	-59						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

12/21

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 3 2013
Weather: overcast 3°C
Field Staff: KM

	BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear / Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
34	SCW16-001-MW			—	0.969	2.059		FF	14:01	0	0	9.14	9.76	0.491	12.42	159	-29	clear	SCW16-001-MW	FF	16:08	BTEX, TPH, PAH, Hg, Metals	9
										3	1	8.49	10.22	0.402	11.68	73.2	-39						
										6	2	8.29	10.23	0.409	11.23	49.8	-35						
										9	2.75	8.45	10.20	0.400	10.92	39.1	-26						
										12	3.5	8.63	10.24	0.393	10.93	35.3	-22						
										15	4.25	8.81	10.23	0.395	11.05	60.5	-20						
												ran dry at 4.5L											
35	SCW16-004-MW			—	14.88	5.515		FF	14:32	0	0	9.88	8.52	1.05	6.71	644	41	clear	SCW16-004-MW	FF	15:02	BTEX, TPH, PAH, Hg, Metals	9
										3	1	10.45	8.23	0.831	8.96	170	68						
										6	2	10.49	8.35	0.740	8.53	104	-76						
										9	3	10.33	8.43	0.688	8.66	54.0	82						
										12	4	10.22	8.49	0.617	8.71	45.1	85						
										15	5	10.12	8.44	0.711	8.39	35.3	91						
										18	6	10.02	8.53	0.671	8.85	30.9	93						
										21	7	9.96	8.55	0.664	9.03	26.1	96						
										24	8	9.94	8.55	0.665	9.09	24.4	99						
										27	9	9.94	8.55	0.663	9.15	24.8	102						
36	SCW16-006-MW			—	7.218	5.361		FF	15:24	0	0	10.39	7.37	3.56	0.24	115	-114	clear	SCW16-006-MW/FD#4	FF	15:39	BTEX, TPH, PAH, Hg, Metals	oxidized rain on old tubing 9 9 *FD #4
										3	1	10.81	7.27	3.56	0.00	90.5	-122						
										6	2	10.80	7.23	3.55	0.00	83.1	-122						
										9	3	10.80	7.23	3.54	0.00	79.6	-123						
										12	4	10.84	7.23	3.54	0.00	71.4	-123						
										15	5	10.81	7.23	3.51	0.00	62.5	-123						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 4, 2013
Weather: overcast, raining, windy, 3°C
Field Staff: KM

	BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	Depth (m): to GW	Depth (m): to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (1)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
37	SCU16-013-MW			1	5.232	6.759		LF	8:18	0	0	12.96	12.50	2.56	9.93	20.5	100	clear	SCU16-013-MW	LF	8:25	BTEX, TPH, PAH, Hg, Metals	9
										3	1	11.60	12.57	2.64	6.16	9.1	110						
										6	2	11.39	12.54	2.66	5.90	5.7	-109						
										9	3	11.31	12.52	2.66	5.36	5.9	-102						
										12	4	11.29	12.51	2.66	5.99	5.0	-99						
38	SCU16-011-MW			1	6.009	6.006		LF	9:07	0	0	12.55	10.69	0.549	1.54	17.2	-80	clear	SCU16-011-MW	LF	9:40	BTEX, TPH, PAH, Hg, Metals	9
										3	1	11.63	10.18	0.561	0.58	16.9	-115						
										6	2	11.44	10.71	0.631	0.16	11.4	-130						
										9	3	11.36	10.90	0.639	0.00	9.1	-205						
										12	4	11.34	10.99	0.652	1.25	7.1	-221						
										15	5	11.29	11.03	0.657	1.11	6.8	-233						
										18	6	11.27	11.05	0.661	1.63	5.1	-238						
										21	7	11.25	11.07	0.664	0.00	3.2	-242						
										24	8	11.25	11.10	0.665	0.00	4.1	-249						
										27	9	11.10	11.12	0.673	0.00	4.5	-251						
39	SCU16-011-MW3			1	3.916	11.167		LF	9:55	0	0	11.31	11.55	0.906	0.00	36.1	-229	clear	SCU16-011-MW3	K	10:09	BTEX, TPH, PAH, Hg, Metals	9
										3	1	11.18	11.64	0.910	0.00	26.0	-261						
										6	2	11.06	11.69	0.929	0.00	9.0	-274						
										9	3	11.04	11.70	0.931	0.00	9.0	-277						
										12	4	11.05	11.70	0.931	0.00	8.7	-279						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Redox: +/- 20mV; Temp: +/- 0.1°C; D/O: +/- 0.2mg/L; Conductivity: +/- 3%; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 4, 2013
Weather: overcast, rainy, windy 3°C
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	Depth (m): to GW	Depth (m): to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (L)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear / Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
SCW16-011-MW3A			1	1.771	5.602		LF	10:18	0	0	11.19	10.19	0.550	2.68	63.4	-131	clear	SCW16-011-MW3A	LF	10:36	BTEX, PAH, TPH, Hg, Metals	9
									3	1	11.29	10.11	0.549	2.74	12.3	-97						
									6	2	11.33	10.08	0.549	2.75	4.6	-82						
									9	3	11.33	10.01	0.551	2.72	2.4	-66						
									12	4	11.33	10.02	0.549	2.66	1.7	-52						
									15	5	11.30	10.08	0.547	2.51	1.0	-46						
									18	6	11.29	10.13	0.545	2.51	6.7	-43						
SCW31-013-MW3B			1	6.264	18.352		LF	13:12	3	0.5	11.12	9.99	0.449	5.56	0.0	29	slightly silty	SCW31-013-MW3B	LF		BTEX, PAH, TPH, Hg, Metals	*RB full of dirty possible surface water in well center well 9 in line
									6	1	11.02	9.99	0.353	4.99	0.0	23						
									9	1.5	11.08	9.98	0.356	4.88	0.0	21						
									12	2	11.03	9.98	0.369	4.70	0.0	20						
									15	2.5	11.01	9.96	0.402	6.10	0.0	18						
									18	3	11.02	9.96	0.441	6.37	0.0	16						
									21	3.5	11.01	9.94	0.490	6.67	0.0	15						
									24	4	11.01	9.93	0.521	6.76	0.0	13						
									27	4.5	10.97	9.89	0.647	6.79	-72.4	12						
									30	5	10.95	9.87	0.726	6.73	63.5	10						
									33	6	10.84	9.89	0.684	6.67	0.0	3						
									36	6.5	10.85	9.92	0.629	6.62	0.0	0						
									39	7	10.37	9.97	2.68	6.67	70.6	15						Turbidity reading of 0.0 may have actually been x1000 (function of Horiba probe?)
									42	8	10.64	8.76	7.43	6.00	53.4	-62						
									45	9	10.69	8.53	7.55	5.55	51.6	-89						
									48	10	10.66	8.46	7.62	5.20	49.9	-113						
									51	11	10.66	8.40	7.65	4.89	46.5	-128						
									54	12	10.62	8.34	7.66	4.63	45.5	-135						
									57	13	10.64	8.29	7.66	4.36	43.4	-139						
									60	14	10.90	8.23	7.63	4.12	44.0	-141						
									63	15	11.01	8.19	7.65	3.94	46.4	-143						
									66	16	11.04	8.17	7.49	3.90	46.2	-144						
									69	17	11.08	8.15	7.47	3.69	47.3	-144						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Redox: +/- 20mV; Temp: +/- 0.1°C; D/O: +/- 0.2mg/L; Conductivity: +/- 3%; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 4, 2013
Weather: overcast, rain, v windy, 3°C
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	Depth (m): to GW	Depth (m): to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
SCU31-013-MWC			—	6.366	23.034		LF	14:54	0	0	10.87	7.62	9.04	0.00	157	-133	clear	SCU31-013-MWC	LF	15:09	BTEX, TPH, PAH, Hg, Metals	9
									3	1	11.24	7.45	9.06	0.00	165	-129						
									6	2	11.25	7.39	9.09	0.00	184	-127						
									9	3	11.27	7.38	9.10	0.00	179	-127						
									12	4	11.27	7.37	9.10	0.00	182	-127						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Redox: +/- 20mV; Temp: +/- 0.1°C; D/O: +/- 0.2mg/L; Conductivity: +/- 3%; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

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Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 6, 2013
Weather: overcast, raining, windy, 3°C
Field Staff: KM

	BH ID	EOH from Log(m)	Headspace (ppm/%)	Depth (m) to Prod.	Depth (m) to GW	Depth (m) to EOH	Single Well Volume (L)	Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sample ID	Sampling Method	Time	Analysis	Comments
53	SCU25-003-MW			—	7.366	8.329		LF	12:32	0	0	10.35	12.89	4.18	4.15	16.1	-205	clear	SCU25-003-MW	LF	12:50	PAH	2
										3	0.5	10.06	12.90	4.17	3.79	9.4	-205						
										6	1	10.00	12.90	4.16	3.52	6.7	-207						
										9	1.5	9.99	12.90	4.09	3.44	4.4	-206						
										12	2	9.99	12.89	3.98	3.48	2.1	-206						
										15	2.5	9.97	12.89	3.97	3.46	1.9	-205						
54	SCU16-014-MW			—	6.893	8.578		LF	13:10	0	0	10.73	10.20	0.963	0.42	22.8	-134		SCU16-014-MW	LF	13:51	BTEX, TPH, Metals, Hg PAH	9
										3	1	10.75	9.50	0.935	0.02	20.5	-93						
										6	2	10.76	8.96	0.911	0.00	22.3	-167						
										9	3	10.73	8.57	0.921	0.00	10.3	-222						
										12	4	10.76	8.43	0.914	0.00	3.4	-224						
										13	5	10.76	8.38	0.911	0.00	2.1	-220						
55	SCU25-001-MW			—	7.848	12.631		LF		0	0	10.34	12.30	2.79	1.58	30.3	-248	clear	SCU25-001-MW	LF		BTEX, TPH, PAH, Metals, Hg	9
										3	1	10.18	12.62	3.01	0.36	23.3	-286						
										6	2	10.15	12.65	3.01	0.05	15.3	-292						
										9	3	10.15	12.66	3.00	0.00	9.5	-295						
										12	4	10.14	12.66	3.00	0.00	8.7	-298						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2(H) \times 1000$
$V_a = \pi R^2(H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

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* sampled SCU26-007-MW on December 6, 2013, bailer, PAH, 2
* pump would not work, did data entry and dried pump & fixed it, then YSI issues

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 6, 2013
Weather: Sun 6°C
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	Depth (m): to GW	Depth (m): to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
SCU25-004-MW3			1	7.500	9.502		LF	14:46	0	0	10.42	12.76	3.63	2.90	452	-136	clear	SCU25-004-MW3	LF	15:04	Metals, H9	2
									3	1	10.27	12.78	3.53	3.15	47.4	-172						
									6	2	10.25	12.77	3.51	2.68	20.9	-160						
									9	3	10.24	12.77	3.45	2.44	7.0	-155						
									12	4	10.22	12.77	3.42	2.50	5.9	-150						
									15	5	10.22	12.77	3.39	2.53	5.3	-148						
SCU25-007-MW3			1	8.174	9.688		LF	15:23	0	0	10.54	12.56	2.50	2.52	533	-163	clear	SCU25-007-MW3	LF	15:45	BTEX, TPH, PAH, H9, Metals	9
									3	1	10.51	12.53	2.54	2.50	11.0	-178						
									6	2	10.50	12.59	2.47	2.26	12.3	-181						
									9	3	10.50	12.59	2.51	2.14	2.5	-181						
									12	4	10.50	12.59	2.51	1.88	2.1	-182						
									15	5	10.51	12.59	2.52	1.87	1.4	-183						
									18	6	10.49	12.60	2.51	1.84	0.3	-184						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

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Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 7, 2013
Weather: cloudy 2°C
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (L)	T (°C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Redox (mV)	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
SCU31-002-MW8			1	6.86	23.445		LF	11:22	0	0	13.99	8.30	9.26	3.07	18.9	-1	clear	SCU31-002-MW8/FD#6	LF	11:51	BTEX, TPH, PAH, Hg, Metals	*FD #6
									3	1	12.01	7.53	9.89	1.65	16.2	-15						9
									6	2	11.27	7.31	10.2	0.92	14.8	-35						9
									9	3	10.73	7.28	10.2	0.68	13.6	-37						
									12	4	10.68	7.19	10.4	0.38	13.9	-41						
									15	5	10.63	7.12	10.4	0.17	12.9	-39						
									18	6	10.60	7.09	10.4	0.06	11.4	-27						
									21	7	10.51	7.05	10.4	0.00	11.8	-18						
									24	8	10.48	7.04	10.4	0.00	13.3	-16						
									27	9	10.47	7.02	10.4	0.00	13.6	-13						
SCU33-001-MW3			1	8.604	11.601		LF	12:18	0	0	11.43	12.31	5.59	0.49	2.9	-196	clear	SCU33-001-MW3	LF	12:58	BTEX, TPH, PAH, Hg, Metals	9
									3	1	11.16	12.62	5.76	0.00	0.5	-260						
									6	2	10.92	12.64	5.83	0.00	2.6	-268						
									9	3	10.77	12.66	5.87	0.00	1.9	-272						
									12	4	10.60	12.66	5.90	0.00	2.1	-276						
									15	5	10.46	12.67	5.92	0.00	1.5	-279						
									18	6	10.34	12.67	5.95	0.00	2.1	-282						
									21	7	10.22	12.68	5.97	0.00	0.6	-284						
									24	8	10.09	12.69	5.98	0.00	0.6	-284						
									27	9	9.96	12.69	6.01	0.00	0.7	-285						
									30	10	9.83	12.69	6.02	0.00	0.1	-285						
									33	11	9.77	12.70	6.03	0.00	0.0	-287						
									36	12	9.70	12.70	6.06	0.00	0.0	-288						
									39	13	9.68	12.70	6.07	0.00	1.1	-288						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Redox: +/- 20mV; Temp: +/- 0.1°C; D/O: +/- 0.2mg/L; Conductivity: +/- 3%; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 7, 2013
Weather: cloudy 3°C
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
(17) SCU19-030-MW3			1	2.044	4.993		LF	13:21	0	0	10.02	9.74	1.46	0.05	63.4	-163	clear	SCU19-030-MW3	LF	13:40	BTEX, TPH, PAH, Hg, Metals, PCBs	well was buried in slag, well was dug out, returned
									3	1	10.43	8.10	1.43	0.00	23.5	-198	some sediment in the sample					
									6	2	10.55	7.84	1.44	0.00	20.9	-204						
									9	3	10.61	7.70	1.43	0.00	13.5	-209						
									12	4	10.63	7.64	1.43	0.00	12.0	-211						
									15	5	10.56	7.59	1.42	0.00	5.6	-211						
(16) SCU19-029-MW3			1	1.652	5.233		LF	14:17	0	0	10.12	7.97	1.63	0.26	0.0	-65	silty clearing	SCU19-029-MW3	LF	14:50	BTEX, TPH, PAH, Hg, Metals, PCBs	well was buried in slag, well was dug out, returned to
									3	1	10.57	7.81	1.61	0.00	1000	-117						
									6	2	10.15	7.76	1.59	0.00	99.3	-133						
									9	3	10.80	7.76	1.58	0.00	79.2	-144						
									12	4	10.81	7.74	1.52	0.00	52.1	-160	clear					
									15	5	10.82	7.73	1.49	0.00	34.3	-172						
									18	6	10.81	7.72	1.46	0.00	27.4	-175						
									21	7	10.79	7.72	1.44	0.00	22.7	-176						
									24	8	10.84	7.71	1.42	0.00	19.7	-177						
									27	9	10.81	7.70	1.43	0.00	17.8	-177						
									30	10	10.81	7.69	1.41	0.00	16.7	-177						
									33	11	10.82	7.68	1.42	0.00	14.3	-176						
(6) SCU15-001-MW3R			1	6.751	14.529		LF	15:20	0	3	9.26	8.42	0.383	0.43	11.9	-27	clear	SCU15-001-MW3R	LF	15:36	BTEX, TPH, PAH	7
									3	1	9.78	8.16	0.357	0.00	12.7	-40						
									6	2	9.91	8.17	0.354	0.00	12.3	-54						
									9	3	9.94	8.19	0.354	0.00	12.3	-63						
									12	4	9.96	8.21	0.353	0.00	15.3	-81						

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Temp: +/- 0.1°C; Conductivity: +/- 3%; Redox: +/- 20mV; D/O: +/- 0.2mg/L; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

Groundwater Sampling Record

Project Number: 210.05890.000000
Project Name: 2013 GWMP
Address: Harbourside Commercial Park

Date: December 9, 2013
Weather: cloudy -5°C
Field Staff: KM

BH ID	EOH from Log(m)	Monitoring Data: Headspace (ppm/%)	Depth (m): to Prod.	to GW	to EOH	Single Well Volume (L)	Purge Water Parameter Stabilization Data: Purge Method	Start Time	Elapsed Purge Time (minutes)	Cumul. Purge Vol. (l)	T (°C)	pH	Conductivity	Dissolved Oxygen	Turbidity	Redox	Appear./ Odour	Sampling Data: Sample ID	Sampling Method	Time	Analysis	Comments
(61) SCU15-008-MWB			1	6.362	10.131		LF	9:51	0	0	10.99	8.00	0.718	0.00	23.7	-149	clear	SCU15-008-MWB	LF	10:10	BTEX, TPH, PAH	25.6 m to Source Atlantic (nearest building)
									3	1	10.87	7.35	0.718	0.00	17.6	-154					
									6	2	10.74	7.80	0.718	0.00	15.0	-155					
									9	3	10.69	7.76	0.718	0.00	13.2	-156					
									12	4	10.60	7.74	0.718	0.00	12.3	-155					
									15	5	10.57	7.72	0.720	0.00	12.5	-153					
(62) SCU15-012-MW			1	5.822	7.014		LF	10:39	0	0	10.49	7.28	1.26	6.64	>1000	81	silty	SCU15-012-MW	LF	15:17	BTEX, TPH, PAH	28.9 m to Safety Check (nearest building)
									3	1	10.85	7.02	1.26	6.04	644	106	clearing				
									6	2	10.95	6.98	1.29	14.68	470	116	clear				
									9	3	11.01	6.94	1.30	3.61	450	122					
									12	4	11.10	6.92	1.31	2.84	300	127					
									15	5	11.09	6.91	1.32	2.62	281	128					
												rain	dry									

Note: All depth measurements from top of pipe
Do not monitor EOH if free-product is present in well
N/A=Not Applicable

Parameter Stabilization Guidelines: pH: +/- 0.2 units; Redox: +/- 20mV; Temp: +/- 0.1°C; D/O: +/- 0.2mg/L; Conductivity: +/- 3%; Turbidity: +/- 10%

Well volume Calculation:
One standing volume of water in well and annulus = $V_w + V_a$
$V_w = \pi r_i^2 (H) \times 1000$
$V_a = \pi R^2 (H) \times 300 - (\pi r_o^2 (H) \times 300)$
V_w = one well volume (L)
V_a = one standing volume (annulus)(L)

r_i = radius of well inside of pipe (m)
r_o = radius of well outside of pipe (m)
R = radius of the borehole (m)
H = distance from static water level to bottom of well (m)
2" casing has 2.032 L/m; 1" casing has 0.509 L/m
8" sand pack has 9.271 L/m; 6 5/8" sand pack has 6.35 L/m

SCU10-002-MW is >30m from nearest building (Protocase #2)
SCU15-001-MWB is 29.8m from Safety Check and 20m from Mill Creek Building
SCU15-008-MWB is 25.6m from Source Atlantic
SCU15-012-MW is 28.9m from Safety Check

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APPENDIX B
Analytical Certificates

2013 Groundwater Monitoring Program
Harbourside Commercial Park, Sydney, NS
SLR Project No.: 210.05890.00000

Your P.O. #: HAL1988
Your Project #: 210.05890.00000
Site Location: GWMP/HCP
Your C.O.C. #: B161488

Attention:Kelly Henderson

SLR Consulting (Canada) Ltd
45 Wabana Crt., Suite 122
PO Box 791, Station A
Sydney, NS
B1P 6J1

Report Date: 2013/12/05

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B3K5867
Received: 2013/11/28, 13:55

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
TEH in Water (PIRI) (1)	9	2013/12/02	2013/12/03	ATL SOP 00113	Based on Atl. PIRI
Mercury - Total (CVAA,LL) (1)	3	2013/12/02	2013/12/02	ATL SOP 00026	Based on EPA245.1
Mercury - Total (CVAA,LL) (1)	6	2013/12/05	2013/12/05	ATL SOP 00026	Based on EPA245.1
Metals Water Diss. MS (as rec'd) (1)	1	N/A	2013/12/03	ATL SOP 00058	Based on EPA6020A
Metals Water Diss. MS (as rec'd) (1)	8	N/A	2013/12/04	ATL SOP 00058	Based on EPA6020A
PAH in Water by GC/MS (SIM) (1)	6	2013/12/02	2013/12/04	ATL SOP 00103	Based on EPA 8270C
PAH in Water by GC/MS (SIM) (1)	3	2013/12/02	2013/12/05	ATL SOP 00103	Based on EPA 8270C
VPH in Water (PIRI) (1)	9	2013/12/02	2013/12/03	ATL SOP 00118	Based on Atl. PIRI
ModTPH (T1) Calc. for Water (1)	9	N/A	2013/12/04	N/A	Based on Atl. PIRI

Remarks:

Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Bedford

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Natalie MacAskill, Sr. Project Manager
Email: NMacAskill@maxxam.ca
Phone# (902)567-1255 Ext:17

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This report has been generated and distributed using a secure automated process.
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B3K5867
Report Date: 2013/12/05

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		UB9963	UB9976		UB9977		
Sampling Date		2013/11/27	2013/11/27		2013/11/27		
COC Number		B161488	B161488		B161488		
	Units	SCU19-002-MWA	SCU19-002-MWB	QC Batch	SCU19-031-MW	RDL	QC Batch
Metals							
Total Mercury (Hg)	ug/L	<0.013	<0.013	3443229	<0.013	0.013	3443225

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		UB9978	UB9979	UB9980	UB9981	UB9982		
Sampling Date		2013/11/26	2013/11/26	2013/11/26	2013/11/26	2013/11/26		
COC Number		B161488	B161488	B161488	B161488	B161488		
	Units	SCU20-013-MW	SCU20-014-MW	SCU20-015-MW	SCU20-016-MW	SCU20-017-MW	RDL	QC Batch
Metals								
Total Mercury (Hg)	ug/L	0.013	0.048	<0.013	<0.013	<0.013	0.013	3447287

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		UB9983		
Sampling Date		2013/11/26		
COC Number		B161488		
	Units	SCU20-018-MW	RDL	QC Batch
Metals				
Total Mercury (Hg)	ug/L	<0.013	0.013	3447287

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3K5867
Report Date: 2013/12/05

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UB9963		UB9976		UB9977		
Sampling Date		2013/11/27		2013/11/27		2013/11/27		
COC Number		B161488		B161488		B161488		
	Units	SCU19-002-MWA	RDL	SCU19-002-MWB	RDL	SCU19-031-MW	RDL	QC Batch
Metals								
Dissolved Aluminum (Al)	ug/L	38	5.0	39	5.0	16	5.0	3443974
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	3443974
Dissolved Arsenic (As)	ug/L	1.0	1.0	8.0	1.0	3.3	1.0	3443974
Dissolved Barium (Ba)	ug/L	56	1.0	66	1.0	95	1.0	3443974
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	3443974
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	3443974
Dissolved Boron (B)	ug/L	430	50	470	50	360	50	3443974
Dissolved Cadmium (Cd)	ug/L	<0.010	0.010	<0.010	0.010	<0.010	0.010	3443974
Dissolved Calcium (Ca)	ug/L	460000	100	1800000	1000	160000	100	3443974
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	<1.0	1.0	1.7	1.0	3443974
Dissolved Cobalt (Co)	ug/L	<0.40	0.40	<0.40	0.40	0.45	0.40	3443974
Dissolved Copper (Cu)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	3443974
Dissolved Iron (Fe)	ug/L	800	50	2400	50	570	50	3443974
Dissolved Lead (Pb)	ug/L	0.52	0.50	0.76	0.50	<0.50	0.50	3443974
Dissolved Magnesium (Mg)	ug/L	93000	100	180000	1000	46000	100	3443974
Dissolved Manganese (Mn)	ug/L	88	2.0	600	2.0	1200	2.0	3443974
Dissolved Molybdenum (Mo)	ug/L	5.2	2.0	2.8	2.0	8.2	2.0	3443974
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	3443974
Dissolved Phosphorus (P)	ug/L	250	100	120	100	<100	100	3443974
Dissolved Potassium (K)	ug/L	22000	100	23000	100	42000	100	3443974
Dissolved Selenium (Se)	ug/L	<1.0	1.0	<1.0	1.0	2.1	1.0	3443974
Dissolved Silver (Ag)	ug/L	<0.10	0.10	<0.10	0.10	<0.10	0.10	3443974
Dissolved Sodium (Na)	ug/L	560000	100	280000	100	60000	100	3443974
Dissolved Strontium (Sr)	ug/L	26000	20	150000	200	780	2.0	3443974
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	<0.10	0.10	<0.10	0.10	3443974
Dissolved Tin (Sn)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	3443974
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	3443974
Dissolved Uranium (U)	ug/L	0.80	0.10	1.2	0.10	2.7	0.10	3443974
Dissolved Vanadium (V)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	3443974
Dissolved Zinc (Zn)	ug/L	7.3	5.0	11	5.0	13	5.0	3443974

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2013/12/05

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UB9978	UB9979	UB9980	UB9981	UB9982		
Sampling Date		2013/11/26	2013/11/26	2013/11/26	2013/11/26	2013/11/26		
COC Number		B161488	B161488	B161488	B161488	B161488		
	Units	SCU20-013-MW	SCU20-014-MW	SCU20-015-MW	SCU20-016-MW	SCU20-017-MW	RDL	QC Batch
Metals								
Dissolved Aluminum (Al)	ug/L	130	170	42	95	100	5.0	3443974
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3443974
Dissolved Arsenic (As)	ug/L	13	9.3	15	9.0	7.9	1.0	3443974
Dissolved Barium (Ba)	ug/L	89	31	19	34	56	1.0	3443974
Dissolved Beryllium (Be)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3443974
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	3443974
Dissolved Boron (B)	ug/L	57	100	78	140	110	50	3443974
Dissolved Cadmium (Cd)	ug/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	3443974
Dissolved Calcium (Ca)	ug/L	130000	150000	210000	140000	160000	100	3443974
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	3443974
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	3443974
Dissolved Copper (Cu)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	3443974
Dissolved Iron (Fe)	ug/L	<50	<50	<50	<50	<50	50	3443974
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	3443974
Dissolved Magnesium (Mg)	ug/L	<100	<100	<100	160	<100	100	3443974
Dissolved Manganese (Mn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	3443974
Dissolved Molybdenum (Mo)	ug/L	47	40	42	38	14	2.0	3443974
Dissolved Nickel (Ni)	ug/L	35	31	5.0	25	26	2.0	3443974
Dissolved Phosphorus (P)	ug/L	140	330	110	110	170	100	3443974
Dissolved Potassium (K)	ug/L	47000	27000	15000	28000	13000	100	3443974
Dissolved Selenium (Se)	ug/L	<1.0	4.3	<1.0	<1.0	2.4	1.0	3443974
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3443974
Dissolved Sodium (Na)	ug/L	140000	51000	41000	37000	36000	100	3443974
Dissolved Strontium (Sr)	ug/L	1500	620	530	870	910	2.0	3443974
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3443974
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	3443974
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	3443974
Dissolved Uranium (U)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3443974
Dissolved Vanadium (V)	ug/L	21	2.1	<2.0	11	2.7	2.0	3443974
Dissolved Zinc (Zn)	ug/L	5.5	6.6	<5.0	6.8	7.6	5.0	3443974

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2013/12/05

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UB9983		
Sampling Date		2013/11/26		
COC Number		B161488		
	Units	SCU20-018-MW	RDL	QC Batch
Metals				
Dissolved Aluminum (Al)	ug/L	13	5.0	3443974
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	3443974
Dissolved Arsenic (As)	ug/L	2.2	1.0	3443974
Dissolved Barium (Ba)	ug/L	26	1.0	3443974
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	3443974
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	3443974
Dissolved Boron (B)	ug/L	88	50	3443974
Dissolved Cadmium (Cd)	ug/L	<0.010	0.010	3443974
Dissolved Calcium (Ca)	ug/L	380000	100	3443974
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	3443974
Dissolved Cobalt (Co)	ug/L	<0.40	0.40	3443974
Dissolved Copper (Cu)	ug/L	<2.0	2.0	3443974
Dissolved Iron (Fe)	ug/L	180	50	3443974
Dissolved Lead (Pb)	ug/L	<0.50	0.50	3443974
Dissolved Magnesium (Mg)	ug/L	25000	100	3443974
Dissolved Manganese (Mn)	ug/L	300	2.0	3443974
Dissolved Molybdenum (Mo)	ug/L	3.5	2.0	3443974
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	3443974
Dissolved Phosphorus (P)	ug/L	<100	100	3443974
Dissolved Potassium (K)	ug/L	5100	100	3443974
Dissolved Selenium (Se)	ug/L	1.2	1.0	3443974
Dissolved Silver (Ag)	ug/L	<0.10	0.10	3443974
Dissolved Sodium (Na)	ug/L	14000	100	3443974
Dissolved Strontium (Sr)	ug/L	5500	20	3443974
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	3443974
Dissolved Tin (Sn)	ug/L	<2.0	2.0	3443974
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	3443974
Dissolved Uranium (U)	ug/L	2.3	0.10	3443974
Dissolved Vanadium (V)	ug/L	6.7	2.0	3443974
Dissolved Zinc (Zn)	ug/L	7.5	5.0	3443974

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2013/12/05

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UB9963	UB9976	UB9977		UB9978		
Sampling Date		2013/11/27	2013/11/27	2013/11/27		2013/11/26		
COC Number		B161488	B161488	B161488		B161488		
	Units	SCU19-002-MWA	SCU19-002-MWB	SCU19-031-MW	RDL	SCU20-013-MW	RDL	QC Batch
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	ug/L	0.79	<0.050	<0.050	0.050	42 (1)	2.5	3443290
2-Methylnaphthalene	ug/L	0.31	<0.050	0.063	0.050	68 (1)	2.5	3443290
Acenaphthene	ug/L	0.32	0.019	0.060	0.010	7.6	0.010	3443290
Acenaphthylene	ug/L	0.13	<0.010	0.017	0.010	34	0.010	3443290
Anthracene	ug/L	0.083	0.030	0.055	0.010	4.0	0.010	3443290
Benzo(a)anthracene	ug/L	0.030	0.026	0.036	0.010	0.50	0.010	3443290
Benzo(a)pyrene	ug/L	0.026	0.020	0.025	0.010	0.23	0.010	3443290
Benzo(b)fluoranthene	ug/L	0.020	0.016	0.017	0.010	0.19	0.010	3443290
Benzo(g,h,i)perylene	ug/L	0.015	0.012	0.011	0.010	0.083	0.010	3443290
Benzo(j)fluoranthene	ug/L	0.013	<0.010	0.011	0.010	0.12	0.010	3443290
Benzo(k)fluoranthene	ug/L	0.013	0.010	0.011	0.010	0.11	0.010	3443290
Chrysene	ug/L	0.032	0.030	0.035	0.010	0.44	0.010	3443290
Dibenz(a,h)anthracene	ug/L	<0.010	<0.010	<0.010	0.010	0.031	0.010	3443290
Fluoranthene	ug/L	0.12	0.093	0.14	0.010	2.8	0.010	3443290
Fluorene	ug/L	0.39	0.025	0.077	0.010	17	0.010	3443290
Indeno(1,2,3-cd)pyrene	ug/L	0.013	0.011	<0.010	0.010	0.088	0.010	3443290
Naphthalene	ug/L	3.8	<0.20	<0.20	0.20	770 (1)	10	3443290
Perylene	ug/L	<0.010	<0.010	<0.010	0.010	0.062	0.010	3443290
Phenanthrene	ug/L	0.47	0.15	0.22	0.010	18	0.010	3443290
Pyrene	ug/L	0.089	0.081	0.11	0.010	1.8	0.010	3443290
Surrogate Recovery (%)								
D10-Anthracene	%	95	90	94		95		3443290
D14-Terphenyl	%	97	97	100		84		3443290
D8-Acenaphthylene	%	98	100	99		95		3443290

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to sample dilution.

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Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UB9979		UB9980		UB9981	UB9982		
Sampling Date		2013/11/26		2013/11/26		2013/11/26	2013/11/26		
COC Number		B161488		B161488		B161488	B161488		
	Units	SCU20-014-MW	RDL	SCU20-015-MW	RDL	SCU20-016-MW	SCU20-017-MW	RDL	QC Batch
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	ug/L	8.7	0.050	2.6	0.050	5.3	5.5	0.050	3443290
2-Methylnaphthalene	ug/L	11	0.050	2.8	0.050	5.9	5.9	0.050	3443290
Acenaphthene	ug/L	2.1	0.010	0.68	0.010	2.7	1.8	0.010	3443290
Acenaphthylene	ug/L	5.7	0.010	0.96	0.010	3.1	3.7	0.010	3443290
Anthracene	ug/L	1.1	0.010	0.50	0.010	0.37	1.2	0.010	3443290
Benzo(a)anthracene	ug/L	0.23	0.010	0.30	0.010	0.033	0.62	0.010	3443290
Benzo(a)pyrene	ug/L	0.14	0.010	0.20	0.010	0.030	0.44	0.010	3443290
Benzo(b)fluoranthene	ug/L	0.12	0.010	0.15	0.010	0.023	0.33	0.010	3443290
Benzo(g,h,i)perylene	ug/L	0.064	0.010	0.084	0.010	0.013	0.19	0.010	3443290
Benzo(j)fluoranthene	ug/L	0.068	0.010	0.12	0.010	0.013	0.24	0.010	3443290
Benzo(k)fluoranthene	ug/L	0.069	0.010	0.10	0.010	0.013	0.22	0.010	3443290
Chrysene	ug/L	0.20	0.010	0.29	0.010	0.042	0.56	0.010	3443290
Dibenz(a,h)anthracene	ug/L	0.019	0.010	0.024	0.010	<0.010	0.060	0.010	3443290
Fluoranthene	ug/L	1.4	0.010	0.93	0.010	0.35	2.2	0.010	3443290
Fluorene	ug/L	4.2	0.010	1.0	0.010	3.1	3.6	0.010	3443290
Indeno(1,2,3-cd)pyrene	ug/L	0.065	0.010	0.073	0.010	0.013	0.18	0.010	3443290
Naphthalene	ug/L	84 (1)	2.0	11	0.20	46 (1)	37 (1)	2.0	3443290
Perylene	ug/L	0.041	0.010	0.049	0.010	<0.010	0.10	0.010	3443290
Phenanthrene	ug/L	5.4	0.010	1.9	0.010	1.8	5.0	0.010	3443290
Pyrene	ug/L	1.0	0.010	0.76	0.010	0.33	1.6	0.010	3443290
Surrogate Recovery (%)									
D10-Anthracene	%	96		92		87	99		3443290
D14-Terphenyl	%	101		98		95	102		3443290
D8-Acenaphthylene	%	105		103		100	109		3443290

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to sample dilution.

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Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UB9983		
Sampling Date		2013/11/26		
COC Number		B161488		
	Units	**SCU20-018-MW**	**RDL**	**QC Batch**
Polyaromatic Hydrocarbons				
1-Methylnaphthalene	ug/L	<0.050	0.050	3443290
2-Methylnaphthalene	ug/L	<0.050	0.050	3443290
Acenaphthene	ug/L	0.014	0.010	3443290
Acenaphthylene	ug/L	<0.010	0.010	3443290
Anthracene	ug/L	0.019	0.010	3443290
Benzo(a)anthracene	ug/L	<0.010	0.010	3443290
Benzo(a)pyrene	ug/L	<0.010	0.010	3443290
Benzo(b)fluoranthene	ug/L	<0.010	0.010	3443290
Benzo(g,h,i)perylene	ug/L	<0.010	0.010	3443290
Benzo(j)fluoranthene	ug/L	<0.010	0.010	3443290
Benzo(k)fluoranthene	ug/L	<0.010	0.010	3443290
Chrysene	ug/L	<0.010	0.010	3443290
Dibenz(a,h)anthracene	ug/L	<0.010	0.010	3443290
Fluoranthene	ug/L	0.032	0.010	3443290
Fluorene	ug/L	0.026	0.010	3443290
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	0.010	3443290
Naphthalene	ug/L	<0.20	0.20	3443290
Perylene	ug/L	<0.010	0.010	3443290
Phenanthrene	ug/L	0.045	0.010	3443290
Pyrene	ug/L	0.028	0.010	3443290
Surrogate Recovery (%)				
D10-Anthracene	%	98		3443290
D14-Terphenyl	%	93		3443290
D8-Acenaphthylene	%	105		3443290

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UB9963	UB9976	UB9977	UB9978		
Sampling Date		2013/11/27	2013/11/27	2013/11/27	2013/11/26		
COC Number		B161488	B161488	B161488	B161488		
	Units	SCU19-002-MWA	SCU19-002-MWB	SCU19-031-MW	SCU20-013-MW	RDL	QC Batch
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0010	<0.0010	<0.0010	0.011	0.0010	3443020
Toluene	mg/L	<0.0010	<0.0010	<0.0010	0.016	0.0010	3443020
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	0.0069	0.0010	3443020
Xylene (Total)	mg/L	<0.0020	<0.0020	<0.0020	0.053	0.0020	3443020
C6 - C10 (less BTEX)	mg/L	<0.010	<0.010	<0.010	0.10	0.010	3443020
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	2.2	0.050	3442688
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	1.0	0.050	3442688
>C21-<C32 Hydrocarbons	mg/L	<0.10	0.11	<0.10	0.80	0.10	3442688
Modified TPH (Tier1)	mg/L	<0.10	0.11	<0.10	4.2	0.10	3438995
Reached Baseline at C32	mg/L	NA	Yes	NA	Yes		3442688
Hydrocarbon Resemblance	mg/L	NA	COMMENT (1)	NA	COMMENT (2)		3442688
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	105	107	106	105		3442688
n-Dotriacontane - Extractable	%	104	114	112	94		3442688
Isobutylbenzene - Volatile	%	104	103	103	104		3443020

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Possible lube oil fraction.
(2) Weathered fuel oil fraction. Unidentified compound(s) in fuel oil range.

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Report Date: 2013/12/05

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UB9979	UB9980	UB9981	UB9982		
Sampling Date		2013/11/26	2013/11/26	2013/11/26	2013/11/26		
COC Number		B161488	B161488	B161488	B161488		
	Units	SCU20-014-MW	SCU20-015-MW	SCU20-016-MW	SCU20-017-MW	RDL	QC Batch
Petroleum Hydrocarbons							
Benzene	mg/L	0.0027	0.0021	<0.0010	0.0017	0.0010	3443020
Toluene	mg/L	0.0021	<0.0010	<0.0010	0.0015	0.0010	3443020
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	3443020
Xylene (Total)	mg/L	0.0048	<0.0020	<0.0020	<0.0020	0.0020	3443020
C6 - C10 (less BTEX)	mg/L	0.019	<0.010	<0.010	0.011	0.010	3443020
>C10-C16 Hydrocarbons	mg/L	0.35	0.14	0.32	0.26	0.050	3442688
>C16-C21 Hydrocarbons	mg/L	0.27	0.12	0.29	0.15	0.050	3442688
>C21-<C32 Hydrocarbons	mg/L	0.24	0.21	0.27	0.19	0.10	3442688
Modified TPH (Tier1)	mg/L	0.87	0.48	0.87	0.61	0.10	3438995
Reached Baseline at C32	mg/L	Yes	Yes	Yes	Yes		3442688
Hydrocarbon Resemblance	mg/L	COMMENT (1)	COMMENT (2)	COMMENT (1)	COMMENT (3)		3442688
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	103	107	107	102		3442688
n-Dotriacontane - Extractable	%	107	116	113	109		3442688
Isobutylbenzene - Volatile	%	103	104	106	106		3443020

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Weathered fuel oil fraction. Unidentified compound(s) in fuel oil range.
(2) Weathered fuel oil fraction.
(3) One product in fuel / lube range. Unidentified compound(s) in fuel oil range.

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ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UB9983		
Sampling Date		2013/11/26		
COC Number		B161488		
	Units	**SCU20-018-MW**	**RDL**	**QC Batch**
Petroleum Hydrocarbons				
Benzene	mg/L	<0.0010	0.0010	3443020
Toluene	mg/L	<0.0010	0.0010	3443020
Ethylbenzene	mg/L	<0.0010	0.0010	3443020
Xylene (Total)	mg/L	<0.0020	0.0020	3443020
C6 - C10 (less BTEX)	mg/L	<0.010	0.010	3443020
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	3442688
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	3442688
>C21-<C32 Hydrocarbons	mg/L	<0.10	0.10	3442688
Modified TPH (Tier1)	mg/L	<0.10	0.10	3438995
Reached Baseline at C32	mg/L	NA		3442688
Hydrocarbon Resemblance	mg/L	NA		3442688
Surrogate Recovery (%)				
Isobutylbenzene - Extractable	%	99		3442688
n-Dotriacontane - Extractable	%	110		3442688
Isobutylbenzene - Volatile	%	106		3443020

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3442688	AJS	Matrix Spike [UB9980]	>C10-C16 Hydrocarbons	2013/12/03		89	%	30 - 130
	AJS	Matrix Spike [UB9980]	>C16-C21 Hydrocarbons	2013/12/03		104	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/03		108	%	30 - 130
		Spiked Blank	>C10-C16 Hydrocarbons	2013/12/03		98	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/03		113	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/03		121	%	30 - 130
		Method Blank	>C10-C16 Hydrocarbons	2013/12/02	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2013/12/02	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2013/12/02	<0.10		mg/L	
		RPD [UB9977]	>C10-C16 Hydrocarbons	2013/12/03	NC		%	40
			>C16-C21 Hydrocarbons	2013/12/03	NC		%	40
			>C21-<C32 Hydrocarbons	2013/12/03	NC		%	40
3443020	ASL	Matrix Spike	Benzene	2013/12/03		109	%	70 - 130
	ASL	Matrix Spike	Toluene	2013/12/03		110	%	70 - 130
			Ethylbenzene	2013/12/03		110	%	70 - 130
			Xylene (Total)	2013/12/03		112	%	70 - 130
		Spiked Blank	Benzene	2013/12/03		105	%	70 - 130
			Toluene	2013/12/03		106	%	70 - 130
			Ethylbenzene	2013/12/03		110	%	70 - 130
			Xylene (Total)	2013/12/03		110	%	70 - 130
		Method Blank	Benzene	2013/12/03	<0.0010		mg/L	
			Toluene	2013/12/03	<0.0010		mg/L	
			Ethylbenzene	2013/12/03	<0.0010		mg/L	
			Xylene (Total)	2013/12/03	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2013/12/03	<0.010		mg/L	
		RPD	Benzene	2013/12/03	NC		%	40
			Toluene	2013/12/03	NC		%	40
			Ethylbenzene	2013/12/03	NC		%	40
			Xylene (Total)	2013/12/03	NC		%	40
			C6 - C10 (less BTEX)	2013/12/03	NC		%	40
3443225	MKH	Matrix Spike	Total Mercury (Hg)	2013/12/02		98	%	80 - 120
	MKH	Spiked Blank	Total Mercury (Hg)	2013/12/02		100	%	80 - 120
		Method Blank	Total Mercury (Hg)	2013/12/02	<0.013		ug/L	
		RPD	Total Mercury (Hg)	2013/12/02	NC		%	25
3443229		Matrix Spike	Total Mercury (Hg)	2013/12/02		NC	%	80 - 120
	MKH	Spiked Blank	Total Mercury (Hg)	2013/12/02		99	%	80 - 120
		Method Blank	Total Mercury (Hg)	2013/12/02	<0.013		ug/L	
		RPD	Total Mercury (Hg)	2013/12/02	2.5		%	25
3443290	GTH	Matrix Spike [UB9983]	1-Methylnaphthalene	2013/12/04		94	%	30 - 130
	GTH	Matrix Spike [UB9983]	2-Methylnaphthalene	2013/12/04		102	%	30 - 130
			Acenaphthene	2013/12/04		107	%	30 - 130
			Acenaphthylene	2013/12/04		99	%	30 - 130
			Anthracene	2013/12/04		101	%	30 - 130
			Benzo(a)anthracene	2013/12/04		107	%	30 - 130
			Benzo(a)pyrene	2013/12/04		96	%	30 - 130
			Benzo(b)fluoranthene	2013/12/04		93	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/04		96	%	30 - 130
			Benzo(j)fluoranthene	2013/12/04		94	%	30 - 130
			Benzo(k)fluoranthene	2013/12/04		94	%	30 - 130
			Chrysene	2013/12/04		99	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/04		76	%	30 - 130
			Fluoranthene	2013/12/04		102	%	30 - 130
			Fluorene	2013/12/04		103	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/04		89	%	30 - 130
			Naphthalene	2013/12/04		96	%	30 - 130
			Perylene	2013/12/04		101	%	30 - 130
			Phenanthrene	2013/12/04		109	%	30 - 130
			Pyrene	2013/12/04		103	%	30 - 130
		Spiked Blank	1-Methylnaphthalene	2013/12/04		87	%	30 - 130
			2-Methylnaphthalene	2013/12/04		90	%	30 - 130
			Acenaphthene	2013/12/04		94	%	30 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
		Spiked Blank	Acenaphthylene	2013/12/04		91	%	30 - 130
			Anthracene	2013/12/04		90	%	30 - 130
			Benzo(a)anthracene	2013/12/04		101	%	30 - 130
			Benzo(a)pyrene	2013/12/04		90	%	30 - 130
			Benzo(b)fluoranthene	2013/12/04		88	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/04		91	%	30 - 130
			Benzo(j)fluoranthene	2013/12/04		88	%	30 - 130
			Benzo(k)fluoranthene	2013/12/04		88	%	30 - 130
			Chrysene	2013/12/04		94	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/04		75	%	30 - 130
			Fluoranthene	2013/12/04		94	%	30 - 130
			Fluorene	2013/12/04		93	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/04		86	%	30 - 130
			Naphthalene	2013/12/04		90	%	30 - 130
			Perylene	2013/12/04		95	%	30 - 130
			Phenanthrene	2013/12/04		102	%	30 - 130
			Pyrene	2013/12/04		96	%	30 - 130
		Method Blank	1-Methylnaphthalene	2013/12/04	<0.050		ug/L	
			2-Methylnaphthalene	2013/12/04	<0.050		ug/L	
			Acenaphthene	2013/12/04	<0.010		ug/L	
			Acenaphthylene	2013/12/04	<0.010		ug/L	
			Anthracene	2013/12/04	<0.010		ug/L	
			Benzo(a)anthracene	2013/12/04	<0.010		ug/L	
			Benzo(a)pyrene	2013/12/04	<0.010		ug/L	
			Benzo(b)fluoranthene	2013/12/04	<0.010		ug/L	
			Benzo(g,h,i)perylene	2013/12/04	<0.010		ug/L	
			Benzo(j)fluoranthene	2013/12/04	<0.010		ug/L	
			Benzo(k)fluoranthene	2013/12/04	<0.010		ug/L	
			Chrysene	2013/12/04	<0.010		ug/L	
			Dibenz(a,h)anthracene	2013/12/04	<0.010		ug/L	
			Fluoranthene	2013/12/04	<0.010		ug/L	
			Fluorene	2013/12/04	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2013/12/04	<0.010		ug/L	
			Naphthalene	2013/12/04	<0.20		ug/L	
			Perylene	2013/12/04	<0.010		ug/L	
			Phenanthrene	2013/12/04	<0.010		ug/L	
			Pyrene	2013/12/04	<0.010		ug/L	
		RPD [UB9979]	1-Methylnaphthalene	2013/12/04	9.5		%	40
			2-Methylnaphthalene	2013/12/04	6.9		%	40
			Acenaphthene	2013/12/04	7.2		%	40
			Acenaphthylene	2013/12/04	11.2		%	40
			Anthracene	2013/12/04	10.1		%	40
			Benzo(a)anthracene	2013/12/04	1.4		%	40
			Benzo(a)pyrene	2013/12/04	1.5		%	40
			Benzo(b)fluoranthene	2013/12/04	0.09		%	40
			Benzo(g,h,i)perylene	2013/12/04	2.4		%	40
			Benzo(j)fluoranthene	2013/12/04	13.4		%	40
			Benzo(k)fluoranthene	2013/12/04	25.2		%	40
			Chrysene	2013/12/04	4.1		%	40
			Dibenz(a,h)anthracene	2013/12/04	NC		%	40
			Fluoranthene	2013/12/04	3.9		%	40
			Fluorene	2013/12/04	7.2		%	40
			Indeno(1,2,3-cd)pyrene	2013/12/04	9.6		%	40
			Naphthalene	2013/12/04	9.6(1)		%	40
			Perylene	2013/12/04	NC		%	40
			Phenanthrene	2013/12/04	3.8		%	40
			Pyrene	2013/12/04	1.7		%	40
3443974	DLB	Matrix Spike	Dissolved Aluminum (Al)	2013/12/04		102	%	80 - 120
	DLB	Matrix Spike	Dissolved Antimony (Sb)	2013/12/04		104	%	80 - 120
			Dissolved Arsenic (As)	2013/12/04		102	%	80 - 120
			Dissolved Barium (Ba)	2013/12/04		91	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
		Matrix Spike	Dissolved Beryllium (Be)	2013/12/04		105	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/04		102	%	80 - 120
			Dissolved Boron (B)	2013/12/04		107	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/04		97	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/04		98	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/04		99	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/04		98	%	80 - 120
			Dissolved Copper (Cu)	2013/12/04		96	%	80 - 120
			Dissolved Iron (Fe)	2013/12/04		102	%	80 - 120
			Dissolved Lead (Pb)	2013/12/04		97	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/04		105	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/04		102	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/04		104	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/04		100	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/04		104	%	80 - 120
			Dissolved Potassium (K)	2013/12/04		104	%	80 - 120
			Dissolved Selenium (Se)	2013/12/04		99	%	80 - 120
			Dissolved Silver (Ag)	2013/12/04		97	%	80 - 120
			Dissolved Sodium (Na)	2013/12/04		NC	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/04		96	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/04		102	%	80 - 120
			Dissolved Tin (Sn)	2013/12/04		104	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/04		103	%	80 - 120
			Dissolved Uranium (U)	2013/12/04		107	%	80 - 120
			Dissolved Vanadium (V)	2013/12/04		101	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/04		99	%	80 - 120
		Spiked Blank	Dissolved Aluminum (Al)	2013/12/03		104	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/03		102	%	80 - 120
			Dissolved Arsenic (As)	2013/12/03		101	%	80 - 120
			Dissolved Barium (Ba)	2013/12/03		100	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/03		102	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/03		102	%	80 - 120
			Dissolved Boron (B)	2013/12/03		101	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/03		99	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/03		99	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/03		102	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/03		102	%	80 - 120
			Dissolved Copper (Cu)	2013/12/03		100	%	80 - 120
			Dissolved Iron (Fe)	2013/12/03		104	%	80 - 120
			Dissolved Lead (Pb)	2013/12/03		101	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/03		109	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/03		105	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/03		101	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/03		102	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/03		109	%	80 - 120
			Dissolved Potassium (K)	2013/12/03		109	%	80 - 120
			Dissolved Selenium (Se)	2013/12/03		101	%	80 - 120
			Dissolved Silver (Ag)	2013/12/03		100	%	80 - 120
			Dissolved Sodium (Na)	2013/12/03		108	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/03		102	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/03		104	%	80 - 120
			Dissolved Tin (Sn)	2013/12/03		103	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/03		106	%	80 - 120
			Dissolved Uranium (U)	2013/12/03		105	%	80 - 120
			Dissolved Vanadium (V)	2013/12/03		103	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/03		103	%	80 - 120
		Method Blank	Dissolved Aluminum (Al)	2013/12/03	<5.0		ug/L	
			Dissolved Antimony (Sb)	2013/12/03	<1.0		ug/L	
			Dissolved Arsenic (As)	2013/12/03	<1.0		ug/L	
			Dissolved Barium (Ba)	2013/12/03	<1.0		ug/L	
			Dissolved Beryllium (Be)	2013/12/03	<1.0		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
		Method Blank	Dissolved Bismuth (Bi)	2013/12/03	<2.0		ug/L	
			Dissolved Boron (B)	2013/12/03	<50		ug/L	
			Dissolved Cadmium (Cd)	2013/12/03	<0.010		ug/L	
			Dissolved Calcium (Ca)	2013/12/03	<100		ug/L	
			Dissolved Chromium (Cr)	2013/12/03	<1.0		ug/L	
			Dissolved Cobalt (Co)	2013/12/03	<0.40		ug/L	
			Dissolved Copper (Cu)	2013/12/03	<2.0		ug/L	
			Dissolved Iron (Fe)	2013/12/03	<50		ug/L	
			Dissolved Lead (Pb)	2013/12/03	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2013/12/03	<100		ug/L	
			Dissolved Manganese (Mn)	2013/12/03	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2013/12/03	<2.0		ug/L	
			Dissolved Nickel (Ni)	2013/12/03	<2.0		ug/L	
			Dissolved Phosphorus (P)	2013/12/03	<100		ug/L	
			Dissolved Potassium (K)	2013/12/03	<100		ug/L	
			Dissolved Selenium (Se)	2013/12/03	<1.0		ug/L	
			Dissolved Silver (Ag)	2013/12/03	<0.10		ug/L	
			Dissolved Sodium (Na)	2013/12/03	<100		ug/L	
			Dissolved Strontium (Sr)	2013/12/03	<2.0		ug/L	
			Dissolved Thallium (Tl)	2013/12/03	<0.10		ug/L	
			Dissolved Tin (Sn)	2013/12/03	<2.0		ug/L	
			Dissolved Titanium (Ti)	2013/12/03	<2.0		ug/L	
			Dissolved Uranium (U)	2013/12/03	<0.10		ug/L	
			Dissolved Vanadium (V)	2013/12/03	<2.0		ug/L	
			Dissolved Zinc (Zn)	2013/12/03	<5.0		ug/L	
		RPD	Dissolved Aluminum (Al)	2013/12/04	1.3		%	20
			Dissolved Antimony (Sb)	2013/12/04	NC		%	20
			Dissolved Arsenic (As)	2013/12/04	NC		%	20
			Dissolved Barium (Ba)	2013/12/04	4.8		%	20
			Dissolved Beryllium (Be)	2013/12/04	NC		%	20
			Dissolved Bismuth (Bi)	2013/12/04	NC		%	20
			Dissolved Boron (B)	2013/12/04	NC		%	20
			Dissolved Cadmium (Cd)	2013/12/04	NC		%	20
			Dissolved Calcium (Ca)	2013/12/04	0.6		%	20
			Dissolved Chromium (Cr)	2013/12/04	NC		%	20
			Dissolved Cobalt (Co)	2013/12/04	NC		%	20
			Dissolved Copper (Cu)	2013/12/04	NC		%	20
			Dissolved Iron (Fe)	2013/12/04	NC		%	20
			Dissolved Lead (Pb)	2013/12/04	NC		%	20
			Dissolved Magnesium (Mg)	2013/12/04	0.7		%	20
			Dissolved Manganese (Mn)	2013/12/04	NC		%	20
			Dissolved Molybdenum (Mo)	2013/12/04	NC		%	20
			Dissolved Nickel (Ni)	2013/12/04	NC		%	20
			Dissolved Phosphorus (P)	2013/12/04	NC		%	20
			Dissolved Potassium (K)	2013/12/04	0.7		%	20
			Dissolved Selenium (Se)	2013/12/04	NC		%	20
			Dissolved Silver (Ag)	2013/12/04	NC		%	20
			Dissolved Sodium (Na)	2013/12/04	1.2		%	20
			Dissolved Strontium (Sr)	2013/12/04	0.06		%	20
			Dissolved Thallium (Tl)	2013/12/04	NC		%	20
			Dissolved Tin (Sn)	2013/12/04	NC		%	20
			Dissolved Titanium (Ti)	2013/12/04	NC		%	20
			Dissolved Uranium (U)	2013/12/04	NC		%	20
			Dissolved Vanadium (V)	2013/12/04	NC		%	20
			Dissolved Zinc (Zn)	2013/12/04	NC		%	20
3447287	MKH	Matrix Spike [UB9979]	Total Mercury (Hg)	2013/12/05		101	%	80 - 120
	MKH	Spiked Blank	Total Mercury (Hg)	2013/12/05		100	%	80 - 120

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Maxxam Job #: B3K5867
Report Date: 2013/12/05

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
		Method Blank	Total Mercury (Hg)	2013/12/05	<0.013		ug/L	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

(1) Elevated PAH RDL(s) due to sample dilution.

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Maxxam Job #: B3K5867
Report Date: 2013/12/05

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Mike MacGillivray, Scientific Specialist (Inorganics)

Rose MacDonald, Scientific Specialist (Organics)

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Your P.O. #: HAL1988
Your Project #: 210.05890.00000
Site Location: GWMP/HCP
Your C.O.C. #: B161472

Attention:Kelly Henderson

SLR Consulting (Canada) Ltd
45 Wabana Crt., Suite 122
PO Box 791, Station A
Sydney, NS
B1P 6J1

Report Date: 2013/12/09

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B3K7489
Received: 2013/11/29, 17:00

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
TEH in Water (PIRI) (1)	7	2013/12/04	2013/12/04	ATL SOP 00113	Based on Atl. PIRI
Mercury - Total (CVAA,LL) (1)	6	2013/12/05	2013/12/05	ATL SOP 00026	Based on EPA245.1
Metals Water Diss. MS (as rec'd) (1)	5	N/A	2013/12/05	ATL SOP 00058	Based on EPA6020A
Metals Water Diss. MS (as rec'd) (1)	1	N/A	2013/12/06	ATL SOP 00058	Based on EPA6020A
PAH in Water by GC/MS (SIM) (1)	6	2013/12/04	2013/12/06	ATL SOP 00103	Based on EPA 8270C
VPH in Water (PIRI) (1)	7	2013/12/05	2013/12/05	ATL SOP 00118	Based on Atl. PIRI
ModTPH (T1) Calc. for Water (1)	7	N/A	2013/12/06	N/A	Based on Atl. PIRI

Remarks:

Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Bedford

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Natalie MacAskill, Sr. Project Manager
Email: NMacAskill@maxxam.ca
Phone# (902)567-1255 Ext:17

==========

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Maxxam Job #: B3K7489
Report Date: 2013/12/09

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		UC8575	UC8576	UC8577	UC8578		
Sampling Date		2013/11/29	2013/11/29	2013/11/29	2013/11/29		
COC Number		B161472	B161472	B161472	B161472		
	Units	FD #1	SCU18-001-MW	SCU18-002-MW	SCU18-010-MW	RDL	QC Batch
Metals							
Total Mercury (Hg)	ug/L	<0.013	<0.013	<0.013	0.013	0.013	3447297

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		UC8579	UC8580		
Sampling Date		2013/11/29	2013/11/29		
COC Number		B161472	B161472		
	Units	SCU18-011-MW	SCU19-015-MW	RDL	QC Batch
Metals					
Total Mercury (Hg)	ug/L	<0.013	<0.013	0.013	3447308

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3K7489
Report Date: 2013/12/09

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UC8575		UC8576		UC8577	UC8578		
Sampling Date		2013/11/29		2013/11/29		2013/11/29	2013/11/29		
COC Number		B161472		B161472		B161472	B161472		
	Units	FD #1	RDL	SCU18-001-MW	RDL	SCU18-002-MW	SCU18-010-MW	RDL	QC Batch
Metals									
Dissolved Aluminum (Al)	ug/L	18	5.0	19	5.0	70	27	5.0	3446919
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	2.9	1.0	3446919
Dissolved Cobalt (Co)	ug/L	<0.40	0.40	0.98	0.40	<0.40	<0.40	0.40	3446919
Dissolved Copper (Cu)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	2.0	3446919
Dissolved Iron (Fe)	ug/L	<50	50	520	50	<50	69	50	3446919
Dissolved Lead (Pb)	ug/L	0.51	0.50	<0.50	0.50	0.63	<0.50	0.50	3446919
Dissolved Magnesium (Mg)	ug/L	27000	100	56000	100	28000	750	100	3446919
Dissolved Manganese (Mn)	ug/L	790	2.0	7100	2.0	830	3.7	2.0	3446919
Dissolved Molybdenum (Mo)	ug/L	<2.0	2.0	2.2	2.0	<2.0	20	2.0	3446919
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	1.4	1.0	3446919
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	2.0	3446919
Dissolved Phosphorus (P)	ug/L	<100	100	<100	100	<100	100	100	3446919
Dissolved Potassium (K)	ug/L	2600	100	7000	100	2600	13000	100	3446919
Dissolved Selenium (Se)	ug/L	1.8	1.0	<1.0	1.0	1.9	1.4	1.0	3446919
Dissolved Silver (Ag)	ug/L	<0.10	0.10	<0.10	0.10	<0.10	<0.10	0.10	3446919
Dissolved Sodium (Na)	ug/L	40000	100	41000	100	40000	26000	100	3446919
Dissolved Strontium (Sr)	ug/L	3100	2.0	6800	20	3100	790	2.0	3446919
Dissolved Arsenic (As)	ug/L	<1.0	1.0	1.7	1.0	<1.0	7.2	1.0	3446919
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	<0.10	0.10	<0.10	<0.10	0.10	3446919
Dissolved Tin (Sn)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	2.0	3446919
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	2.0	3446919
Dissolved Uranium (U)	ug/L	1.4	0.10	1.2	0.10	1.4	0.45	0.10	3446919
Dissolved Vanadium (V)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	54	2.0	3446919
Dissolved Barium (Ba)	ug/L	14	1.0	40	1.0	14	33	1.0	3446919
Dissolved Zinc (Zn)	ug/L	10	5.0	12	5.0	59	6.2	5.0	3446919
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	3446919
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	2.0	3446919
Dissolved Boron (B)	ug/L	76	50	120	50	77	59	50	3446919
Dissolved Cadmium (Cd)	ug/L	0.015	0.010	0.11	0.010	0.012	<0.010	0.010	3446919
Dissolved Calcium (Ca)	ug/L	200000	100	310000	100	200000	180000	100	3446919

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3K7489
Report Date: 2013/12/09

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UC8579	UC8580		
Sampling Date		2013/11/29	2013/11/29		
COC Number		B161472	B161472		
	Units	SCU18-011-MW	SCU19-015-MW	RDL	QC Batch
Metals					
Dissolved Aluminum (Al)	ug/L	23	7.2	5.0	3446919
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	1.0	3446919
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	0.40	3446919
Dissolved Copper (Cu)	ug/L	<2.0	<2.0	2.0	3446919
Dissolved Iron (Fe)	ug/L	830	65	50	3446919
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	0.50	3446919
Dissolved Magnesium (Mg)	ug/L	24000	9800	100	3446919
Dissolved Manganese (Mn)	ug/L	330	38	2.0	3446919
Dissolved Molybdenum (Mo)	ug/L	11	2.3	2.0	3446919
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	1.0	3446919
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	2.0	3446919
Dissolved Phosphorus (P)	ug/L	<100	<100	100	3446919
Dissolved Potassium (K)	ug/L	14000	25000	100	3446919
Dissolved Selenium (Se)	ug/L	<1.0	22	1.0	3446919
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	0.10	3446919
Dissolved Sodium (Na)	ug/L	21000	27000	100	3446919
Dissolved Strontium (Sr)	ug/L	750	1600	2.0	3446919
Dissolved Arsenic (As)	ug/L	4.3	1.4	1.0	3446919
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	0.10	3446919
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	2.0	3446919
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	2.0	3446919
Dissolved Uranium (U)	ug/L	<0.10	7.3	0.10	3446919
Dissolved Vanadium (V)	ug/L	<2.0	8.7	2.0	3446919
Dissolved Barium (Ba)	ug/L	21	28	1.0	3446919
Dissolved Zinc (Zn)	ug/L	8.2	7.0	5.0	3446919
Dissolved Beryllium (Be)	ug/L	<1.0	<1.0	1.0	3446919
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	2.0	3446919
Dissolved Boron (B)	ug/L	150	540	50	3446919
Dissolved Cadmium (Cd)	ug/L	<0.010	<0.010	0.010	3446919
Dissolved Calcium (Ca)	ug/L	150000	370000	100	3446919

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3K7489
Report Date: 2013/12/09

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UC8575	UC8576	UC8577	UC8578	UC8579		
Sampling Date		2013/11/29	2013/11/29	2013/11/29	2013/11/29	2013/11/29		
COC Number		B161472	B161472	B161472	B161472	B161472		
	Units	FD #1	SCU18-001-MW	SCU18-002-MW	SCU18-010-MW	SCU18-011-MW	RDL	QC Batch
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	ug/L	<0.050	<0.050	<0.050	0.67	<0.050	0.050	3445874
2-Methylnaphthalene	ug/L	<0.050	<0.050	<0.050	0.099	<0.050	0.050	3445874
Acenaphthene	ug/L	0.014	<0.010	0.025	0.29	0.049	0.010	3445874
Acenaphthylene	ug/L	<0.010	<0.010	<0.010	0.19	0.012	0.010	3445874
Anthracene	ug/L	0.013	<0.010	0.023	0.11	0.016	0.010	3445874
Benzo(a)anthracene	ug/L	<0.010	<0.010	0.017	0.13	0.021	0.010	3445874
Benzo(a)pyrene	ug/L	<0.010	<0.010	0.010	0.096	0.015	0.010	3445874
Benzo(b)fluoranthene	ug/L	<0.010	<0.010	<0.010	0.068	0.011	0.010	3445874
Benzo(g,h,i)perylene	ug/L	<0.010	<0.010	<0.010	0.054	<0.010	0.010	3445874
Benzo(j)fluoranthene	ug/L	<0.010	<0.010	<0.010	0.051	<0.010	0.010	3445874
Benzo(k)fluoranthene	ug/L	<0.010	<0.010	<0.010	0.045	<0.010	0.010	3445874
Chrysene	ug/L	<0.010	<0.010	0.016	0.12	0.019	0.010	3445874
Dibenz(a,h)anthracene	ug/L	<0.010	<0.010	<0.010	0.018	<0.010	0.010	3445874
Fluoranthene	ug/L	0.026	<0.010	0.044	0.37	0.044	0.010	3445874
Fluorene	ug/L	0.022	<0.010	0.034	0.28	0.041	0.010	3445874
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	<0.010	<0.010	0.053	<0.010	0.010	3445874
Naphthalene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	3445874
Perylene	ug/L	<0.010	<0.010	<0.010	0.031	<0.010	0.010	3445874
Phenanthrene	ug/L	0.058	0.011	0.099	0.29	0.052	0.010	3445874
Pyrene	ug/L	0.021	<0.010	0.034	0.41	0.038	0.010	3445874
Surrogate Recovery (%)								
D10-Anthracene	%	91	97	100	89	85		3445874
D14-Terphenyl	%	93 (1)	96	96	90	87		3445874
D8-Acenaphthylene	%	94	91	92	92	93		3445874

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) PAH sample contained sediment.

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Maxxam Job #: B3K7489
Report Date: 2013/12/09

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UC8580		
Sampling Date		2013/11/29		
COC Number		B161472		
	Units	SCU19-015-MW	RDL	QC Batch
Polyaromatic Hydrocarbons				
1-Methylnaphthalene	ug/L	<0.050	0.050	3445874
2-Methylnaphthalene	ug/L	<0.050	0.050	3445874
Acenaphthene	ug/L	<0.010	0.010	3445874
Acenaphthylene	ug/L	<0.010	0.010	3445874
Anthracene	ug/L	<0.010	0.010	3445874
Benzo(a)anthracene	ug/L	<0.010	0.010	3445874
Benzo(a)pyrene	ug/L	<0.010	0.010	3445874
Benzo(b)fluoranthene	ug/L	<0.010	0.010	3445874
Benzo(g,h,i)perylene	ug/L	<0.010	0.010	3445874
Benzo(j)fluoranthene	ug/L	<0.010	0.010	3445874
Benzo(k)fluoranthene	ug/L	<0.010	0.010	3445874
Chrysene	ug/L	<0.010	0.010	3445874
Dibenz(a,h)anthracene	ug/L	<0.010	0.010	3445874
Fluoranthene	ug/L	<0.010	0.010	3445874
Fluorene	ug/L	<0.010	0.010	3445874
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	0.010	3445874
Naphthalene	ug/L	<0.20	0.20	3445874
Perylene	ug/L	<0.010	0.010	3445874
Phenanthrene	ug/L	<0.010	0.010	3445874
Pyrene	ug/L	<0.010	0.010	3445874
Surrogate Recovery (%)				
D10-Anthracene	%	93		3445874
D14-Terphenyl	%	88		3445874
D8-Acenaphthylene	%	93		3445874

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3K7489
Report Date: 2013/12/09

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UC8574	UC8575	UC8576	UC8577	UC8578		
Sampling Date		2013/11/29	2013/11/29	2013/11/29	2013/11/29	2013/11/29		
COC Number		B161472	B161472	B161472	B161472	B161472		
	Units	TRIP BLANK #1	FD #1	SCU18-001-MW	SCU18-002-MW	SCU18-010-MW	RDL	QC Batch
Petroleum Hydrocarbons								
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	3445375
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	3445375
>C21-<C32 Hydrocarbons	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3445375
Modified TPH (Tier1)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	3442932
Reached Baseline at C32	mg/L	NA	NA	NA	NA	NA		3445375
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	NA		3445375
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	3446928
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	3446928
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	3446928
Xylene (Total)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	3446928
C6 - C10 (less BTEX)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	3446928
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	100	102	106	104	106		3445375
n-Dotriacontane - Extractable	%	106	111	111	111	111		3445375
Isobutylbenzene - Volatile	%	107	99	106	103	102		3446928

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
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Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UC8579	UC8580		
Sampling Date		2013/11/29	2013/11/29		
COC Number		B161472	B161472		
	Units	**SCU18-011-MW**	**SCU19-015-MW**	**RDL**	**QC Batch**
Petroleum Hydrocarbons					
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	0.050	3445375
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	0.050	3445375
>C21-<C32 Hydrocarbons	mg/L	<0.10	<0.10	0.10	3445375
Modified TPH (Tier1)	mg/L	<0.10	<0.10	0.10	3442932
Reached Baseline at C32	mg/L	NA	NA		3445375
Hydrocarbon Resemblance	mg/L	NA	NA		3445375
Benzene	mg/L	<0.0010	<0.0010	0.0010	3446928
Toluene	mg/L	<0.0010	<0.0010	0.0010	3446928
Ethylbenzene	mg/L	<0.0010	<0.0010	0.0010	3446928
Xylene (Total)	mg/L	<0.0020	<0.0020	0.0020	3446928
C6 - C10 (less BTEX)	mg/L	<0.010	<0.010	0.010	3446928
Surrogate Recovery (%)					
Isobutylbenzene - Extractable	%	107	100		3445375
n-Dotriacontane - Extractable	%	115	103		3445375
Isobutylbenzene - Volatile	%	100	102		3446928

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3445375	AJS	Matrix Spike [UC8580]	Isobutylbenzene - Extractable	2013/12/04		97	%	30 - 130
	AJS	Matrix Spike [UC8580]	n-Dotriacontane - Extractable	2013/12/04		107	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/04		93	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/04		109	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/04		112	%	30 - 130
		Spiked Blank	Isobutylbenzene - Extractable	2013/12/04		107	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/04		110	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/04		89	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/04		102	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/04		107	%	30 - 130
		Method Blank	Isobutylbenzene - Extractable	2013/12/04		108	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/04		109	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/04	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2013/12/04	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2013/12/04	<0.10		mg/L	
		RPD [UC8576]	>C10-C16 Hydrocarbons	2013/12/04	NC		%	40
			>C16-C21 Hydrocarbons	2013/12/04	NC		%	40
			>C21-<C32 Hydrocarbons	2013/12/04	NC		%	40
3445874	GTH	Matrix Spike	1-Methylnaphthalene	2013/12/05		90	%	30 - 130
	GTH	Matrix Spike	2-Methylnaphthalene	2013/12/05		96	%	30 - 130
			Acenaphthene	2013/12/05		102	%	30 - 130
			Acenaphthylene	2013/12/05		99	%	30 - 130
			Anthracene	2013/12/05		98	%	30 - 130
			Benzo(a)anthracene	2013/12/05		115	%	30 - 130
			Benzo(a)pyrene	2013/12/05		95	%	30 - 130
			Benzo(b)fluoranthene	2013/12/05		86	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/05		102	%	30 - 130
			Benzo(j)fluoranthene	2013/12/05		88	%	30 - 130
			Benzo(k)fluoranthene	2013/12/05		90	%	30 - 130
			Chrysene	2013/12/05		106	%	30 - 130
			D10-Anthracene	2013/12/05		86	%	30 - 130
			D14-Terphenyl	2013/12/05		99	%	30 - 130
			D8-Acenaphthylene	2013/12/05		94	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/05		98	%	30 - 130
			Fluoranthene	2013/12/05		100	%	30 - 130
			Fluorene	2013/12/05		100	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/05		103	%	30 - 130
			Naphthalene	2013/12/05		95	%	30 - 130
			Perylene	2013/12/05		98	%	30 - 130
			Phenanthrene	2013/12/05		106	%	30 - 130
			Pyrene	2013/12/05		103	%	30 - 130
		Spiked Blank	1-Methylnaphthalene	2013/12/05		86	%	30 - 130
			2-Methylnaphthalene	2013/12/05		94	%	30 - 130
			Acenaphthene	2013/12/05		98	%	30 - 130
			Acenaphthylene	2013/12/05		95	%	30 - 130
			Anthracene	2013/12/05		98	%	30 - 130
			Benzo(a)anthracene	2013/12/05		117	%	30 - 130
			Benzo(a)pyrene	2013/12/05		94	%	30 - 130
			Benzo(b)fluoranthene	2013/12/05		84	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/05		99	%	30 - 130
			Benzo(j)fluoranthene	2013/12/05		87	%	30 - 130
			Benzo(k)fluoranthene	2013/12/05		89	%	30 - 130
			Chrysene	2013/12/05		104	%	30 - 130
			D10-Anthracene	2013/12/05		84	%	30 - 130
			D14-Terphenyl	2013/12/05		96	%	30 - 130
			D8-Acenaphthylene	2013/12/05		90	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/05		96	%	30 - 130
			Fluoranthene	2013/12/05		100	%	30 - 130
			Fluorene	2013/12/05		96	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/05		102	%	30 - 130
			Naphthalene	2013/12/05		90	%	30 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
		Spiked Blank	Perylene	2013/12/05		97	%	30 - 130
			Phenanthrene	2013/12/05		106	%	30 - 130
			Pyrene	2013/12/05		103	%	30 - 130
		Method Blank	1-Methylnaphthalene	2013/12/05	<0.050		ug/L	
			2-Methylnaphthalene	2013/12/05	<0.050		ug/L	
			Acenaphthene	2013/12/05	<0.010		ug/L	
			Acenaphthylene	2013/12/05	<0.010		ug/L	
			Anthracene	2013/12/05	<0.010		ug/L	
			Benzo(a)anthracene	2013/12/05	<0.010		ug/L	
			Benzo(a)pyrene	2013/12/05	<0.010		ug/L	
			Benzo(b)fluoranthene	2013/12/05	<0.010		ug/L	
			Benzo(g,h,i)perylene	2013/12/05	<0.010		ug/L	
			Benzo(j)fluoranthene	2013/12/05	<0.010		ug/L	
			Benzo(k)fluoranthene	2013/12/05	<0.010		ug/L	
			Chrysene	2013/12/05	<0.010		ug/L	
			D10-Anthracene	2013/12/05		91	%	30 - 130
			D14-Terphenyl	2013/12/05		93	%	30 - 130
			D8-Acenaphthylene	2013/12/05		92	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/05	<0.010		ug/L	
			Fluoranthene	2013/12/05	<0.010		ug/L	
			Fluorene	2013/12/05	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2013/12/05	<0.010		ug/L	
			Naphthalene	2013/12/05	<0.20		ug/L	
			Perylene	2013/12/05	<0.010		ug/L	
			Phenanthrene	2013/12/05	<0.010		ug/L	
			Pyrene	2013/12/05	<0.010		ug/L	
		RPD	1-Methylnaphthalene	2013/12/05	NC		%	40
			2-Methylnaphthalene	2013/12/05	NC		%	40
			Acenaphthene	2013/12/05	NC		%	40
			Acenaphthylene	2013/12/05	NC		%	40
			Anthracene	2013/12/05	NC		%	40
			Benzo(a)anthracene	2013/12/05	NC		%	40
			Benzo(a)pyrene	2013/12/05	NC		%	40
			Benzo(b)fluoranthene	2013/12/05	NC		%	40
			Benzo(g,h,i)perylene	2013/12/05	NC		%	40
			Benzo(j)fluoranthene	2013/12/05	NC		%	40
			Benzo(k)fluoranthene	2013/12/05	NC		%	40
			Chrysene	2013/12/05	NC		%	40
			Dibenz(a,h)anthracene	2013/12/05	NC		%	40
			Fluoranthene	2013/12/05	NC		%	40
			Fluorene	2013/12/05	NC		%	40
			Indeno(1,2,3-cd)pyrene	2013/12/05	NC		%	40
			Naphthalene	2013/12/05	NC		%	40
			Perylene	2013/12/05	NC		%	40
			Phenanthrene	2013/12/05	NC		%	40
			Pyrene	2013/12/05	NC		%	40
3446919	DLB	Matrix Spike [UC8579]	Dissolved Aluminum (Al)	2013/12/05		99	%	80 - 120
	DLB	Matrix Spike [UC8579]	Dissolved Antimony (Sb)	2013/12/05		108	%	80 - 120
			Dissolved Arsenic (As)	2013/12/05		101	%	80 - 120
			Dissolved Barium (Ba)	2013/12/05		97	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/05		102	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/05		102	%	80 - 120
			Dissolved Boron (B)	2013/12/05		NC	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/05		100	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/05		NC	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/05		99	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/05		98	%	80 - 120
			Dissolved Copper (Cu)	2013/12/05		95	%	80 - 120
			Dissolved Iron (Fe)	2013/12/05		NC	%	80 - 120
			Dissolved Lead (Pb)	2013/12/05		98	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/05		NC	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
		Matrix Spike [UC8579]	Dissolved Manganese (Mn)	2013/12/05		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/05		104	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/05		99	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/05		105	%	80 - 120
			Dissolved Potassium (K)	2013/12/05		NC	%	80 - 120
			Dissolved Selenium (Se)	2013/12/05		100	%	80 - 120
			Dissolved Silver (Ag)	2013/12/05		93	%	80 - 120
			Dissolved Sodium (Na)	2013/12/05		NC	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/05		NC	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/05		106	%	80 - 120
			Dissolved Tin (Sn)	2013/12/05		107	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/05		104	%	80 - 120
			Dissolved Uranium (U)	2013/12/05		109	%	80 - 120
			Dissolved Vanadium (V)	2013/12/05		100	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/05		98	%	80 - 120
		Spiked Blank	Dissolved Aluminum (Al)	2013/12/05		104	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/05		107	%	80 - 120
			Dissolved Arsenic (As)	2013/12/05		102	%	80 - 120
			Dissolved Barium (Ba)	2013/12/05		98	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/05		101	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/05		104	%	80 - 120
			Dissolved Boron (B)	2013/12/05		101	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/05		99	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/05		111	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/05		100	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/05		100	%	80 - 120
			Dissolved Copper (Cu)	2013/12/05		98	%	80 - 120
			Dissolved Iron (Fe)	2013/12/05		105	%	80 - 120
			Dissolved Lead (Pb)	2013/12/05		99	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/05		109	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/05		103	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/05		101	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/05		102	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/05		105	%	80 - 120
			Dissolved Potassium (K)	2013/12/05		106	%	80 - 120
			Dissolved Selenium (Se)	2013/12/05		100	%	80 - 120
			Dissolved Silver (Ag)	2013/12/05		99	%	80 - 120
			Dissolved Sodium (Na)	2013/12/05		106	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/05		103	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/05		105	%	80 - 120
			Dissolved Tin (Sn)	2013/12/05		105	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/05		104	%	80 - 120
			Dissolved Uranium (U)	2013/12/05		108	%	80 - 120
			Dissolved Vanadium (V)	2013/12/05		101	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/05		103	%	80 - 120
		Method Blank	Dissolved Aluminum (Al)	2013/12/05	<5.0		ug/L	
			Dissolved Antimony (Sb)	2013/12/05	<1.0		ug/L	
			Dissolved Arsenic (As)	2013/12/05	<1.0		ug/L	
			Dissolved Barium (Ba)	2013/12/05	<1.0		ug/L	
			Dissolved Beryllium (Be)	2013/12/05	<1.0		ug/L	
			Dissolved Bismuth (Bi)	2013/12/05	<2.0		ug/L	
			Dissolved Boron (B)	2013/12/05	<50		ug/L	
			Dissolved Cadmium (Cd)	2013/12/05	<0.010		ug/L	
			Dissolved Calcium (Ca)	2013/12/05	<100		ug/L	
			Dissolved Chromium (Cr)	2013/12/05	<1.0		ug/L	
			Dissolved Cobalt (Co)	2013/12/05	<0.40		ug/L	
			Dissolved Copper (Cu)	2013/12/05	<2.0		ug/L	
			Dissolved Iron (Fe)	2013/12/05	<50		ug/L	
			Dissolved Lead (Pb)	2013/12/05	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2013/12/05	<100		ug/L	
			Dissolved Manganese (Mn)	2013/12/05	<2.0		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
		Method Blank	Dissolved Molybdenum (Mo)	2013/12/05	<2.0		ug/L	
			Dissolved Nickel (Ni)	2013/12/05	<2.0		ug/L	
			Dissolved Phosphorus (P)	2013/12/05	<100		ug/L	
			Dissolved Potassium (K)	2013/12/05	<100		ug/L	
			Dissolved Selenium (Se)	2013/12/05	<1.0		ug/L	
			Dissolved Silver (Ag)	2013/12/05	<0.10		ug/L	
			Dissolved Sodium (Na)	2013/12/05	<100		ug/L	
			Dissolved Strontium (Sr)	2013/12/05	<2.0		ug/L	
			Dissolved Thallium (Tl)	2013/12/05	<0.10		ug/L	
			Dissolved Tin (Sn)	2013/12/05	<2.0		ug/L	
			Dissolved Titanium (Ti)	2013/12/05	<2.0		ug/L	
			Dissolved Uranium (U)	2013/12/05	<0.10		ug/L	
			Dissolved Vanadium (V)	2013/12/05	<2.0		ug/L	
			Dissolved Zinc (Zn)	2013/12/05	<5.0		ug/L	
		RPD [UC8579]	Dissolved Aluminum (Al)	2013/12/05	NC		%	20
			Dissolved Antimony (Sb)	2013/12/05	NC		%	20
			Dissolved Arsenic (As)	2013/12/05	NC		%	20
			Dissolved Barium (Ba)	2013/12/05	0.5		%	20
			Dissolved Beryllium (Be)	2013/12/05	NC		%	20
			Dissolved Bismuth (Bi)	2013/12/05	NC		%	20
			Dissolved Boron (B)	2013/12/05	NC		%	20
			Dissolved Cadmium (Cd)	2013/12/05	NC		%	20
			Dissolved Calcium (Ca)	2013/12/05	0.6		%	20
			Dissolved Chromium (Cr)	2013/12/05	NC		%	20
			Dissolved Cobalt (Co)	2013/12/05	NC		%	20
			Dissolved Copper (Cu)	2013/12/05	NC		%	20
			Dissolved Iron (Fe)	2013/12/05	0.7		%	20
			Dissolved Lead (Pb)	2013/12/05	NC		%	20
			Dissolved Magnesium (Mg)	2013/12/05	0.8		%	20
			Dissolved Manganese (Mn)	2013/12/05	0.4		%	20
			Dissolved Molybdenum (Mo)	2013/12/05	1.8		%	20
			Dissolved Nickel (Ni)	2013/12/05	NC		%	20
			Dissolved Phosphorus (P)	2013/12/05	NC		%	20
			Dissolved Potassium (K)	2013/12/05	2.1		%	20
			Dissolved Selenium (Se)	2013/12/05	NC		%	20
			Dissolved Silver (Ag)	2013/12/05	NC		%	20
			Dissolved Sodium (Na)	2013/12/05	1.1		%	20
			Dissolved Strontium (Sr)	2013/12/05	0.2		%	20
			Dissolved Thallium (Tl)	2013/12/05	NC		%	20
			Dissolved Tin (Sn)	2013/12/05	NC		%	20
			Dissolved Titanium (Ti)	2013/12/05	NC		%	20
			Dissolved Uranium (U)	2013/12/05	NC		%	20
			Dissolved Vanadium (V)	2013/12/05	NC		%	20
			Dissolved Zinc (Zn)	2013/12/05	NC		%	20
3446928	MS3	Matrix Spike [UC8575]	Isobutylbenzene - Volatile	2013/12/05		102	%	70 - 130
	MS3	Matrix Spike [UC8575]	Benzene	2013/12/05		109	%	70 - 130
			Toluene	2013/12/05		112	%	70 - 130
			Ethylbenzene	2013/12/05		110	%	70 - 130
			Xylene (Total)	2013/12/05		111	%	70 - 130
		Spiked Blank	Isobutylbenzene - Volatile	2013/12/05		103	%	70 - 130
			Benzene	2013/12/05		113	%	N/A
			Toluene	2013/12/05		116	%	N/A
			Ethylbenzene	2013/12/05		111	%	N/A
			Xylene (Total)	2013/12/05		111	%	N/A
		Method Blank	Isobutylbenzene - Volatile	2013/12/05		98	%	70 - 130
			Benzene	2013/12/05	<0.0010		mg/L	
			Toluene	2013/12/05	<0.0010		mg/L	
			Ethylbenzene	2013/12/05	<0.0010		mg/L	
			Xylene (Total)	2013/12/05	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2013/12/05	<0.010		mg/L	
		RPD [UC8574]	Benzene	2013/12/05	NC		%	40

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Maxxam Job #: B3K7489
Report Date: 2013/12/09

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
		RPD [UC8574]	Toluene	2013/12/05	NC		%	40
			Ethylbenzene	2013/12/05	NC		%	40
			Xylene (Total)	2013/12/05	NC		%	40
			C6 - C10 (less BTEX)	2013/12/05	NC		%	40
3447297	MKH	Matrix Spike	Total Mercury (Hg)	2013/12/05		102	%	80 - 120
	MKH	Spiked Blank	Total Mercury (Hg)	2013/12/05		98	%	80 - 120
		Method Blank	Total Mercury (Hg)	2013/12/05	<0.013		ug/L	
		RPD	Total Mercury (Hg)	2013/12/06	NC		%	25
3447308		Matrix Spike [UC8580]	Total Mercury (Hg)	2013/12/05		98	%	80 - 120
	MKH	Spiked Blank	Total Mercury (Hg)	2013/12/05		100	%	80 - 120
		Method Blank	Total Mercury (Hg)	2013/12/05	<0.013		ug/L	
		RPD [UC8579]	Total Mercury (Hg)	2013/12/05	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Sampler Initials: KM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Alan Stewart, Scientific Specialist (Organics)

Eric Dearman, Scientific Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

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Your P.O. #: HAL1988
Your Project #: 210.05890.00000
Site Location: GWMP/HCP
Your C.O.C. #: B161490

Attention:Kelly Henderson

SLR Consulting (Canada) Ltd
45 Wabana Crt., Suite 122
PO Box 791, Station A
Sydney, NS
B1P 6J1

Report Date: 2013/12/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B3K8203
Received: 2013/12/02, 16:50

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
TEH in Water (PIRI) (1)	7	2013/12/04	2013/12/05	ATL SOP 00113	Based on Atl. PIRI
TEH in Water (PIRI) (1)	4	2013/12/05	2013/12/05	ATL SOP 00113	Based on Atl. PIRI
Mercury - Total (CVAA,LL) (1)	11	2013/12/10	2013/12/10	ATL SOP 00026	Based on EPA245.1
Metals Water Diss. MS (as rec'd) (1)	5	N/A	2013/12/05	ATL SOP 00058	Based on EPA6020A
Metals Water Diss. MS (as rec'd) (1)	6	N/A	2013/12/06	ATL SOP 00058	Based on EPA6020A
PAH in Water by GC/MS (SIM) (1)	6	2013/12/04	2013/12/06	ATL SOP 00103	Based on EPA 8270C
PAH in Water by GC/MS (SIM) (1)	7	2013/12/06	2013/12/10	ATL SOP 00103	Based on EPA 8270C
VPH in Water (PIRI) (1)	10	2013/12/05	2013/12/06	ATL SOP 00118	Based on Atl. PIRI
VPH in Water (PIRI) (1)	1	2013/12/05	2013/12/09	ATL SOP 00118	Based on Atl. PIRI
ModTPH (T1) Calc. for Water (1)	11	N/A	2013/12/09	N/A	Based on Atl. PIRI
Volatile Organic Compounds in Water (1, 2)	1	2013/12/05	2013/12/06	ATL SOP 00122/00133	Based on 8260C mod

Remarks:

Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Bedford

(2) New RDLs in effect due to release of NS Contaminated Sites Regulations. Reduced RDL based on MDL study performance. Low level analytical run checks being implemented.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Natalie MacAskill, Sr. Project Manager
Email: NMacAskill@maxxam.ca
Phone# (902)567-1255 Ext:17

==========

This report has been generated and distributed using a secure automated process.
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Maxxam Job #: B3K8203
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		UD1677	UD1678	UD1679	UD1680	UD1681		
Sampling Date		2013/12/01	2013/12/01	2013/12/01	2013/12/01	2013/12/01		
COC Number		B161490	B161490	B161490	B161490	B161490		
	Units	FD #2	SCU17-010-MWA	SCU17-010-MWB	SCU17-010-MWC	SCU19-010-MW	RDL	QC Batch
Metals								
Total Mercury (Hg)	ug/L	<0.013	<0.013	<0.013	<0.013	<0.013	0.013	3452788

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		UD1682	UD1683	UD1694	UD1695	UD1697		
Sampling Date		2013/12/01	2013/12/02	2013/12/02	2013/12/02	2013/12/02		
COC Number		B161490	B161490	B161490	B161490	B161490		
	Units	SCU18-009-MW	SCU8-002-MW	SCU10-004-MW	SCU11-003-MW	SCU17-004-MW	RDL	QC Batch
Metals								
Total Mercury (Hg)	ug/L	<0.013	<0.013	<0.013	<0.013	<0.013	0.013	3452788

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		UD1698		
Sampling Date		2013/12/02		
COC Number		B161490		
	Units	SCU18-007-MW	RDL	QC Batch
Metals				
Total Mercury (Hg)	ug/L	<0.013	0.013	3452788

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UD1677		UD1678			UD1679		
Sampling Date		2013/12/01		2013/12/01			2013/12/01		
COC Number		B161490		B161490			B161490		
	Units	FD #2	QC Batch	SCU17-010-M WA	RDL	QC Batch	SCU17-010-M WB	RDL	QC Batch
Metals									
Dissolved Aluminum (Al)	ug/L	54	3448497	56	5.0	3446919	13	5.0	3448497
Dissolved Antimony (Sb)	ug/L	<1.0	3448497	<1.0	1.0	3446919	<1.0	1.0	3448497
Dissolved Arsenic (As)	ug/L	1.4	3448497	1.3	1.0	3446919	22	1.0	3448497
Dissolved Barium (Ba)	ug/L	43	3448497	42	1.0	3446919	7.9	1.0	3448497
Dissolved Beryllium (Be)	ug/L	<1.0	3448497	<1.0	1.0	3446919	<1.0	1.0	3448497
Dissolved Bismuth (Bi)	ug/L	<2.0	3448497	<2.0	2.0	3446919	<2.0	2.0	3448497
Dissolved Boron (B)	ug/L	140	3448497	150	50	3446919	150	50	3448497
Dissolved Cadmium (Cd)	ug/L	<0.010	3448497	<0.010	0.010	3446919	<0.010	0.010	3448497
Dissolved Calcium (Ca)	ug/L	110000	3448497	110000	100	3446919	780000	100	3448497
Dissolved Chromium (Cr)	ug/L	<1.0	3448497	<1.0	1.0	3446919	<1.0	1.0	3448497
Dissolved Cobalt (Co)	ug/L	<0.40	3448497	<0.40	0.40	3446919	<0.40	0.40	3448497
Dissolved Copper (Cu)	ug/L	<2.0	3448497	<2.0	2.0	3446919	<2.0	2.0	3448497
Dissolved Iron (Fe)	ug/L	<50	3448497	<50	50	3446919	1100	50	3448497
Dissolved Lead (Pb)	ug/L	<0.50	3448497	<0.50	0.50	3446919	<0.50	0.50	3448497
Dissolved Magnesium (Mg)	ug/L	4400	3448497	4400	100	3446919	26000	100	3448497
Dissolved Manganese (Mn)	ug/L	<2.0	3448497	<2.0	2.0	3446919	310	2.0	3448497
Dissolved Molybdenum (Mo)	ug/L	7.5	3448497	7.3	2.0	3446919	2.8	2.0	3448497
Dissolved Nickel (Ni)	ug/L	<2.0	3448497	<2.0	2.0	3446919	<2.0	2.0	3448497
Dissolved Phosphorus (P)	ug/L	<100	3448497	<100	100	3446919	<100	100	3448497
Dissolved Potassium (K)	ug/L	9500	3448497	9800	100	3446919	8600	100	3448497
Dissolved Selenium (Se)	ug/L	4.0	3448497	4.3	1.0	3446919	<1.0	1.0	3448497
Dissolved Silver (Ag)	ug/L	<0.10	3448497	<0.10	0.10	3446919	<0.10	0.10	3448497
Dissolved Sodium (Na)	ug/L	31000	3448497	31000	100	3446919	490000	100	3448497
Dissolved Strontium (Sr)	ug/L	460	3448497	460	2.0	3446919	20000	20	3448497
Dissolved Thallium (Tl)	ug/L	<0.10	3448497	<0.10	0.10	3446919	<0.10	0.10	3448497
Dissolved Tin (Sn)	ug/L	<2.0	3448497	<2.0	2.0	3446919	<2.0	2.0	3448497
Dissolved Titanium (Ti)	ug/L	<2.0	3448497	<2.0	2.0	3446919	<2.0	2.0	3448497
Dissolved Uranium (U)	ug/L	2.9	3448497	2.8	0.10	3446919	2.5	0.10	3448497
Dissolved Vanadium (V)	ug/L	2.9	3448497	2.5	2.0	3446919	<2.0	2.0	3448497
Dissolved Zinc (Zn)	ug/L	<5.0	3448497	6.7	5.0	3446919	<5.0	5.0	3448497

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3K8203
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UD1680		UD1681		UD1682		
Sampling Date		2013/12/01		2013/12/01		2013/12/01		
COC Number		B161490		B161490		B161490		
	Units	SCU17-010-MWC	RDL	SCU19-010-MW	QC Batch	SCU18-009-MW	RDL	QC Batch
Metals								
Dissolved Aluminum (Al)	ug/L	19	5.0	27	3446919	29	5.0	3448497
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	<1.0	3446919	<1.0	1.0	3448497
Dissolved Arsenic (As)	ug/L	12	1.0	4.4	3446919	4.0	1.0	3448497
Dissolved Barium (Ba)	ug/L	15	1.0	48	3446919	63	1.0	3448497
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	<1.0	3446919	<1.0	1.0	3448497
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	3446919	<2.0	2.0	3448497
Dissolved Boron (B)	ug/L	490	50	260	3446919	100	50	3448497
Dissolved Cadmium (Cd)	ug/L	<0.010	0.010	0.012	3446919	<0.010	0.010	3448497
Dissolved Calcium (Ca)	ug/L	1100000	100	130000	3446919	96000	100	3448497
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	6.2	3446919	<1.0	1.0	3448497
Dissolved Cobalt (Co)	ug/L	<0.40	0.40	<0.40	3446919	<0.40	0.40	3448497
Dissolved Copper (Cu)	ug/L	2.1	2.0	<2.0	3446919	<2.0	2.0	3448497
Dissolved Iron (Fe)	ug/L	1400	50	320	3446919	<50	50	3448497
Dissolved Lead (Pb)	ug/L	<0.50	0.50	<0.50	3446919	<0.50	0.50	3448497
Dissolved Magnesium (Mg)	ug/L	72000	100	6500	3446919	13000	100	3448497
Dissolved Manganese (Mn)	ug/L	700	2.0	63	3446919	79	2.0	3448497
Dissolved Molybdenum (Mo)	ug/L	5.4	2.0	13	3446919	6.5	2.0	3448497
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	<2.0	3446919	<2.0	2.0	3448497
Dissolved Phosphorus (P)	ug/L	<100	100	140	3446919	<100	100	3448497
Dissolved Potassium (K)	ug/L	18000	100	28000	3446919	9300	100	3448497
Dissolved Selenium (Se)	ug/L	<1.0	1.0	3.0	3446919	1.2	1.0	3448497
Dissolved Silver (Ag)	ug/L	<0.10	0.10	<0.10	3446919	<0.10	0.10	3448497
Dissolved Sodium (Na)	ug/L	350000	100	31000	3446919	40000	100	3448497
Dissolved Strontium (Sr)	ug/L	26000	20	490	3446919	820	2.0	3448497
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	<0.10	3446919	<0.10	0.10	3448497
Dissolved Tin (Sn)	ug/L	<2.0	2.0	<2.0	3446919	<2.0	2.0	3448497
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	<2.0	3446919	<2.0	2.0	3448497
Dissolved Uranium (U)	ug/L	0.30	0.10	0.31	3446919	1.9	0.10	3448497
Dissolved Vanadium (V)	ug/L	<2.0	2.0	38	3446919	2.9	2.0	3448497
Dissolved Zinc (Zn)	ug/L	7.2	5.0	5.9	3446919	<5.0	5.0	3448497

RDL = Reportable Detection Limit
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Maxxam Job #: B3K8203
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UD1683	UD1694		UD1695	UD1697		
Sampling Date		2013/12/02	2013/12/02		2013/12/02	2013/12/02		
COC Number		B161490	B161490		B161490	B161490		
	Units	SCU8-002-MW	SCU10-004-MW	QC Batch	SCU11-003-MW	SCU17-004-MW	RDL	QC Batch
Metals								
Dissolved Aluminum (Al)	ug/L	7.9	39	3446919	12	24	5.0	3448497
Dissolved Antimony (Sb)	ug/L	1.9	<1.0	3446919	<1.0	<1.0	1.0	3448497
Dissolved Arsenic (As)	ug/L	1.9	11	3446919	1.5	4.1	1.0	3448497
Dissolved Barium (Ba)	ug/L	59	57	3446919	64	59	1.0	3448497
Dissolved Beryllium (Be)	ug/L	<1.0	<1.0	3446919	<1.0	<1.0	1.0	3448497
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	3446919	<2.0	<2.0	2.0	3448497
Dissolved Boron (B)	ug/L	120	69	3446919	130	<50	50	3448497
Dissolved Cadmium (Cd)	ug/L	0.045	<0.010	3446919	0.020	<0.010	0.010	3448497
Dissolved Calcium (Ca)	ug/L	140000	100000	3446919	72000	150000	100	3448497
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	3446919	<1.0	<1.0	1.0	3448497
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	3446919	<0.40	<0.40	0.40	3448497
Dissolved Copper (Cu)	ug/L	<2.0	<2.0	3446919	<2.0	<2.0	2.0	3448497
Dissolved Iron (Fe)	ug/L	<50	110	3446919	<50	<50	50	3448497
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	3446919	<0.50	<0.50	0.50	3448497
Dissolved Magnesium (Mg)	ug/L	23000	3600	3446919	20000	<100	100	3448497
Dissolved Manganese (Mn)	ug/L	5.0	73	3446919	90	<2.0	2.0	3448497
Dissolved Molybdenum (Mo)	ug/L	4.1	5.4	3446919	3.4	10	2.0	3448497
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	3446919	<2.0	<2.0	2.0	3448497
Dissolved Phosphorus (P)	ug/L	170	<100	3446919	<100	<100	100	3448497
Dissolved Potassium (K)	ug/L	2300	10000	3446919	12000	14000	100	3448497
Dissolved Selenium (Se)	ug/L	3.4	1.2	3446919	1.1	2.8	1.0	3448497
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	3446919	<0.10	<0.10	0.10	3448497
Dissolved Sodium (Na)	ug/L	12000	100000	3446919	24000	30000	100	3448497
Dissolved Strontium (Sr)	ug/L	420	540	3446919	250	600	2.0	3448497
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	3446919	<0.10	<0.10	0.10	3448497
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	3446919	<2.0	<2.0	2.0	3448497
Dissolved Titanium (Ti)	ug/L	<2.0	2.9	3446919	<2.0	<2.0	2.0	3448497
Dissolved Uranium (U)	ug/L	3.7	1.2	3446919	1.5	<0.10	0.10	3448497
Dissolved Vanadium (V)	ug/L	3.6	7.3	3446919	8.3	6.6	2.0	3448497
Dissolved Zinc (Zn)	ug/L	7.5	6.2	3446919	<5.0	<5.0	5.0	3448497

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3K8203
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UD1698		
Sampling Date		2013/12/02		
COC Number		B161490		
	Units	SCU18-007-MW	RDL	QC Batch
Metals				
Dissolved Aluminum (Al)	ug/L	12	5.0	3446919
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	3446919
Dissolved Arsenic (As)	ug/L	1.5	1.0	3446919
Dissolved Barium (Ba)	ug/L	62	1.0	3446919
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	3446919
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	3446919
Dissolved Boron (B)	ug/L	190	50	3446919
Dissolved Cadmium (Cd)	ug/L	0.010	0.010	3446919
Dissolved Calcium (Ca)	ug/L	82000	100	3446919
Dissolved Chromium (Cr)	ug/L	9.4	1.0	3446919
Dissolved Cobalt (Co)	ug/L	<0.40	0.40	3446919
Dissolved Copper (Cu)	ug/L	<2.0	2.0	3446919
Dissolved Iron (Fe)	ug/L	<50	50	3446919
Dissolved Lead (Pb)	ug/L	<0.50	0.50	3446919
Dissolved Magnesium (Mg)	ug/L	27000	100	3446919
Dissolved Manganese (Mn)	ug/L	<2.0	2.0	3446919
Dissolved Molybdenum (Mo)	ug/L	2.8	2.0	3446919
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	3446919
Dissolved Phosphorus (P)	ug/L	100	100	3446919
Dissolved Potassium (K)	ug/L	4000	100	3446919
Dissolved Selenium (Se)	ug/L	1.2	1.0	3446919
Dissolved Silver (Ag)	ug/L	<0.10	0.10	3446919
Dissolved Sodium (Na)	ug/L	14000	100	3446919
Dissolved Strontium (Sr)	ug/L	230	2.0	3446919
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	3446919
Dissolved Tin (Sn)	ug/L	<2.0	2.0	3446919
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	3446919
Dissolved Uranium (U)	ug/L	3.6	0.10	3446919
Dissolved Vanadium (V)	ug/L	7.6	2.0	3446919
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	3446919

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3K8203
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UD1677	UD1678		UD1679	UD1680		
Sampling Date		2013/12/01	2013/12/01		2013/12/01	2013/12/01		
COC Number		B161490	B161490		B161490	B161490		
	Units	FD #2	SCU17-010-MWA	RDL	SCU17-010-MWB	SCU17-010-MWC	RDL	QC Batch
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	<0.050	<0.050	0.050	3445985
2-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	<0.050	<0.050	0.050	3445985
Acenaphthene	ug/L	0.015	0.012	0.010	0.016	<0.010	0.010	3445985
Acenaphthylene	ug/L	<0.020 (1)	<0.020 (1)	0.020	<0.010	<0.010	0.010	3445985
Anthracene	ug/L	0.022	0.023	0.010	0.021	<0.010	0.010	3445985
Benzo(a)anthracene	ug/L	0.012	<0.010	0.010	<0.010	<0.010	0.010	3445985
Benzo(a)pyrene	ug/L	<0.010	<0.010	0.010	<0.010	<0.010	0.010	3445985
Benzo(b)fluoranthene	ug/L	<0.010	<0.010	0.010	<0.010	<0.010	0.010	3445985
Benzo(g,h,i)perylene	ug/L	<0.010	<0.010	0.010	<0.010	<0.010	0.010	3445985
Benzo(j)fluoranthene	ug/L	<0.010	<0.010	0.010	<0.010	<0.010	0.010	3445985
Benzo(k)fluoranthene	ug/L	<0.010	<0.010	0.010	<0.010	<0.010	0.010	3445985
Chrysene	ug/L	0.015	0.012	0.010	<0.010	<0.010	0.010	3445985
Dibenz(a,h)anthracene	ug/L	<0.010	<0.010	0.010	<0.010	<0.010	0.010	3445985
Fluoranthene	ug/L	0.047	0.039	0.010	0.036	0.016	0.010	3445985
Fluorene	ug/L	0.030	0.028	0.010	0.028	0.014	0.010	3445985
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	<0.010	0.010	<0.010	<0.010	0.010	3445985
Naphthalene	ug/L	0.20	0.21	0.20	<0.20	<0.20	0.20	3445985
Perylene	ug/L	<0.010	<0.010	0.010	<0.010	<0.010	0.010	3445985
Phenanthrene	ug/L	0.081	0.072	0.010	0.097	0.046	0.010	3445985
Pyrene	ug/L	0.035	0.028	0.010	0.024	0.011	0.010	3445985
Surrogate Recovery (%)								
D10-Anthracene	%	95	105		102	104		3445985
D14-Terphenyl	%	95 (2)	104 (2)		106 (2)	103 (2)		3445985
D8-Acenaphthylene	%	101	100		102	97		3445985

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to matrix / co-extractive interference.
(2) PAH sample contained sediment.

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Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UD1681		UD1682		UD1683		
Sampling Date		2013/12/01		2013/12/01		2013/12/02		
COC Number		B161490		B161490		B161490		
	Units	SCU19-010-MW	RDL	SCU18-009-MW	QC Batch	SCU8-002-MW	RDL	QC Batch
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	ug/L	0.17	0.050	0.50	3445985	<0.050	0.050	3448861
2-Methylnaphthalene	ug/L	0.15	0.050	0.44	3445985	<0.050	0.050	3448861
Acenaphthene	ug/L	0.24	0.010	0.96	3445985	<0.010	0.010	3448861
Acenaphthylene	ug/L	<0.020 (1)	0.020	0.24	3445985	<0.010	0.010	3448861
Anthracene	ug/L	0.031	0.010	0.36	3445985	<0.010	0.010	3448861
Benzo(a)anthracene	ug/L	<0.010	0.010	<0.010	3445985	<0.010	0.010	3448861
Benzo(a)pyrene	ug/L	<0.010	0.010	<0.010	3445985	<0.010	0.010	3448861
Benzo(b)fluoranthene	ug/L	<0.010	0.010	<0.010	3445985	<0.010	0.010	3448861
Benzo(g,h,i)perylene	ug/L	<0.010	0.010	<0.010	3445985	<0.010	0.010	3448861
Benzo(j)fluoranthene	ug/L	<0.010	0.010	<0.010	3445985	<0.010	0.010	3448861
Benzo(k)fluoranthene	ug/L	<0.010	0.010	<0.010	3445985	<0.010	0.010	3448861
Chrysene	ug/L	<0.010	0.010	0.013	3445985	<0.010	0.010	3448861
Dibenz(a,h)anthracene	ug/L	<0.010	0.010	<0.010	3445985	<0.010	0.010	3448861
Fluoranthene	ug/L	0.013	0.010	0.35	3445985	0.011	0.010	3448861
Fluorene	ug/L	0.10	0.010	0.90	3445985	<0.010	0.010	3448861
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	0.010	<0.010	3445985	<0.010	0.010	3448861
Naphthalene	ug/L	0.84	0.20	1.2	3445985	<0.20	0.20	3448861
Perylene	ug/L	<0.010	0.010	<0.010	3445985	<0.010	0.010	3448861
Phenanthrene	ug/L	0.048	0.010	1.4	3445985	0.018	0.010	3448861
Pyrene	ug/L	0.025	0.010	0.24	3445985	0.011	0.010	3448861
Surrogate Recovery (%)								
D10-Anthracene	%	102		93	3445985	112		3448861
D14-Terphenyl	%	102 (2)		98 (2)	3445985	105		3448861
D8-Acenaphthylene	%	96		98	3445985	102		3448861

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to matrix / co-extractive interference.
(2) PAH sample contained sediment.

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SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UD1684		UD1694		UD1695	UD1696		
Sampling Date		2013/12/02		2013/12/02		2013/12/02	2013/12/02		
COC Number		B161490		B161490		B161490	B161490		
	Units	SCU7-006-MW A	RDL	SCU10-004-M W	RDL	SCU11-003-M W	SCU6-004-MW	RDL	QC Batch
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	ug/L	15	0.050	85 (1)	1.0	<0.050	<0.050	0.050	3448861
2-Methylnaphthalene	ug/L	0.37	0.050	80 (1)	1.0	<0.050	<0.050	0.050	3448861
Acenaphthene	ug/L	4.3	0.010	53 (1)	0.20	0.025	0.10	0.010	3448861
Acenaphthylene	ug/L	21	0.010	20	0.010	<0.010	0.11	0.010	3448861
Anthracene	ug/L	0.89	0.010	4.0	0.010	0.023	0.56	0.010	3448861
Benzo(a)anthracene	ug/L	0.013	0.010	0.34	0.010	0.011	2.1	0.010	3448861
Benzo(a)pyrene	ug/L	<0.010	0.010	0.20	0.010	<0.010	1.2	0.010	3448861
Benzo(b)fluoranthene	ug/L	<0.010	0.010	0.14	0.010	<0.010	1.0	0.010	3448861
Benzo(g,h,i)perylene	ug/L	<0.010	0.010	0.077	0.010	<0.010	0.65	0.010	3448861
Benzo(j)fluoranthene	ug/L	<0.010	0.010	0.090	0.010	<0.010	0.64	0.010	3448861
Benzo(k)fluoranthene	ug/L	<0.010	0.010	0.089	0.010	<0.010	0.60	0.010	3448861
Chrysene	ug/L	0.013	0.010	0.29	0.010	0.011	1.8	0.010	3448861
Dibenz(a,h)anthracene	ug/L	<0.010	0.010	0.027	0.010	<0.010	0.18	0.010	3448861
Fluoranthene	ug/L	0.52	0.010	3.5	0.010	0.031	3.7	0.010	3448861
Fluorene	ug/L	12	0.010	31	0.010	0.031	0.11	0.010	3448861
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	0.010	0.072	0.010	<0.010	0.61	0.010	3448861
Naphthalene	ug/L	<0.20	0.20	680 (1)	4.0	<0.20	<0.20	0.20	3448861
Perylene	ug/L	<0.010	0.010	0.043	0.010	<0.010	0.31	0.010	3448861
Phenanthrene	ug/L	6.4	0.010	24	0.010	0.079	2.2	0.010	3448861
Pyrene	ug/L	0.28	0.010	2.3	0.010	0.027	3.2	0.010	3448861
Surrogate Recovery (%)									
D10-Anthracene	%	96		95		108	98		3448861
D14-Terphenyl	%	97		102		106	92 (2)		3448861
D8-Acenaphthylene	%	101		102		103	98		3448861

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to sample dilution.
(2) PAH sample contained sediment.

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SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UD1697		UD1698		
Sampling Date		2013/12/02		2013/12/02		
COC Number		B161490		B161490		
	Units	SCU17-004-MW	RDL	SCU18-007-MW	RDL	QC Batch
Polyaromatic Hydrocarbons						
1-Methylnaphthalene	ug/L	20	0.050	<0.050	0.050	3448861
2-Methylnaphthalene	ug/L	37	0.050	<0.050	0.050	3448861
Acenaphthene	ug/L	2.8	0.010	0.011	0.010	3448861
Acenaphthylene	ug/L	20	0.010	0.012	0.010	3448861
Anthracene	ug/L	3.6	0.010	0.012	0.010	3448861
Benzo(a)anthracene	ug/L	0.099	0.010	<0.010	0.010	3448861
Benzo(a)pyrene	ug/L	<0.020 (1)	0.020	<0.010	0.010	3448861
Benzo(b)fluoranthene	ug/L	0.012	0.010	<0.010	0.010	3448861
Benzo(g,h,i)perylene	ug/L	<0.010	0.010	<0.010	0.010	3448861
Benzo(j)fluoranthene	ug/L	<0.020 (1)	0.020	<0.010	0.010	3448861
Benzo(k)fluoranthene	ug/L	<0.010	0.010	<0.010	0.010	3448861
Chrysene	ug/L	0.065	0.010	<0.010	0.010	3448861
Dibenz(a,h)anthracene	ug/L	<0.010	0.010	<0.010	0.010	3448861
Fluoranthene	ug/L	2.5	0.010	0.011	0.010	3448861
Fluorene	ug/L	19	0.010	0.017	0.010	3448861
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	0.010	<0.010	0.010	3448861
Naphthalene	ug/L	130 (2)	2.0	<0.20	0.20	3448861
Perylene	ug/L	<0.010	0.010	<0.010	0.010	3448861
Phenanthrene	ug/L	23	0.010	0.034	0.010	3448861
Pyrene	ug/L	1.7	0.010	0.013	0.010	3448861
Surrogate Recovery (%)						
D10-Anthracene	%	89		95		3448861
D14-Terphenyl	%	97		97 (3)		3448861
D8-Acenaphthylene	%	102		103		3448861

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to matrix / co-extractive interference.
(2) Elevated PAH RDL(s) due to sample dilution.
(3) PAH sample contained sediment.

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ATLANTIC VOC IN WATER (WATER)

Maxxam ID		UD1685		
Sampling Date		2013/12/02		
COC Number		B161490		
	Units	**SCU10-001-MW**	**RDL**	**QC Batch**
Chlorobenzenes				
1,2-Dichlorobenzene	ug/L	<0.50	0.50	3446946
1,3-Dichlorobenzene	ug/L	<1.0	1.0	3446946
1,4-Dichlorobenzene	ug/L	<1.0	1.0	3446946
Chlorobenzene	ug/L	<1.0	1.0	3446946
Volatile Organics				
1,1,1-Trichloroethane	ug/L	<1.0	1.0	3446946
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	3446946
1,1,2-Trichloroethane	ug/L	<1.0	1.0	3446946
1,1-Dichloroethane	ug/L	2.1	2.0	3446946
1,1-Dichloroethylene	ug/L	<0.50	0.50	3446946
1,2-Dichloroethane	ug/L	<1.0	1.0	3446946
1,2-Dichloropropane	ug/L	<0.50	0.50	3446946
Benzene	ug/L	<1.0	1.0	3446946
Bromodichloromethane	ug/L	<1.0	1.0	3446946
Bromoform	ug/L	<1.0	1.0	3446946
Bromomethane	ug/L	<0.50	0.50	3446946
Carbon Tetrachloride	ug/L	<0.50	0.50	3446946
Chloroethane	ug/L	<8.0	8.0	3446946
Chloroform	ug/L	<1.0	1.0	3446946
Chloromethane	ug/L	<8.0	8.0	3446946
cis-1,2-Dichloroethylene	ug/L	92	0.50	3446946
cis-1,3-Dichloropropene	ug/L	<0.50	0.50	3446946
Dibromochloromethane	ug/L	<1.0	1.0	3446946
Ethylbenzene	ug/L	<1.0	1.0	3446946
Ethylene Dibromide	ug/L	<0.20	0.20	3446946
Methylene Chloride(Dichloromethane)	ug/L	<3.0	3.0	3446946
o-Xylene	ug/L	<1.0	1.0	3446946
p+m-Xylene	ug/L	<2.0	2.0	3446946
Styrene	ug/L	<1.0	1.0	3446946
Tetrachloroethylene	ug/L	<1.0	1.0	3446946
Toluene	ug/L	<1.0	1.0	3446946
trans-1,2-Dichloroethylene	ug/L	1.8	0.50	3446946
trans-1,3-Dichloropropene	ug/L	<0.50	0.50	3446946

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Sampler Initials: KM

ATLANTIC VOC IN WATER (WATER)

Maxxam ID		UD1685		
Sampling Date		2013/12/02		
COC Number		B161490		
	Units	**SCU10-001-MW**	**RDL**	**QC Batch**
Trichloroethylene	ug/L	1.9	1.0	3446946
Trichlorofluoromethane (FREON 11)	ug/L	<8.0	8.0	3446946
Vinyl Chloride	ug/L	<4.0 (1)	4.0	3446946
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	99		3446946
D4-1,2-Dichloroethane	%	105		3446946
D8-Toluene	%	100		3446946

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated VOC RDL(s) due to matrix interference.

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Report Date: 2013/12/12

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Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UD1677	UD1678		UD1679	UD1680		
Sampling Date		2013/12/01	2013/12/01		2013/12/01	2013/12/01		
COC Number		B161490	B161490		B161490	B161490		
	Units	FD #2	SCU17-010-MWA	QC Batch	SCU17-010-MWB	SCU17-010-MWC	RDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	3447414	<0.0010	<0.0010	0.0010	3447414
Toluene	mg/L	<0.0010	<0.0010	3447414	<0.0010	<0.0010	0.0010	3447414
Ethylbenzene	mg/L	<0.0010	<0.0010	3447414	<0.0010	<0.0010	0.0010	3447414
Xylene (Total)	mg/L	<0.0020	<0.0020	3447414	<0.0020	<0.0020	0.0020	3447414
C6 - C10 (less BTEX)	mg/L	<0.010	<0.010	3447414	<0.010	<0.010	0.010	3447414
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	3446932	<0.050	<0.050	0.050	3445757
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	3446932	<0.050	<0.050	0.050	3445757
>C21-<C32 Hydrocarbons	mg/L	<0.10	<0.10	3446932	<0.10	<0.10	0.10	3445757
Modified TPH (Tier1)	mg/L	<0.10	<0.10	3444190	<0.10	<0.10	0.10	3444190
Reached Baseline at C32	mg/L	NA	NA	3446932	NA	NA		3445757
Hydrocarbon Resemblance	mg/L	NA	NA	3446932	NA	NA		3445757
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	114	116	3446932	110	112		3445757
n-Dotriacontane - Extractable	%	104	97	3446932	123	116		3445757
Isobutylbenzene - Volatile	%	106	103	3447414	101	102		3447414

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3K8203
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UD1681	UD1682	UD1683		UD1694		
Sampling Date		2013/12/01	2013/12/01	2013/12/02		2013/12/02		
COC Number		B161490	B161490	B161490		B161490		
	Units	SCU19-010-MW	SCU18-009-MW	SCU8-002-MW	RDL	SCU10-004-MW	RDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	0.11	0.010	3447414
Toluene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	0.011	0.010	3447414
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	0.013	0.010	3447414
Xylene (Total)	mg/L	<0.0020	<0.0020	<0.0020	0.0020	0.062	0.020	3447414
C6 - C10 (less BTEX)	mg/L	<0.010	<0.010	<0.010	0.010	0.16	0.10	3447414
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	0.050	1.9	0.050	3445757
>C16-C21 Hydrocarbons	mg/L	0.084	<0.050	<0.050	0.050	0.14	0.050	3445757
>C21-<C32 Hydrocarbons	mg/L	0.14	<0.10	<0.10	0.10	<0.10	0.10	3445757
Modified TPH (Tier1)	mg/L	0.23	<0.10	<0.10	0.10	2.2	0.10	3444190
Reached Baseline at C32	mg/L	Yes	NA	NA		Yes		3445757
Hydrocarbon Resemblance	mg/L	COMMENT (1)	NA	NA		COMMENT (2)		3445757
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	109	109	109		114		3445757
n-Dotriacontane - Extractable	%	116	114	108		113		3445757
Isobutylbenzene - Volatile	%	104	103	105		107		3447414

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) One product in fuel / lube range.
(2) One product in fuel oil range. Unidentified compound(s) in fuel oil range.

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ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UD1695		UD1697	UD1698		
Sampling Date		2013/12/02		2013/12/02	2013/12/02		
COC Number		B161490		B161490	B161490		
	Units	SCU11-003-MW	QC Batch	SCU17-004-MW	SCU18-007-MW	RDL	QC Batch
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0010	3447414	0.0011	<0.0010	0.0010	3447414
Toluene	mg/L	<0.0010	3447414	0.0024	<0.0010	0.0010	3447414
Ethylbenzene	mg/L	<0.0010	3447414	<0.0010	<0.0010	0.0010	3447414
Xylene (Total)	mg/L	<0.0020	3447414	0.0059	<0.0020	0.0020	3447414
C6 - C10 (less BTEX)	mg/L	<0.010	3447414	0.011	<0.010	0.010	3447414
>C10-C16 Hydrocarbons	mg/L	<0.050	3445757	0.41	<0.050	0.050	3446932
>C16-C21 Hydrocarbons	mg/L	<0.050	3445757	0.12	<0.050	0.050	3446932
>C21-<C32 Hydrocarbons	mg/L	<0.10	3445757	<0.10	<0.10	0.10	3446932
Modified TPH (Tier1)	mg/L	<0.10	3444190	0.54	<0.10	0.10	3444190
Reached Baseline at C32	mg/L	NA	3445757	Yes	NA		3446932
Hydrocarbon Resemblance	mg/L	NA	3445757	COMMENT (1)	NA		3446932
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	110	3445757	111	110		3446932
n-Dotriacontane - Extractable	%	115	3445757	109	109		3446932
Isobutylbenzene - Volatile	%	104	3447414	104	104		3447414

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Unidentified compound(s) in fuel oil range.

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GENERAL COMMENTS

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3445757	AJS	Matrix Spike	Isobutylbenzene - Extractable	2013/12/05		100	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/05		107	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/05		92	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/05		106	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/05		110	%	30 - 130
3445757	AJS	Spiked Blank	Isobutylbenzene - Extractable	2013/12/05		110	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/05		110	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/05		93	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/05		107	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/05		110	%	30 - 130
3445757	AJS	Method Blank	Isobutylbenzene - Extractable	2013/12/05		108	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/05		109	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/05	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2013/12/05	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2013/12/05	<0.10		mg/L	
3445757	AJS	RPD	>C10-C16 Hydrocarbons	2013/12/05	NC		%	40
			>C16-C21 Hydrocarbons	2013/12/05	NC		%	40
			>C21-<C32 Hydrocarbons	2013/12/05	NC		%	40
3445985	GTH	Matrix Spike	1-Methylnaphthalene	2013/12/05		NC	%	30 - 130
			2-Methylnaphthalene	2013/12/05		NC	%	30 - 130
			Acenaphthene	2013/12/05		NC	%	30 - 130
			Acenaphthylene	2013/12/05		106	%	30 - 130
			Anthracene	2013/12/05		100	%	30 - 130
			Benzo(a)anthracene	2013/12/05		86	%	30 - 130
			Benzo(a)pyrene	2013/12/05		90	%	30 - 130
			Benzo(b)fluoranthene	2013/12/05		97	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/05		103	%	30 - 130
			Benzo(j)fluoranthene	2013/12/05		95	%	30 - 130
			Benzo(k)fluoranthene	2013/12/05		84	%	30 - 130
			Chrysene	2013/12/05		91	%	30 - 130
			D10-Anthracene	2013/12/05		86	%	30 - 130
			D14-Terphenyl	2013/12/05		96(1)	%	30 - 130
			D8-Acenaphthylene	2013/12/05		99	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/05		67	%	30 - 130
			Fluoranthene	2013/12/05		NC	%	30 - 130
			Fluorene	2013/12/05		NC	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/05		80	%	30 - 130
			Naphthalene	2013/12/05		NC	%	30 - 130
			Perylene	2013/12/05		92	%	30 - 130
			Phenanthrene	2013/12/05		108	%	30 - 130
			Pyrene	2013/12/05		103	%	30 - 130
3445985	GTH	Spiked Blank	1-Methylnaphthalene	2013/12/05		107	%	30 - 130
			2-Methylnaphthalene	2013/12/05		99	%	30 - 130
			Acenaphthene	2013/12/05		107	%	30 - 130
			Acenaphthylene	2013/12/05		107	%	30 - 130
			Anthracene	2013/12/05		104	%	30 - 130
			Benzo(a)anthracene	2013/12/05		83	%	30 - 130
			Benzo(a)pyrene	2013/12/05		88	%	30 - 130
			Benzo(b)fluoranthene	2013/12/05		89	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/05		95	%	30 - 130
			Benzo(j)fluoranthene	2013/12/05		92	%	30 - 130
			Benzo(k)fluoranthene	2013/12/05		85	%	30 - 130
			Chrysene	2013/12/05		88	%	30 - 130
			D10-Anthracene	2013/12/05		94	%	30 - 130
			D14-Terphenyl	2013/12/05		95	%	30 - 130
			D8-Acenaphthylene	2013/12/05		101	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/05		64	%	30 - 130
			Fluoranthene	2013/12/05		105	%	30 - 130
			Fluorene	2013/12/05		108	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/05		76	%	30 - 130
			Naphthalene	2013/12/05		112	%	30 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Perylene	2013/12/05		90	%	30 - 130
			Phenanthrene	2013/12/05		95	%	30 - 130
			Pyrene	2013/12/05		103	%	30 - 130
3445985	GTH	Method Blank	1-Methylnaphthalene	2013/12/05	<0.050		ug/L	
			2-Methylnaphthalene	2013/12/05	<0.050		ug/L	
			Acenaphthene	2013/12/05	<0.010		ug/L	
			Acenaphthylene	2013/12/05	<0.010		ug/L	
			Anthracene	2013/12/05	<0.010		ug/L	
			Benzo(a)anthracene	2013/12/05	<0.010		ug/L	
			Benzo(a)pyrene	2013/12/05	<0.010		ug/L	
			Benzo(b)fluoranthene	2013/12/05	<0.010		ug/L	
			Benzo(g,h,i)perylene	2013/12/05	<0.010		ug/L	
			Benzo(j)fluoranthene	2013/12/05	<0.010		ug/L	
			Benzo(k)fluoranthene	2013/12/05	<0.010		ug/L	
			Chrysene	2013/12/05	<0.010		ug/L	
			D10-Anthracene	2013/12/05		104	%	30 - 130
			D14-Terphenyl	2013/12/05		94	%	30 - 130
			D8-Acenaphthylene	2013/12/05		99	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/05	<0.010		ug/L	
			Fluoranthene	2013/12/05	<0.010		ug/L	
			Fluorene	2013/12/05	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2013/12/05	<0.010		ug/L	
			Naphthalene	2013/12/05	<0.20		ug/L	
			Perylene	2013/12/05	<0.010		ug/L	
			Phenanthrene	2013/12/05	<0.010		ug/L	
			Pyrene	2013/12/05	<0.010		ug/L	
3445985	GTH	RPD	1-Methylnaphthalene	2013/12/05	5		%	40
			2-Methylnaphthalene	2013/12/05	NC		%	40
			Acenaphthene	2013/12/05	7.3		%	40
			Acenaphthylene	2013/12/05	6		%	40
			Anthracene	2013/12/05	NC		%	40
			Benzo(a)anthracene	2013/12/05	NC		%	40
			Benzo(a)pyrene	2013/12/05	NC		%	40
			Benzo(b)fluoranthene	2013/12/05	NC		%	40
			Benzo(g,h,i)perylene	2013/12/05	NC		%	40
			Benzo(j)fluoranthene	2013/12/05	NC		%	40
			Benzo(k)fluoranthene	2013/12/05	NC		%	40
			Chrysene	2013/12/05	NC		%	40
			Dibenz(a,h)anthracene	2013/12/05	NC		%	40
			Fluoranthene	2013/12/05	15.1		%	40
			Fluorene	2013/12/05	9.6		%	40
			Indeno(1,2,3-cd)pyrene	2013/12/05	NC		%	40
			Naphthalene	2013/12/05	8.2		%	40
			Perylene	2013/12/05	NC		%	40
			Phenanthrene	2013/12/05	11.4		%	40
			Pyrene	2013/12/05	6.2		%	40
3446919	DLB	Matrix Spike	Dissolved Aluminum (Al)	2013/12/05		99	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/05		108	%	80 - 120
			Dissolved Arsenic (As)	2013/12/05		101	%	80 - 120
			Dissolved Barium (Ba)	2013/12/05		97	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/05		102	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/05		102	%	80 - 120
			Dissolved Boron (B)	2013/12/05		NC	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/05		100	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/05		NC	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/05		99	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/05		98	%	80 - 120
			Dissolved Copper (Cu)	2013/12/05		95	%	80 - 120
			Dissolved Iron (Fe)	2013/12/05		NC	%	80 - 120
			Dissolved Lead (Pb)	2013/12/05		98	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/05		NC	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Dissolved Manganese (Mn)	2013/12/05		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/05		104	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/05		99	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/05		105	%	80 - 120
			Dissolved Potassium (K)	2013/12/05		NC	%	80 - 120
			Dissolved Selenium (Se)	2013/12/05		100	%	80 - 120
			Dissolved Silver (Ag)	2013/12/05		93	%	80 - 120
			Dissolved Sodium (Na)	2013/12/05		NC	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/05		NC	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/05		106	%	80 - 120
			Dissolved Tin (Sn)	2013/12/05		107	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/05		104	%	80 - 120
			Dissolved Uranium (U)	2013/12/05		109	%	80 - 120
			Dissolved Vanadium (V)	2013/12/05		100	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/05		98	%	80 - 120
3446919	DLB	Spiked Blank	Dissolved Aluminum (Al)	2013/12/05		104	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/05		107	%	80 - 120
			Dissolved Arsenic (As)	2013/12/05		102	%	80 - 120
			Dissolved Barium (Ba)	2013/12/05		98	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/05		101	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/05		104	%	80 - 120
			Dissolved Boron (B)	2013/12/05		101	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/05		99	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/05		111	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/05		100	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/05		100	%	80 - 120
			Dissolved Copper (Cu)	2013/12/05		98	%	80 - 120
			Dissolved Iron (Fe)	2013/12/05		105	%	80 - 120
			Dissolved Lead (Pb)	2013/12/05		99	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/05		109	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/05		103	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/05		101	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/05		102	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/05		105	%	80 - 120
			Dissolved Potassium (K)	2013/12/05		106	%	80 - 120
			Dissolved Selenium (Se)	2013/12/05		100	%	80 - 120
			Dissolved Silver (Ag)	2013/12/05		99	%	80 - 120
			Dissolved Sodium (Na)	2013/12/05		106	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/05		103	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/05		105	%	80 - 120
			Dissolved Tin (Sn)	2013/12/05		105	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/05		104	%	80 - 120
			Dissolved Uranium (U)	2013/12/05		108	%	80 - 120
			Dissolved Vanadium (V)	2013/12/05		101	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/05		103	%	80 - 120
3446919	DLB	Method Blank	Dissolved Aluminum (Al)	2013/12/05	<5.0		ug/L	
			Dissolved Antimony (Sb)	2013/12/05	<1.0		ug/L	
			Dissolved Arsenic (As)	2013/12/05	<1.0		ug/L	
			Dissolved Barium (Ba)	2013/12/05	<1.0		ug/L	
			Dissolved Beryllium (Be)	2013/12/05	<1.0		ug/L	
			Dissolved Bismuth (Bi)	2013/12/05	<2.0		ug/L	
			Dissolved Boron (B)	2013/12/05	<50		ug/L	
			Dissolved Cadmium (Cd)	2013/12/05	<0.010		ug/L	
			Dissolved Calcium (Ca)	2013/12/05	<100		ug/L	
			Dissolved Chromium (Cr)	2013/12/05	<1.0		ug/L	
			Dissolved Cobalt (Co)	2013/12/05	<0.40		ug/L	
			Dissolved Copper (Cu)	2013/12/05	<2.0		ug/L	
			Dissolved Iron (Fe)	2013/12/05	<50		ug/L	
			Dissolved Lead (Pb)	2013/12/05	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2013/12/05	<100		ug/L	
			Dissolved Manganese (Mn)	2013/12/05	<2.0		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Dissolved Molybdenum (Mo)	2013/12/05	<2.0		ug/L	
			Dissolved Nickel (Ni)	2013/12/05	<2.0		ug/L	
			Dissolved Phosphorus (P)	2013/12/05	<100		ug/L	
			Dissolved Potassium (K)	2013/12/05	<100		ug/L	
			Dissolved Selenium (Se)	2013/12/05	<1.0		ug/L	
			Dissolved Silver (Ag)	2013/12/05	<0.10		ug/L	
			Dissolved Sodium (Na)	2013/12/05	<100		ug/L	
			Dissolved Strontium (Sr)	2013/12/05	<2.0		ug/L	
			Dissolved Thallium (Tl)	2013/12/05	<0.10		ug/L	
			Dissolved Tin (Sn)	2013/12/05	<2.0		ug/L	
			Dissolved Titanium (Ti)	2013/12/05	<2.0		ug/L	
			Dissolved Uranium (U)	2013/12/05	<0.10		ug/L	
			Dissolved Vanadium (V)	2013/12/05	<2.0		ug/L	
			Dissolved Zinc (Zn)	2013/12/05	<5.0		ug/L	
3446919	DLB	RPD	Dissolved Aluminum (Al)	2013/12/05	NC		%	20
			Dissolved Antimony (Sb)	2013/12/05	NC		%	20
			Dissolved Arsenic (As)	2013/12/05	NC		%	20
			Dissolved Barium (Ba)	2013/12/05	0.5		%	20
			Dissolved Beryllium (Be)	2013/12/05	NC		%	20
			Dissolved Bismuth (Bi)	2013/12/05	NC		%	20
			Dissolved Boron (B)	2013/12/05	NC		%	20
			Dissolved Cadmium (Cd)	2013/12/05	NC		%	20
			Dissolved Calcium (Ca)	2013/12/05	0.6		%	20
			Dissolved Chromium (Cr)	2013/12/05	NC		%	20
			Dissolved Cobalt (Co)	2013/12/05	NC		%	20
			Dissolved Copper (Cu)	2013/12/05	NC		%	20
			Dissolved Iron (Fe)	2013/12/05	0.7		%	20
			Dissolved Lead (Pb)	2013/12/05	NC		%	20
			Dissolved Magnesium (Mg)	2013/12/05	0.8		%	20
			Dissolved Manganese (Mn)	2013/12/05	0.4		%	20
			Dissolved Molybdenum (Mo)	2013/12/05	1.8		%	20
			Dissolved Nickel (Ni)	2013/12/05	NC		%	20
			Dissolved Phosphorus (P)	2013/12/05	NC		%	20
			Dissolved Potassium (K)	2013/12/05	2.1		%	20
			Dissolved Selenium (Se)	2013/12/05	NC		%	20
			Dissolved Silver (Ag)	2013/12/05	NC		%	20
			Dissolved Sodium (Na)	2013/12/05	1.1		%	20
			Dissolved Strontium (Sr)	2013/12/05	0.2		%	20
			Dissolved Thallium (Tl)	2013/12/05	NC		%	20
			Dissolved Tin (Sn)	2013/12/05	NC		%	20
			Dissolved Titanium (Ti)	2013/12/05	NC		%	20
			Dissolved Uranium (U)	2013/12/05	NC		%	20
			Dissolved Vanadium (V)	2013/12/05	NC		%	20
			Dissolved Zinc (Zn)	2013/12/05	NC		%	20
3446932	CMI	Matrix Spike [UD1678]	Isobutylbenzene - Extractable	2013/12/05		111	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/05		116	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/05		84	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/05		93	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/05		105	%	30 - 130
3446932	CMI	Spiked Blank	Isobutylbenzene - Extractable	2013/12/05		112	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/05		111	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/05		90	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/05		103	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/05		106	%	30 - 130
3446932	CMI	Method Blank	Isobutylbenzene - Extractable	2013/12/05		114	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/05		101	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/05	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2013/12/05	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2013/12/05	<0.10		mg/L	
3446932	CMI	RPD [UD1677]	>C10-C16 Hydrocarbons	2013/12/05	NC		%	40
			>C16-C21 Hydrocarbons	2013/12/05	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			>C21-<C32 Hydrocarbons	2013/12/05	NC		%	40
3446946	SHL	Matrix Spike	1,2-Dichlorobenzene	2013/12/05		96	%	70 - 130
			1,3-Dichlorobenzene	2013/12/05		92	%	70 - 130
			1,4-Dichlorobenzene	2013/12/05		104	%	70 - 130
			Chlorobenzene	2013/12/05		107	%	70 - 130
			1,1,1-Trichloroethane	2013/12/05		116	%	70 - 130
			1,1,2,2-Tetrachloroethane	2013/12/05		104	%	70 - 130
			1,1,2-Trichloroethane	2013/12/05		104	%	70 - 130
			1,1-Dichloroethane	2013/12/05		106	%	70 - 130
			1,1-Dichloroethylene	2013/12/05		115	%	70 - 130
			1,2-Dichloroethane	2013/12/05		105	%	70 - 130
			1,2-Dichloropropane	2013/12/05		102	%	70 - 130
			4-Bromofluorobenzene	2013/12/05		98	%	70 - 130
			Benzene	2013/12/05		NC	%	70 - 130
			Bromodichloromethane	2013/12/05		99	%	70 - 130
			Bromoform	2013/12/05		94	%	70 - 130
			Bromomethane	2013/12/05		91	%	70 - 130
			Carbon Tetrachloride	2013/12/05		112	%	70 - 130
			Chloroethane	2013/12/05		107	%	70 - 130
			Chloroform	2013/12/05		105	%	70 - 130
			Chloromethane	2013/12/05		83	%	70 - 130
			cis-1,2-Dichloroethylene	2013/12/05		110	%	70 - 130
			cis-1,3-Dichloropropene	2013/12/05		103	%	70 - 130
			D4-1,2-Dichloroethane	2013/12/05		102	%	70 - 130
			D8-Toluene	2013/12/05		100	%	70 - 130
			Dibromochloromethane	2013/12/05		97	%	70 - 130
			Ethylbenzene	2013/12/05		NC	%	70 - 130
			Ethylene Dibromide	2013/12/05		105	%	70 - 130
			Methylene Chloride(Dichloromethane)	2013/12/05		105	%	70 - 130
			o-Xylene	2013/12/05		NC	%	70 - 130
			p+m-Xylene	2013/12/05		NC	%	70 - 130
			Styrene	2013/12/05		102	%	70 - 130
			Tetrachloroethylene	2013/12/05		115	%	70 - 130
			Toluene	2013/12/05		NC	%	70 - 130
			trans-1,2-Dichloroethylene	2013/12/05		117	%	70 - 130
			trans-1,3-Dichloropropene	2013/12/05		91	%	70 - 130
			Trichloroethylene	2013/12/05		112	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2013/12/05		102	%	70 - 130
			Vinyl Chloride	2013/12/05		114	%	70 - 130
3446946	SHL	Spiked Blank	1,2-Dichlorobenzene	2013/12/05		104	%	70 - 130
			1,3-Dichlorobenzene	2013/12/05		105	%	70 - 130
			1,4-Dichlorobenzene	2013/12/05		106	%	70 - 130
			Chlorobenzene	2013/12/05		106	%	70 - 130
			1,1,1-Trichloroethane	2013/12/05		114	%	70 - 130
			1,1,2,2-Tetrachloroethane	2013/12/05		100	%	70 - 130
			1,1,2-Trichloroethane	2013/12/05		102	%	70 - 130
			1,1-Dichloroethane	2013/12/05		104	%	70 - 130
			1,1-Dichloroethylene	2013/12/05		114	%	70 - 130
			1,2-Dichloroethane	2013/12/05		108	%	70 - 130
			1,2-Dichloropropane	2013/12/05		101	%	70 - 130
			4-Bromofluorobenzene	2013/12/05		99	%	70 - 130
			Benzene	2013/12/05		110	%	70 - 130
			Bromodichloromethane	2013/12/05		100	%	70 - 130
			Bromoform	2013/12/05		93	%	70 - 130
			Bromomethane	2013/12/05		89	%	70 - 130
			Carbon Tetrachloride	2013/12/05		110	%	70 - 130
			Chloroethane	2013/12/05		104	%	70 - 130
			Chloroform	2013/12/05		105	%	70 - 130
			Chloromethane	2013/12/05		83	%	70 - 130
			cis-1,2-Dichloroethylene	2013/12/05		107	%	70 - 130
			cis-1,3-Dichloropropene	2013/12/05		105	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			D4-1,2-Dichloroethane	2013/12/05		100	%	70 - 130
			D8-Toluene	2013/12/05		101	%	70 - 130
			Dibromochloromethane	2013/12/05		96	%	70 - 130
			Ethylbenzene	2013/12/05		111	%	70 - 130
			Ethylene Dibromide	2013/12/05		101	%	70 - 130
			Methylene Chloride(Dichloromethane)	2013/12/05		103	%	70 - 130
			o-Xylene	2013/12/05		113	%	70 - 130
			p+m-Xylene	2013/12/05		111	%	70 - 130
			Styrene	2013/12/05		109	%	70 - 130
			Tetrachloroethylene	2013/12/05		114	%	70 - 130
			Toluene	2013/12/05		110	%	70 - 130
			trans-1,2-Dichloroethylene	2013/12/05		116	%	70 - 130
			trans-1,3-Dichloropropene	2013/12/05		94	%	70 - 130
			Trichloroethylene	2013/12/05		111	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2013/12/05		100	%	70 - 130
			Vinyl Chloride	2013/12/05		113	%	70 - 130
3446946	SHL	Method Blank	1,2-Dichlorobenzene	2013/12/05	<0.50		ug/L	
			1,3-Dichlorobenzene	2013/12/05	<1.0		ug/L	
			1,4-Dichlorobenzene	2013/12/05	<1.0		ug/L	
			Chlorobenzene	2013/12/05	<1.0		ug/L	
			1,1,1-Trichloroethane	2013/12/05	<1.0		ug/L	
			1,1,2,2-Tetrachloroethane	2013/12/05	<0.50		ug/L	
			1,1,2-Trichloroethane	2013/12/05	<1.0		ug/L	
			1,1-Dichloroethane	2013/12/05	<2.0		ug/L	
			1,1-Dichloroethylene	2013/12/05	<0.50		ug/L	
			1,2-Dichloroethane	2013/12/05	<1.0		ug/L	
			1,2-Dichloropropane	2013/12/05	<0.50		ug/L	
			4-Bromofluorobenzene	2013/12/05		101	%	70 - 130
			Benzene	2013/12/05	<1.0		ug/L	
			Bromodichloromethane	2013/12/05	<1.0		ug/L	
			Bromoform	2013/12/05	<1.0		ug/L	
			Bromomethane	2013/12/05	<0.50		ug/L	
			Carbon Tetrachloride	2013/12/05	<0.50		ug/L	
			Chloroethane	2013/12/05	<8.0		ug/L	
			Chloroform	2013/12/05	<1.0		ug/L	
			Chloromethane	2013/12/05	<8.0		ug/L	
			cis-1,2-Dichloroethylene	2013/12/05	<0.50		ug/L	
			cis-1,3-Dichloropropene	2013/12/05	<0.50		ug/L	
			D4-1,2-Dichloroethane	2013/12/05		101	%	70 - 130
			D8-Toluene	2013/12/05		100	%	70 - 130
			Dibromochloromethane	2013/12/05	<1.0		ug/L	
			Ethylbenzene	2013/12/05	<1.0		ug/L	
			Ethylene Dibromide	2013/12/05	<0.20		ug/L	
			Methylene Chloride(Dichloromethane)	2013/12/05	<3.0		ug/L	
			o-Xylene	2013/12/05	<1.0		ug/L	
			p+m-Xylene	2013/12/05	<2.0		ug/L	
			Styrene	2013/12/05	<1.0		ug/L	
			Tetrachloroethylene	2013/12/05	<1.0		ug/L	
			Toluene	2013/12/05	<1.0		ug/L	
			trans-1,2-Dichloroethylene	2013/12/05	<0.50		ug/L	
			trans-1,3-Dichloropropene	2013/12/05	<0.50		ug/L	
			Trichloroethylene	2013/12/05	<1.0		ug/L	
			Trichlorofluoromethane (FREON 11)	2013/12/05	<8.0		ug/L	
			Vinyl Chloride	2013/12/05	<0.50		ug/L	
3446946	SHL	RPD	1,2-Dichlorobenzene	2013/12/05	NC		%	40
			1,4-Dichlorobenzene	2013/12/05	NC		%	40
			Chlorobenzene	2013/12/05	NC		%	40
			1,1-Dichloroethylene	2013/12/05	NC		%	40
			1,2-Dichloroethane	2013/12/05	NC		%	40
			Benzene	2013/12/05	NC		%	40
			Bromodichloromethane	2013/12/05	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Bromoform	2013/12/05	NC		%	40
			Carbon Tetrachloride	2013/12/05	NC		%	40
			Chloroform	2013/12/05	NC		%	40
			Dibromochloromethane	2013/12/05	NC		%	40
			Ethylbenzene	2013/12/05	NC		%	40
			Methylene Chloride(Dichloromethane)	2013/12/05	NC		%	40
			Tetrachloroethylene	2013/12/05	NC		%	40
			Toluene	2013/12/05	NC		%	40
			Trichloroethylene	2013/12/05	NC		%	40
			Vinyl Chloride	2013/12/05	NC		%	40
3447414	ASL	Matrix Spike [UD1677]	Isobutylbenzene - Volatile	2013/12/06		105	%	70 - 130
			Benzene	2013/12/06		108	%	70 - 130
			Toluene	2013/12/06		108	%	70 - 130
			Ethylbenzene	2013/12/06		111	%	70 - 130
			Xylene (Total)	2013/12/06		112	%	70 - 130
3447414	ASL	Spiked Blank	Isobutylbenzene - Volatile	2013/12/06		106	%	70 - 130
			Benzene	2013/12/06		105	%	70 - 130
			Toluene	2013/12/06		105	%	70 - 130
			Ethylbenzene	2013/12/06		109	%	70 - 130
			Xylene (Total)	2013/12/06		108	%	70 - 130
3447414	ASL	Method Blank	Isobutylbenzene - Volatile	2013/12/06		104	%	70 - 130
			Benzene	2013/12/06	<0.0010		mg/L	
			Toluene	2013/12/06	<0.0010		mg/L	
			Ethylbenzene	2013/12/06	<0.0010		mg/L	
			Xylene (Total)	2013/12/06	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2013/12/06	<0.010		mg/L	
3447414	ASL	RPD	Benzene	2013/12/06	NC		%	40
			Toluene	2013/12/06	NC		%	40
			Ethylbenzene	2013/12/06	NC		%	40
			Xylene (Total)	2013/12/06	NC		%	40
			C6 - C10 (less BTEX)	2013/12/06	NC		%	40
3448497	DLB	Matrix Spike [UD1682]	Dissolved Aluminum (Al)	2013/12/06		102	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/06		107	%	80 - 120
			Dissolved Arsenic (As)	2013/12/06		100	%	80 - 120
			Dissolved Barium (Ba)	2013/12/06		NC	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/06		102	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/06		82	%	80 - 120
			Dissolved Boron (B)	2013/12/06		104	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/06		99	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/06		NC	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/06		100	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/06		100	%	80 - 120
			Dissolved Copper (Cu)	2013/12/06		96	%	80 - 120
			Dissolved Iron (Fe)	2013/12/06		101	%	80 - 120
			Dissolved Lead (Pb)	2013/12/06		101	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/06		NC	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/06		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/06		105	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/06		100	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/06		107	%	80 - 120
			Dissolved Potassium (K)	2013/12/06		NC	%	80 - 120
			Dissolved Selenium (Se)	2013/12/06		89	%	80 - 120
			Dissolved Silver (Ag)	2013/12/06		71(2)	%	80 - 120
			Dissolved Sodium (Na)	2013/12/06		NC	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/06		NC	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/06		105	%	80 - 120
			Dissolved Tin (Sn)	2013/12/06		109	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/06		101	%	80 - 120
			Dissolved Uranium (U)	2013/12/06		108	%	80 - 120
			Dissolved Vanadium (V)	2013/12/06		103	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/06		99	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3448497	DLB	Spiked Blank	Dissolved Aluminum (Al)	2013/12/06		103	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/06		105	%	80 - 120
			Dissolved Arsenic (As)	2013/12/06		100	%	80 - 120
			Dissolved Barium (Ba)	2013/12/06		98	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/06		99	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/06		103	%	80 - 120
			Dissolved Boron (B)	2013/12/06		100	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/06		98	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/06		97	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/06		99	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/06		100	%	80 - 120
			Dissolved Copper (Cu)	2013/12/06		99	%	80 - 120
			Dissolved Iron (Fe)	2013/12/06		103	%	80 - 120
			Dissolved Lead (Pb)	2013/12/06		101	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/06		105	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/06		101	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/06		103	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/06		101	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/06		105	%	80 - 120
			Dissolved Potassium (K)	2013/12/06		105	%	80 - 120
			Dissolved Selenium (Se)	2013/12/06		99	%	80 - 120
			Dissolved Silver (Ag)	2013/12/06		100	%	80 - 120
			Dissolved Sodium (Na)	2013/12/06		107	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/06		102	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/06		104	%	80 - 120
			Dissolved Tin (Sn)	2013/12/06		104	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/06		101	%	80 - 120
			Dissolved Uranium (U)	2013/12/06		106	%	80 - 120
			Dissolved Vanadium (V)	2013/12/06		104	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/06		101	%	80 - 120
3448497	DLB	Method Blank	Dissolved Aluminum (Al)	2013/12/06	<5.0		ug/L	
			Dissolved Antimony (Sb)	2013/12/06	<1.0		ug/L	
			Dissolved Arsenic (As)	2013/12/06	<1.0		ug/L	
			Dissolved Barium (Ba)	2013/12/06	<1.0		ug/L	
			Dissolved Beryllium (Be)	2013/12/06	<1.0		ug/L	
			Dissolved Bismuth (Bi)	2013/12/06	<2.0		ug/L	
			Dissolved Boron (B)	2013/12/06	<50		ug/L	
			Dissolved Cadmium (Cd)	2013/12/06	<0.010		ug/L	
			Dissolved Calcium (Ca)	2013/12/06	<100		ug/L	
			Dissolved Chromium (Cr)	2013/12/06	<1.0		ug/L	
			Dissolved Cobalt (Co)	2013/12/06	<0.40		ug/L	
			Dissolved Copper (Cu)	2013/12/06	<2.0		ug/L	
			Dissolved Iron (Fe)	2013/12/06	<50		ug/L	
			Dissolved Lead (Pb)	2013/12/06	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2013/12/06	<100		ug/L	
			Dissolved Manganese (Mn)	2013/12/06	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2013/12/06	<2.0		ug/L	
			Dissolved Nickel (Ni)	2013/12/06	<2.0		ug/L	
			Dissolved Phosphorus (P)	2013/12/06	<100		ug/L	
			Dissolved Potassium (K)	2013/12/06	<100		ug/L	
			Dissolved Selenium (Se)	2013/12/06	<1.0		ug/L	
			Dissolved Silver (Ag)	2013/12/06	<0.10		ug/L	
			Dissolved Sodium (Na)	2013/12/06	170, RDL=100		ug/L	
			Dissolved Strontium (Sr)	2013/12/06	<2.0		ug/L	
			Dissolved Thallium (Tl)	2013/12/06	<0.10		ug/L	
			Dissolved Tin (Sn)	2013/12/06	<2.0		ug/L	
			Dissolved Titanium (Ti)	2013/12/06	<2.0		ug/L	
			Dissolved Uranium (U)	2013/12/06	<0.10		ug/L	
			Dissolved Vanadium (V)	2013/12/06	<2.0		ug/L	
			Dissolved Zinc (Zn)	2013/12/06	<5.0		ug/L	
3448497	DLB	RPD [UD1682]	Dissolved Aluminum (Al)	2013/12/06	0.1		%	20

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Maxxam Job #: B3K8203
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Dissolved Antimony (Sb)	2013/12/06	NC		%	20
			Dissolved Arsenic (As)	2013/12/06	NC		%	20
			Dissolved Barium (Ba)	2013/12/06	0.7		%	20
			Dissolved Beryllium (Be)	2013/12/06	NC		%	20
			Dissolved Bismuth (Bi)	2013/12/06	NC		%	20
			Dissolved Boron (B)	2013/12/06	NC		%	20
			Dissolved Cadmium (Cd)	2013/12/06	NC		%	20
			Dissolved Calcium (Ca)	2013/12/06	0.6		%	20
			Dissolved Chromium (Cr)	2013/12/06	NC		%	20
			Dissolved Cobalt (Co)	2013/12/06	NC		%	20
			Dissolved Copper (Cu)	2013/12/06	NC		%	20
			Dissolved Iron (Fe)	2013/12/06	NC		%	20
			Dissolved Lead (Pb)	2013/12/06	NC		%	20
			Dissolved Magnesium (Mg)	2013/12/06	1		%	20
			Dissolved Manganese (Mn)	2013/12/06	0.5		%	20
			Dissolved Molybdenum (Mo)	2013/12/06	NC		%	20
			Dissolved Nickel (Ni)	2013/12/06	NC		%	20
			Dissolved Phosphorus (P)	2013/12/06	NC		%	20
			Dissolved Potassium (K)	2013/12/06	1		%	20
			Dissolved Selenium (Se)	2013/12/06	NC		%	20
			Dissolved Silver (Ag)	2013/12/06	NC		%	20
			Dissolved Sodium (Na)	2013/12/06	0.8		%	20
			Dissolved Strontium (Sr)	2013/12/06	0.7		%	20
			Dissolved Thallium (Tl)	2013/12/06	NC		%	20
			Dissolved Tin (Sn)	2013/12/06	NC		%	20
			Dissolved Titanium (Ti)	2013/12/06	NC		%	20
			Dissolved Uranium (U)	2013/12/06	0.2		%	20
			Dissolved Vanadium (V)	2013/12/06	NC		%	20
			Dissolved Zinc (Zn)	2013/12/06	NC		%	20
3448861	GTH	Matrix Spike [UD1694]	1-Methylnaphthalene	2013/12/10		NC	%	30 - 130
			2-Methylnaphthalene	2013/12/10		NC	%	30 - 130
			Acenaphthene	2013/12/10		NC	%	30 - 130
			Acenaphthylene	2013/12/10		NC	%	30 - 130
			Anthracene	2013/12/10		NC	%	30 - 130
			Benzo(a)anthracene	2013/12/10		76	%	30 - 130
			Benzo(a)pyrene	2013/12/10		96	%	30 - 130
			Benzo(b)fluoranthene	2013/12/10		97	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/10		101	%	30 - 130
			Benzo(j)fluoranthene	2013/12/10		92	%	30 - 130
			Benzo(k)fluoranthene	2013/12/10		94	%	30 - 130
			Chrysene	2013/12/10		75	%	30 - 130
			D10-Anthracene	2013/12/10		85	%	30 - 130
			D14-Terphenyl	2013/12/10		98	%	30 - 130
			D8-Acenaphthylene	2013/12/10		101	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/10		91	%	30 - 130
			Fluoranthene	2013/12/10		NC	%	30 - 130
			Fluorene	2013/12/10		NC	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/10		94	%	30 - 130
			Naphthalene	2013/12/10		NC	%	30 - 130
			Perylene	2013/12/10		94	%	30 - 130
			Phenanthrene	2013/12/10		NC	%	30 - 130
			Pyrene	2013/12/10		NC	%	30 - 130
3448861	GTH	Spiked Blank	1-Methylnaphthalene	2013/12/10		92	%	30 - 130
			2-Methylnaphthalene	2013/12/10		98	%	30 - 130
			Acenaphthene	2013/12/10		101	%	30 - 130
			Acenaphthylene	2013/12/10		97	%	30 - 130
			Anthracene	2013/12/10		93	%	30 - 130
			Benzo(a)anthracene	2013/12/10		97	%	30 - 130
			Benzo(a)pyrene	2013/12/10		95	%	30 - 130
			Benzo(b)fluoranthene	2013/12/10		92	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/10		101	%	30 - 130

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Maxxam Job #: B3K8203
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Benzo(j)fluoranthene	2013/12/10		91	%	30 - 130
			Benzo(k)fluoranthene	2013/12/10		92	%	30 - 130
			Chrysene	2013/12/10		98	%	30 - 130
			D10-Anthracene	2013/12/10		105	%	30 - 130
			D14-Terphenyl	2013/12/10		96	%	30 - 130
			D8-Acenaphthylene	2013/12/10		104	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/10		88	%	30 - 130
			Fluoranthene	2013/12/10		89	%	30 - 130
			Fluorene	2013/12/10		102	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/10		98	%	30 - 130
			Naphthalene	2013/12/10		104	%	30 - 130
			Perylene	2013/12/10		94	%	30 - 130
			Phenanthrene	2013/12/10		90	%	30 - 130
			Pyrene	2013/12/10		94	%	30 - 130
3448861	GTH	Method Blank	1-Methylnaphthalene	2013/12/10	<0.050		ug/L	
			2-Methylnaphthalene	2013/12/10	<0.050		ug/L	
			Acenaphthene	2013/12/10	<0.010		ug/L	
			Acenaphthylene	2013/12/10	<0.010		ug/L	
			Anthracene	2013/12/10	<0.010		ug/L	
			Benzo(a)anthracene	2013/12/10	<0.010		ug/L	
			Benzo(a)pyrene	2013/12/10	<0.010		ug/L	
			Benzo(b)fluoranthene	2013/12/10	<0.010		ug/L	
			Benzo(g,h,i)perylene	2013/12/10	<0.010		ug/L	
			Benzo(j)fluoranthene	2013/12/10	<0.010		ug/L	
			Benzo(k)fluoranthene	2013/12/10	<0.010		ug/L	
			Chrysene	2013/12/10	<0.010		ug/L	
			D10-Anthracene	2013/12/10		95	%	30 - 130
			D14-Terphenyl	2013/12/10		92	%	30 - 130
			D8-Acenaphthylene	2013/12/10		96	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/10	<0.010		ug/L	
			Fluoranthene	2013/12/10	<0.010		ug/L	
			Fluorene	2013/12/10	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2013/12/10	<0.010		ug/L	
			Naphthalene	2013/12/10	<0.20		ug/L	
			Perylene	2013/12/10	<0.010		ug/L	
			Phenanthrene	2013/12/10	<0.010		ug/L	
			Pyrene	2013/12/10	<0.010		ug/L	
3448861	GTH	RPD [UD1684]	1-Methylnaphthalene	2013/12/10	49(3)		%	40
			2-Methylnaphthalene	2013/12/10	12.6		%	40
			Acenaphthene	2013/12/10	42.5(3)		%	40
			Acenaphthylene	2013/12/10	43.9(3)		%	40
			Anthracene	2013/12/10	44.5(3)		%	40
			Benzo(a)anthracene	2013/12/10	NC		%	40
			Benzo(a)pyrene	2013/12/10	NC		%	40
			Benzo(b)fluoranthene	2013/12/10	NC		%	40
			Benzo(g,h,i)perylene	2013/12/10	NC		%	40
			Benzo(j)fluoranthene	2013/12/10	NC		%	40
			Benzo(k)fluoranthene	2013/12/10	NC		%	40
			Chrysene	2013/12/10	NC		%	40
			Dibenz(a,h)anthracene	2013/12/10	NC		%	40
			Fluoranthene	2013/12/10	54.3(3)		%	40
			Fluorene	2013/12/10	46.4(3)		%	40
			Indeno(1,2,3-cd)pyrene	2013/12/10	NC		%	40
			Naphthalene	2013/12/10	NC		%	40
			Perylene	2013/12/10	NC		%	40
			Phenanthrene	2013/12/10	58.8(3)		%	40
			Pyrene	2013/12/10	53(3)		%	40
3452788	MKH	Matrix Spike	Total Mercury (Hg)	2013/12/10		103	%	80 - 120
3452788	MKH	Spiked Blank	Total Mercury (Hg)	2013/12/10		103	%	80 - 120
3452788	MKH	Method Blank	Total Mercury (Hg)	2013/12/10	<0.013		ug/L	

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Maxxam Job #: B3K8203
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3452788	MKH	RPD	Total Mercury (Hg)	2013/12/10	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

(1) PAH sample contained sediment.

(2) Recovery is within QC acceptance limits. < 10 % of compounds in multi-component analysis in violation.

(3) Duplicate: results are outside acceptance limit. Insufficient sample for repeat analysis.

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Client Project #: 210.05890.00000
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Sampler Initials: KM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Kevin MacDonald, Inorganics Supervisor

Mike MacGillivray, Scientific Specialist (Inorganics)

Rose MacDonald, Scientific Specialist (Organics)

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Your P.O. #: HAL1988
Your Project #: 210.05890.00000
Site Location: GWMP/HCP
Your C.O.C. #: B161494

Attention: Kelly Henderson
SLR Consulting (Canada) Ltd
45 Wabana Crt., Suite 122
PO Box 791, Station A
Sydney, NS
B1P 6J1

Report Date: 2013/12/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B3K8824
Received: 2013/12/03, 16:42

Sample Matrix: Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
TEH in Water (PIRI) (1)	8	2013/12/06	2013/12/07	ATL SOP 00113	Based on Atl. PIRI
Mercury - Total (CVAA,LL) (1)	8	2013/12/10	2013/12/10	ATL SOP 00026	Based on EPA245.1
Metals Water Diss. MS (1,2)	1	N/A	2013/12/06	ATL SOP 00058	Based on EPA6020A
Metals Water Diss. MS (as rec'd) (1)	7	N/A	2013/12/06	ATL SOP 00058	Based on EPA6020A
PAH in Water by GC/MS (SIM) (1)	5	2013/12/06	2013/12/10	ATL SOP 00103	Based on EPA 8270C
PAH in Water by GC/MS (SIM) (1)	1	2013/12/06	2013/12/11	ATL SOP 00103	Based on EPA 8270C
PAH in Water by GC/MS (SIM) (1)	2	2013/12/09	2013/12/11	ATL SOP 00103	Based on EPA 8270C
VPH in Water (PIRI) (1)	7	2013/12/06	2013/12/07	ATL SOP 00118	Based on Atl. PIRI
VPH in Water (PIRI) (1)	1	2013/12/06	2013/12/11	ATL SOP 00118	Based on Atl. PIRI
ModTPH (T1) Calc. for Water (1)	8	N/A	2013/12/09	N/A	Based on Atl. PIRI

Remarks:

Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Bedford
(2) Sample filtered in laboratory prior to analysis for dissolved metals.
New RDLs in effect due to release of NS Contaminated Sites Regulations. Reduced RDL based on MDL study performance. Low level analytical run checks being implemented.

Your P.O. #: HAL1988
Your Project #: 210.05890.00000
Site Location: GWMP/HCP
Your C.O.C. #: B161494

Attention: Kelly Henderson
SLR Consulting (Canada) Ltd
45 Wabana Crt., Suite 122
PO Box 791, Station A
Sydney, NS
B1P 6J1

Report Date: 2013/12/12

CERTIFICATE OF ANALYSIS

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Natalie MacAskill, Sr. Project Manager
Email: NMacAskill@maxxam.ca
Phone# (902) 567-1255 Ext:17

==========

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Total cover pages: 2

Maxxam Job #: B3K8824
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UD4706		UD4716	UD4727		
Sampling Date		2013/12/03		2013/12/03	2013/12/03		
COC Number		B161494		B161494	B161494		
	Units	**FD#3**	**QC Batch**	**SCU15-004-MWA**	**SCU15-004-MWB**	**RDL**	**QC Batch**
Petroleum Hydrocarbons							
Benzene	mg/L	0.0015	3448814	0.0014	<0.0010	0.0010	3448814
Toluene	mg/L	0.0034	3448814	0.0033	<0.0010	0.0010	3448814
Ethylbenzene	mg/L	<0.0010	3448814	<0.0010	<0.0010	0.0010	3448814
Xylene (Total)	mg/L	0.0093	3448814	0.0089	<0.0020	0.0020	3448814
C6 - C10 (less BTEX)	mg/L	0.016	3448814	0.013	<0.010	0.010	3448814
>C10-C16 Hydrocarbons	mg/L	0.084	3448706	0.087	<0.050	0.050	3448706
>C16-C21 Hydrocarbons	mg/L	<0.050	3448706	<0.050	<0.050	0.050	3448706
>C21-<C32 Hydrocarbons	mg/L	<0.10	3448706	<0.10	<0.10	0.10	3448706
Modified TPH (Tier1)	mg/L	<0.10	3444190	0.10	<0.10	0.10	3445654
Reached Baseline at C32	mg/L	NA	3448706	Yes	NA	N/A	3448706
Hydrocarbon Resemblance	mg/L	NA	3448706	COMMENT (1)	NA	N/A	3448706
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	102	3448706	105	101		3448706
n-Dotriacontane - Extractable	%	107	3448706	101	100		3448706
Isobutylbenzene - Volatile	%	105	3448814	105	104		3448814

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Unidentified compound(s) in fuel oil range.

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Maxxam Job #: B3K8824
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UD4728		UD4730	UD4731	UD4732		
Sampling Date		2013/12/03		2013/12/03	2013/12/03	2013/12/03		
COC Number		B161494		B161494	B161494	B161494		
	Units	**SCU15-018-MW**	**RDL**	**SCU16-004-MW**	**SCU16-006-MW**	**SCU16-001-MW**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	0.051	0.0010	<0.0010	<0.0010	<0.0010	0.0010	3448814
Toluene	mg/L	0.0012	0.0010	<0.0010	<0.0010	<0.0010	0.0010	3448814
Ethylbenzene	mg/L	0.18 (1)	0.011	<0.0010	<0.0010	<0.0010	0.0010	3448814
Xylene (Total)	mg/L	0.16	0.0020	<0.0020	<0.0020	<0.0020	0.0020	3448814
C6 - C10 (less BTEX)	mg/L	1.1 (1)	0.11	<0.010	<0.010	<0.010	0.010	3448814
>C10-C16 Hydrocarbons	mg/L	4.5	0.050	<0.050	<0.050	<0.050	0.050	3448706
>C16-C21 Hydrocarbons	mg/L	0.11	0.050	<0.050	<0.050	<0.050	0.050	3448706
>C21-<C32 Hydrocarbons	mg/L	<0.10	0.10	<0.10	<0.10	<0.10	0.10	3448706
Modified TPH (Tier1)	mg/L	5.7	0.11	<0.10	<0.10	<0.10	0.10	3445654
Reached Baseline at C32	mg/L	Yes	N/A	NA	NA	NA	N/A	3448706
Hydrocarbon Resemblance	mg/L	COMMENT (2)	N/A	NA	NA	NA	N/A	3448706
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	106		103	105	102		3448706
n-Dotriacontane - Extractable	%	104 (3)		103	105	104		3448706
Isobutylbenzene - Volatile	%	104		104	104	104		3448814

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) VPH analysis performed on previously opened vial.
(2) One product in the gas/fuel oil range.
(3) TEH sample contained sediment.

Maxxam Job #: B3K8824
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Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UD4733		
Sampling Date		2013/12/03		
COC Number		B161494		
	Units	**FD#4**	**RDL**	**QC Batch**
Petroleum Hydrocarbons				
Benzene	mg/L	<0.0010	0.0010	3448814
Toluene	mg/L	<0.0010	0.0010	3448814
Ethylbenzene	mg/L	<0.0010	0.0010	3448814
Xylene (Total)	mg/L	<0.0020	0.0020	3448814
C6 - C10 (less BTEX)	mg/L	<0.010	0.010	3448814
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	3448706
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	3448706
>C21-<C32 Hydrocarbons	mg/L	<0.10	0.10	3448706
Modified TPH (Tier1)	mg/L	<0.10	0.10	3445654
Reached Baseline at C32	mg/L	NA	N/A	3448706
Hydrocarbon Resemblance	mg/L	NA	N/A	3448706
Surrogate Recovery (%)				
Isobutylbenzene - Extractable	%	102		3448706
n-Dotriacontane - Extractable	%	107		3448706
Isobutylbenzene - Volatile	%	105		3448814

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3K8824
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		UD4706	UD4716	UD4727	UD4728	UD4730		
Sampling Date		2013/12/03	2013/12/03	2013/12/03	2013/12/03	2013/12/03		
COC Number		B161494	B161494	B161494	B161494	B161494		
	Units	**FD#3**	**SCU15-004-MWA**	**SCU15-004-MWB**	**SCU15-018-MW**	**SCU16-004-MW**	**RDL**	**QC Batch**
Metals								
Total Mercury (Hg)	ug/L	0.040	0.040	<0.013	0.19	<0.013	0.013	3452792

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		UD4731	UD4732	UD4733		
Sampling Date		2013/12/03	2013/12/03	2013/12/03		
COC Number		B161494	B161494	B161494		
	Units	**SCU16-006-MW**	**SCU16-001-MW**	**FD#4**	**RDL**	**QC Batch**
Metals						
Total Mercury (Hg)	ug/L	<0.013	<0.013	<0.013	0.013	3452792

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 465 George St., Unit G Sydney, NS B1P 1K5 Tel: (902) 567-1255 Toll-Free: (888) 535-7770 Fax: (902) 539-6504 www.maxxam.ca

Maxxam Job #: B3K8824
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UD4706	UD4716	UD4727		UD4728		
Sampling Date		2013/12/03	2013/12/03	2013/12/03		2013/12/03		
COC Number		B161494	B161494	B161494		B161494		
	Units	**FD#3**	**SCU15-004-MWA**	**SCU15-004-MWB**	**QC Batch**	**SCU15-018-MW**	**RDL**	**QC Batch**
Metals								
Dissolved Aluminum (Al)	ug/L	150	86	11	3448816	5.5	5.0	3448813
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	3448816	<1.0	1.0	3448813
Dissolved Arsenic (As)	ug/L	5.1	5.0	13	3448816	2.0	1.0	3448813
Dissolved Barium (Ba)	ug/L	89	90	47	3448816	680	1.0	3448813
Dissolved Beryllium (Be)	ug/L	<1.0	<1.0	<1.0	3448816	<1.0	1.0	3448813
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	3448816	<2.0	2.0	3448813
Dissolved Boron (B)	ug/L	71	72	<50	3448816	79	50	3448813
Dissolved Cadmium (Cd)	ug/L	<0.010	<0.010	<0.010	3448816	<0.010	0.010	3448813
Dissolved Calcium (Ca)	ug/L	92000	90000	110000	3448816	150000	100	3448813
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	3448816	<1.0	1.0	3448813
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	3448816	0.68	0.40	3448813
Dissolved Copper (Cu)	ug/L	<2.0	<2.0	<2.0	3448816	<2.0	2.0	3448813
Dissolved Iron (Fe)	ug/L	58	<50	1000	3448816	<50	50	3448813
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	3448816	<0.50	0.50	3448813
Dissolved Magnesium (Mg)	ug/L	5000	4900	13000	3448816	25000	100	3448813
Dissolved Manganese (Mn)	ug/L	43	41	230	3448816	2800	2.0	3448813
Dissolved Molybdenum (Mo)	ug/L	15	14	<2.0	3448816	3.9	2.0	3448813
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	3448816	<2.0	2.0	3448813
Dissolved Phosphorus (P)	ug/L	270	260	<100	3448816	<100	100	3448813
Dissolved Potassium (K)	ug/L	11000	11000	2300	3448816	7300	100	3448813
Dissolved Selenium (Se)	ug/L	2.6	2.9	<1.0	3448816	<1.0	1.0	3448813
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	3448816	<0.10	0.10	3448813
Dissolved Sodium (Na)	ug/L	23000	23000	29000	3448816	23000	100	3448813
Dissolved Strontium (Sr)	ug/L	470	480	1600	3448816	1600	2.0	3448813
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	3448816	<0.10	0.10	3448813
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	3448816	<2.0	2.0	3448813
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	3448816	<2.0	2.0	3448813
Dissolved Uranium (U)	ug/L	0.27	0.24	1.3	3448816	2.1	0.10	3448813
Dissolved Vanadium (V)	ug/L	22	22	<2.0	3448816	<2.0	2.0	3448813
Dissolved Zinc (Zn)	ug/L	8.8	5.7	<5.0	3448816	<5.0	5.0	3448813

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B3K8824
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SLR Consulting (Canada) Ltd
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Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UD4730	UD4731	UD4732	UD4733		
Sampling Date		2013/12/03	2013/12/03	2013/12/03	2013/12/03		
COC Number		B161494	B161494	B161494	B161494		
	Units	**SCU16-004-MW**	**SCU16-006-MW**	**SCU16-001-MW**	**FD#4**	**RDL**	**QC Batch**
Metals							
Dissolved Aluminum (Al)	ug/L	13	13	17	8.0	5.0	3448816
Dissolved Antimony (Sb)	ug/L	1.4	<1.0	<1.0	<1.0	1.0	3448816
Dissolved Arsenic (As)	ug/L	1.7	4.9	3.5	4.9	1.0	3448816
Dissolved Barium (Ba)	ug/L	28	14	7.6	14	1.0	3448816
Dissolved Beryllium (Be)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	3448816
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3448816
Dissolved Boron (B)	ug/L	77	<50	65	<50	50	3448816
Dissolved Cadmium (Cd)	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	3448816
Dissolved Calcium (Ca)	ug/L	100000	280000	59000	290000	100	3448816
Dissolved Chromium (Cr)	ug/L	2.1	<1.0	3.3	<1.0	1.0	3448816
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	3448816
Dissolved Copper (Cu)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3448816
Dissolved Iron (Fe)	ug/L	<50	6700	<50	6700	50	3448816
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	3448816
Dissolved Magnesium (Mg)	ug/L	5000	28000	500	28000	100	3448816
Dissolved Manganese (Mn)	ug/L	<2.0	4000	<2.0	4000	2.0	3448816
Dissolved Molybdenum (Mo)	ug/L	3.6	2.8	3.8	2.8	2.0	3448816
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3448816
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	<100	100	3448816
Dissolved Potassium (K)	ug/L	2400	5700	2300	5700	100	3448816
Dissolved Selenium (Se)	ug/L	1.5	<1.0	1.5	<1.0	1.0	3448816
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	3448816
Dissolved Sodium (Na)	ug/L	6900	360000	11000	350000	100	3448816
Dissolved Strontium (Sr)	ug/L	580	1300	180	1300	2.0	3448816
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	3448816
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3448816
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3448816
Dissolved Uranium (U)	ug/L	2.7	2.6	<0.10	2.5	0.10	3448816
Dissolved Vanadium (V)	ug/L	17	<2.0	91	<2.0	2.0	3448816
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	3448816

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B3K8824
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SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
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Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UD4706	UD4716	UD4727		UD4728		
Sampling Date		2013/12/03	2013/12/03	2013/12/03		2013/12/03		
COC Number		B161494	B161494	B161494		B161494		
	Units	**FD#3**	**SCU15-004-MWA**	**SCU15-004-MWB**	**RDL**	**SCU15-018-MW**	**RDL**	**QC Batch**
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	ug/L	1.0	0.99	<0.050	0.050	52 (1)	2.5	3448861
2-Methylnaphthalene	ug/L	1.0	1.0	<0.050	0.050	37 (1)	2.5	3448861
Acenaphthene	ug/L	0.12	0.11	0.014	0.010	17	0.010	3448861
Acenaphthylene	ug/L	0.14	0.13	<0.010	0.010	0.63	0.010	3448861
Anthracene	ug/L	0.015	0.012	0.012	0.010	2.9	0.010	3448861
Benzo(a)anthracene	ug/L	<0.010	<0.010	<0.010	0.010	0.99	0.010	3448861
Benzo(a)pyrene	ug/L	<0.010	<0.010	<0.010	0.010	0.34	0.010	3448861
Benzo(b)fluoranthene	ug/L	<0.010	<0.010	<0.010	0.010	0.25	0.010	3448861
Benzo(g,h,i)perylene	ug/L	<0.010	<0.010	<0.010	0.010	0.063	0.010	3448861
Benzo(j)fluoranthene	ug/L	<0.010	<0.010	<0.010	0.010	0.12	0.010	3448861
Benzo(k)fluoranthene	ug/L	<0.010	<0.010	<0.010	0.010	0.14	0.010	3448861
Chrysene	ug/L	<0.010	<0.010	<0.010	0.010	0.86	0.010	3448861
Dibenz(a,h)anthracene	ug/L	<0.010	<0.010	<0.010	0.010	0.027	0.010	3448861
Fluoranthene	ug/L	0.019	0.016	0.028	0.010	3.2	0.010	3448861
Fluorene	ug/L	0.11	0.11	0.016	0.010	8.5	0.010	3448861
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	<0.010	<0.010	0.010	0.052	0.010	3448861
Naphthalene	ug/L	16	16	<0.20	0.20	1300 (1)	10	3448861
Perylene	ug/L	<0.010	<0.010	<0.010	0.010	0.028	0.010	3448861
Phenanthrene	ug/L	0.074	0.072	0.059	0.010	11	0.010	3448861
Pyrene	ug/L	0.021	0.018	0.024	0.010	2.5	0.010	3448861
Surrogate Recovery (%)								
D10-Anthracene	%	98	95	99		88		3448861
D14-Terphenyl	%	102	101	107		89 (2)		3448861
D8-Acenaphthylene	%	102	99	102		93		3448861

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to sample dilution.
(2) PAH sample contained sediment.

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Maxxam Job #: B3K8824
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UD4730	UD4731		UD4732	UD4733		
Sampling Date		2013/12/03	2013/12/03		2013/12/03	2013/12/03		
COC Number		B161494	B161494		B161494	B161494		
	Units	**SCU16-004-MW**	**SCU16-006-MW**	**QC Batch**	**SCU16-001-MW**	**FD#4**	**RDL**	**QC Batch**
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	ug/L	<0.050	<0.050	3448861	<0.050	<0.050	0.050	3451277
2-Methylnaphthalene	ug/L	<0.050	<0.050	3448861	0.073	<0.050	0.050	3451277
Acenaphthene	ug/L	0.019	0.023	3448861	0.045	0.020	0.010	3451277
Acenaphthylene	ug/L	<0.010	<0.010	3448861	0.017	<0.010	0.010	3451277
Anthracene	ug/L	0.069	0.020	3448861	0.056	0.015	0.010	3451277
Benzo(a)anthracene	ug/L	0.031	0.013	3448861	0.046	0.010	0.010	3451277
Benzo(a)pyrene	ug/L	0.029	<0.010	3448861	0.046	<0.010	0.010	3451277
Benzo(b)fluoranthene	ug/L	0.022	<0.010	3448861	0.048	<0.010	0.010	3451277
Benzo(g,h,i)perylene	ug/L	0.018	<0.010	3448861	0.038	<0.010	0.010	3451277
Benzo(j)fluoranthene	ug/L	0.015	<0.010	3448861	0.025	<0.010	0.010	3451277
Benzo(k)fluoranthene	ug/L	0.013	<0.010	3448861	0.021	<0.010	0.010	3451277
Chrysene	ug/L	0.034	0.013	3448861	0.055	0.011	0.010	3451277
Dibenz(a,h)anthracene	ug/L	<0.010	<0.010	3448861	<0.010	<0.010	0.010	3451277
Fluoranthene	ug/L	0.070	0.041	3448861	0.095	0.033	0.010	3451277
Fluorene	ug/L	0.022	0.025	3448861	0.045	0.019	0.010	3451277
Indeno(1,2,3-cd)pyrene	ug/L	0.015	<0.010	3448861	0.030	<0.010	0.010	3451277
Naphthalene	ug/L	<0.20	<0.20	3448861	<0.20	<0.20	0.20	3451277
Perylene	ug/L	<0.010	<0.010	3448861	0.018	<0.010	0.010	3451277
Phenanthrene	ug/L	0.085	0.081	3448861	0.16	0.067	0.010	3451277
Pyrene	ug/L	0.062	0.032	3448861	0.088	0.026	0.010	3451277
Surrogate Recovery (%)								
D10-Anthracene	%	96	97	3448861	90	90		3451277
D14-Terphenyl	%	97	103 (1)	3448861	95	101		3451277
D8-Acenaphthylene	%	103	101	3448861	103	98		3451277

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) PAH sample contained sediment.

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Maxxam Job #: B3K8824
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

GENERAL COMMENTS

Results relate only to the items tested.

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SLR Consulting (Canada) Ltd
Attention: Kelly Henderson
Client Project #: 210.05890.00000
P.O. #: HAL1988
Site Location: GWMP/HCP

Quality Assurance Report

Maxxam Job Number: KB3K8824

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3448706	AJS	Matrix Spike	Isobutylbenzene - Extractable	2013/12/07		100	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/07		109	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/07		92	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/07		107	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/07		110	%	30 - 130
		Spiked Blank	Isobutylbenzene - Extractable	2013/12/07		102	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/07		97	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/07		90	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/07		104	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/07		109	%	30 - 130
		Method Blank	Isobutylbenzene - Extractable	2013/12/07		104	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/07		108	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/07	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2013/12/07	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2013/12/07	<0.10		mg/L	
		RPD	>C10-C16 Hydrocarbons	2013/12/07	NC		%	40
			>C16-C21 Hydrocarbons	2013/12/07	NC		%	40
			>C21-<C32 Hydrocarbons	2013/12/07	NC		%	40
3448813	DLB	Matrix Spike	Dissolved Aluminum (Al)	2013/12/06		102	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/06		110	%	80 - 120
			Dissolved Arsenic (As)	2013/12/06		100	%	80 - 120
			Dissolved Barium (Ba)	2013/12/06		97	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/06		99	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/06		100	%	80 - 120
			Dissolved Boron (B)	2013/12/06		NC	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/06		98	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/06		NC	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/06		100	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/06		97	%	80 - 120
			Dissolved Copper (Cu)	2013/12/06		96	%	80 - 120
			Dissolved Iron (Fe)	2013/12/06		NC	%	80 - 120
			Dissolved Lead (Pb)	2013/12/06		99	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/06		NC	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/06		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/06		108	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/06		96	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/06		104	%	80 - 120
			Dissolved Potassium (K)	2013/12/06		NC	%	80 - 120
			Dissolved Selenium (Se)	2013/12/06		100	%	80 - 120
			Dissolved Silver (Ag)	2013/12/06		73 (1)	%	80 - 120
			Dissolved Sodium (Na)	2013/12/06		NC	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/06		NC	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/06		104	%	80 - 120
			Dissolved Tin (Sn)	2013/12/06		109	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/06		103	%	80 - 120
			Dissolved Uranium (U)	2013/12/06		107	%	80 - 120
			Dissolved Vanadium (V)	2013/12/06		102	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/06		97	%	80 - 120
		Spiked Blank	Dissolved Aluminum (Al)	2013/12/06		103	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/06		104	%	80 - 120
			Dissolved Arsenic (As)	2013/12/06		97	%	80 - 120
			Dissolved Barium (Ba)	2013/12/06		98	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/06		99	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/06		103	%	80 - 120
			Dissolved Boron (B)	2013/12/06		98	%	80 - 120

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SLR Consulting (Canada) Ltd
Attention: Kelly Henderson
Client Project #: 210.05890.00000
P.O. #: HAL1988
Site Location: GWMP/HCP

Quality Assurance Report (Continued)

Maxxam Job Number: KB3K8824

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3448813	DLB	Spiked Blank	Dissolved Cadmium (Cd)	2013/12/06		97	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/06		97	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/06		98	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/06		99	%	80 - 120
			Dissolved Copper (Cu)	2013/12/06		98	%	80 - 120
			Dissolved Iron (Fe)	2013/12/06		103	%	80 - 120
			Dissolved Lead (Pb)	2013/12/06		101	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/06		106	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/06		101	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/06		104	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/06		99	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/06		104	%	80 - 120
			Dissolved Potassium (K)	2013/12/06		107	%	80 - 120
			Dissolved Selenium (Se)	2013/12/06		95	%	80 - 120
			Dissolved Silver (Ag)	2013/12/06		100	%	80 - 120
			Dissolved Sodium (Na)	2013/12/06		106	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/06		102	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/06		105	%	80 - 120
			Dissolved Tin (Sn)	2013/12/06		106	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/06		102	%	80 - 120
			Dissolved Uranium (U)	2013/12/06		107	%	80 - 120
			Dissolved Vanadium (V)	2013/12/06		102	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/06		100	%	80 - 120
		Method Blank	Dissolved Aluminum (Al)	2013/12/06	<5.0		ug/L	
			Dissolved Antimony (Sb)	2013/12/06	<1.0		ug/L	
			Dissolved Arsenic (As)	2013/12/06	<1.0		ug/L	
			Dissolved Barium (Ba)	2013/12/06	<1.0		ug/L	
			Dissolved Beryllium (Be)	2013/12/06	<1.0		ug/L	
			Dissolved Bismuth (Bi)	2013/12/06	<2.0		ug/L	
			Dissolved Boron (B)	2013/12/06	<50		ug/L	
			Dissolved Cadmium (Cd)	2013/12/06	<0.010		ug/L	
			Dissolved Calcium (Ca)	2013/12/06	<100		ug/L	
			Dissolved Chromium (Cr)	2013/12/06	<1.0		ug/L	
			Dissolved Cobalt (Co)	2013/12/06	<0.40		ug/L	
			Dissolved Copper (Cu)	2013/12/06	<2.0		ug/L	
			Dissolved Iron (Fe)	2013/12/06	<50		ug/L	
			Dissolved Lead (Pb)	2013/12/06	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2013/12/06	<100		ug/L	
			Dissolved Manganese (Mn)	2013/12/06	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2013/12/06	<2.0		ug/L	
			Dissolved Nickel (Ni)	2013/12/06	<2.0		ug/L	
			Dissolved Phosphorus (P)	2013/12/06	<100		ug/L	
			Dissolved Potassium (K)	2013/12/06	<100		ug/L	
			Dissolved Selenium (Se)	2013/12/06	<1.0		ug/L	
			Dissolved Silver (Ag)	2013/12/06	<0.10		ug/L	
			Dissolved Sodium (Na)	2013/12/06	<100		ug/L	
			Dissolved Strontium (Sr)	2013/12/06	<2.0		ug/L	
			Dissolved Thallium (Tl)	2013/12/06	<0.10		ug/L	
			Dissolved Tin (Sn)	2013/12/06	<2.0		ug/L	
			Dissolved Titanium (Ti)	2013/12/06	<2.0		ug/L	
			Dissolved Uranium (U)	2013/12/06	<0.10		ug/L	
			Dissolved Vanadium (V)	2013/12/06	<2.0		ug/L	
			Dissolved Zinc (Zn)	2013/12/06	<5.0		ug/L	
		RPD	Dissolved Aluminum (Al)	2013/12/06	NC		%	20
			Dissolved Antimony (Sb)	2013/12/06	NC		%	20

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Quality Assurance Report (Continued)

Maxxam Job Number: KB3K8824

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3448813	DLB	RPD	Dissolved Arsenic (As)	2013/12/06	NC		%	20
			Dissolved Barium (Ba)	2013/12/06	0.3		%	20
			Dissolved Beryllium (Be)	2013/12/06	NC		%	20
			Dissolved Bismuth (Bi)	2013/12/06	NC		%	20
			Dissolved Boron (B)	2013/12/06	1.1		%	20
			Dissolved Cadmium (Cd)	2013/12/06	NC		%	20
			Dissolved Calcium (Ca)	2013/12/06	0.5		%	20
			Dissolved Chromium (Cr)	2013/12/06	NC		%	20
			Dissolved Cobalt (Co)	2013/12/06	NC		%	20
			Dissolved Copper (Cu)	2013/12/06	NC		%	20
			Dissolved Iron (Fe)	2013/12/06	1.2		%	20
			Dissolved Lead (Pb)	2013/12/06	NC		%	20
			Dissolved Magnesium (Mg)	2013/12/06	0.8		%	20
			Dissolved Manganese (Mn)	2013/12/06	1.2		%	20
			Dissolved Molybdenum (Mo)	2013/12/06	NC		%	20
			Dissolved Nickel (Ni)	2013/12/06	NC		%	20
			Dissolved Phosphorus (P)	2013/12/06	NC		%	20
			Dissolved Potassium (K)	2013/12/06	1.2		%	20
			Dissolved Selenium (Se)	2013/12/06	NC		%	20
			Dissolved Silver (Ag)	2013/12/06	NC		%	20
			Dissolved Sodium (Na)	2013/12/06	0.9		%	20
			Dissolved Strontium (Sr)	2013/12/06	1.1		%	20
			Dissolved Thallium (Tl)	2013/12/06	NC		%	20
			Dissolved Tin (Sn)	2013/12/06	NC		%	20
			Dissolved Titanium (Ti)	2013/12/06	NC		%	20
			Dissolved Uranium (U)	2013/12/06	1.2		%	20
			Dissolved Vanadium (V)	2013/12/06	NC		%	20
			Dissolved Zinc (Zn)	2013/12/06	NC		%	20
3448814	MS3	Matrix Spike [UD4716-02]	Isobutylbenzene - Volatile	2013/12/07		105	%	70 - 130
			Benzene	2013/12/07		109	%	70 - 130
			Toluene	2013/12/07		106	%	70 - 130
			Ethylbenzene	2013/12/07		111	%	70 - 130
			Xylene (Total)	2013/12/07		112	%	70 - 130
		Spiked Blank	Isobutylbenzene - Volatile	2013/12/07		102	%	70 - 130
			Benzene	2013/12/07		103	%	70 - 130
			Toluene	2013/12/07		105	%	70 - 130
			Ethylbenzene	2013/12/07		107	%	70 - 130
			Xylene (Total)	2013/12/07		108	%	70 - 130
		Method Blank	Isobutylbenzene - Volatile	2013/12/07		100	%	70 - 130
			Benzene	2013/12/07	<0.0010		mg/L	
			Toluene	2013/12/07	<0.0010		mg/L	
			Ethylbenzene	2013/12/07	<0.0010		mg/L	
			Xylene (Total)	2013/12/07	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2013/12/07	<0.010		mg/L	
		RPD [UD4706-02]	Benzene	2013/12/07	NC		%	40
			Toluene	2013/12/07	NC		%	40
			Ethylbenzene	2013/12/07	NC		%	40
			Xylene (Total)	2013/12/07	NC		%	40
			C6 - C10 (less BTEX)	2013/12/07	NC		%	40
3448816	DLB	Matrix Spike [UD4730-04]	Dissolved Aluminum (Al)	2013/12/06		100	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/06		108	%	80 - 120
			Dissolved Arsenic (As)	2013/12/06		100	%	80 - 120
			Dissolved Barium (Ba)	2013/12/06		100	%	80 - 120

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Quality Assurance Report (Continued)

Maxxam Job Number: KB3K8824

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3448816	DLB	Matrix Spike [UD4730-04]	Dissolved Beryllium (Be)	2013/12/06		98	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/06		105	%	80 - 120
			Dissolved Boron (B)	2013/12/06		97	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/06		98	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/06		NC	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/06		103	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/06		102	%	80 - 120
			Dissolved Copper (Cu)	2013/12/06		101	%	80 - 120
			Dissolved Iron (Fe)	2013/12/06		104	%	80 - 120
			Dissolved Lead (Pb)	2013/12/06		104	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/06		106	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/06		103	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/06		106	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/06		102	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/06		105	%	80 - 120
			Dissolved Potassium (K)	2013/12/06		106	%	80 - 120
			Dissolved Selenium (Se)	2013/12/06		100	%	80 - 120
			Dissolved Silver (Ag)	2013/12/06		94	%	80 - 120
			Dissolved Sodium (Na)	2013/12/06		109	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/06		NC	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/06		108	%	80 - 120
			Dissolved Tin (Sn)	2013/12/06		109	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/06		103	%	80 - 120
			Dissolved Uranium (U)	2013/12/06		110	%	80 - 120
			Dissolved Vanadium (V)	2013/12/06		104	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/06		102	%	80 - 120
		Spiked Blank	Dissolved Aluminum (Al)	2013/12/06		100	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/06		103	%	80 - 120
			Dissolved Arsenic (As)	2013/12/06		96	%	80 - 120
			Dissolved Barium (Ba)	2013/12/06		97	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/06		96	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/06		100	%	80 - 120
			Dissolved Boron (B)	2013/12/06		94	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/06		97	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/06		102	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/06		99	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/06		99	%	80 - 120
			Dissolved Copper (Cu)	2013/12/06		99	%	80 - 120
			Dissolved Iron (Fe)	2013/12/06		102	%	80 - 120
			Dissolved Lead (Pb)	2013/12/06		100	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/06		105	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/06		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/06		102	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/06		100	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/06		101	%	80 - 120
			Dissolved Potassium (K)	2013/12/06		105	%	80 - 120
			Dissolved Selenium (Se)	2013/12/06		97	%	80 - 120
			Dissolved Silver (Ag)	2013/12/06		97	%	80 - 120
			Dissolved Sodium (Na)	2013/12/06		106	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/06		100	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/06		103	%	80 - 120
			Dissolved Tin (Sn)	2013/12/06		104	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/06		103	%	80 - 120
			Dissolved Uranium (U)	2013/12/06		105	%	80 - 120

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Quality Assurance Report (Continued)

Maxxam Job Number: KB3K8824

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3448816 DLB	Spiked Blank	Dissolved Vanadium (V)	2013/12/06		101	%	80 - 120
		Dissolved Zinc (Zn)	2013/12/06		100	%	80 - 120
	Method Blank	Dissolved Aluminum (Al)	2013/12/06	<5.0		ug/L	
		Dissolved Antimony (Sb)	2013/12/06	<1.0		ug/L	
		Dissolved Arsenic (As)	2013/12/06	<1.0		ug/L	
		Dissolved Barium (Ba)	2013/12/06	<1.0		ug/L	
		Dissolved Beryllium (Be)	2013/12/06	<1.0		ug/L	
		Dissolved Bismuth (Bi)	2013/12/06	<2.0		ug/L	
		Dissolved Boron (B)	2013/12/06	<50		ug/L	
		Dissolved Cadmium (Cd)	2013/12/06	<0.010		ug/L	
		Dissolved Calcium (Ca)	2013/12/06	<100		ug/L	
		Dissolved Chromium (Cr)	2013/12/06	<1.0		ug/L	
		Dissolved Cobalt (Co)	2013/12/06	<0.40		ug/L	
		Dissolved Copper (Cu)	2013/12/06	<2.0		ug/L	
		Dissolved Iron (Fe)	2013/12/06	<50		ug/L	
		Dissolved Lead (Pb)	2013/12/06	<0.50		ug/L	
		Dissolved Magnesium (Mg)	2013/12/06	<100		ug/L	
		Dissolved Manganese (Mn)	2013/12/06	<2.0		ug/L	
		Dissolved Molybdenum (Mo)	2013/12/06	<2.0		ug/L	
		Dissolved Nickel (Ni)	2013/12/06	<2.0		ug/L	
		Dissolved Phosphorus (P)	2013/12/06	<100		ug/L	
		Dissolved Potassium (K)	2013/12/06	<100		ug/L	
		Dissolved Selenium (Se)	2013/12/06	<1.0		ug/L	
		Dissolved Silver (Ag)	2013/12/06	<0.10		ug/L	
		Dissolved Sodium (Na)	2013/12/06	<100		ug/L	
		Dissolved Strontium (Sr)	2013/12/06	<2.0		ug/L	
		Dissolved Thallium (Tl)	2013/12/06	<0.10		ug/L	
		Dissolved Tin (Sn)	2013/12/06	<2.0		ug/L	
		Dissolved Titanium (Ti)	2013/12/06	<2.0		ug/L	
		Dissolved Uranium (U)	2013/12/06	<0.10		ug/L	
		Dissolved Vanadium (V)	2013/12/06	<2.0		ug/L	
		Dissolved Zinc (Zn)	2013/12/06	<5.0		ug/L	
	RPD [UD4730-04]	Dissolved Aluminum (Al)	2013/12/06	NC		%	20
		Dissolved Antimony (Sb)	2013/12/06	NC		%	20
		Dissolved Arsenic (As)	2013/12/06	NC		%	20
		Dissolved Barium (Ba)	2013/12/06	0.01		%	20
		Dissolved Beryllium (Be)	2013/12/06	NC		%	20
		Dissolved Bismuth (Bi)	2013/12/06	NC		%	20
		Dissolved Boron (B)	2013/12/06	NC		%	20
		Dissolved Cadmium (Cd)	2013/12/06	NC		%	20
		Dissolved Calcium (Ca)	2013/12/06	0.7		%	20
		Dissolved Chromium (Cr)	2013/12/06	NC		%	20
		Dissolved Cobalt (Co)	2013/12/06	NC		%	20
		Dissolved Copper (Cu)	2013/12/06	NC		%	20
		Dissolved Iron (Fe)	2013/12/06	NC		%	20
		Dissolved Lead (Pb)	2013/12/06	NC		%	20
		Dissolved Magnesium (Mg)	2013/12/06	1		%	20
		Dissolved Manganese (Mn)	2013/12/06	NC		%	20
		Dissolved Molybdenum (Mo)	2013/12/06	NC		%	20
		Dissolved Nickel (Ni)	2013/12/06	NC		%	20
		Dissolved Phosphorus (P)	2013/12/06	NC		%	20
		Dissolved Potassium (K)	2013/12/06	0.8		%	20
		Dissolved Selenium (Se)	2013/12/06	NC		%	20
		Dissolved Silver (Ag)	2013/12/06	NC		%	20
		Dissolved Sodium (Na)	2013/12/06	0.2		%	20

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Quality Assurance Report (Continued)

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3448816 DLB	RPD [UD4730-04]	Dissolved Strontium (Sr)	2013/12/06	0.4		%	20
		Dissolved Thallium (Tl)	2013/12/06	NC		%	20
		Dissolved Tin (Sn)	2013/12/06	NC		%	20
		Dissolved Titanium (Ti)	2013/12/06	NC		%	20
		Dissolved Uranium (U)	2013/12/06	0.8		%	20
		Dissolved Vanadium (V)	2013/12/06	3.3		%	20
		Dissolved Zinc (Zn)	2013/12/06	NC		%	20
3448861 GTH	Matrix Spike	D10-Anthracene	2013/12/10		85	%	30 - 130
		D14-Terphenyl	2013/12/10		98	%	30 - 130
		D8-Acenaphthylene	2013/12/10		101	%	30 - 130
		1-Methylnaphthalene	2013/12/10		NC	%	30 - 130
		2-Methylnaphthalene	2013/12/10		NC	%	30 - 130
		Acenaphthene	2013/12/10		NC	%	30 - 130
		Acenaphthylene	2013/12/10		NC	%	30 - 130
		Anthracene	2013/12/10		NC	%	30 - 130
		Benzo(a)anthracene	2013/12/10		76	%	30 - 130
		Benzo(a)pyrene	2013/12/10		96	%	30 - 130
		Benzo(b)fluoranthene	2013/12/10		97	%	30 - 130
		Benzo(g,h,i)perylene	2013/12/10		101	%	30 - 130
		Benzo(j)fluoranthene	2013/12/10		92	%	30 - 130
		Benzo(k)fluoranthene	2013/12/10		94	%	30 - 130
		Chrysene	2013/12/10		75	%	30 - 130
		Dibenz(a,h)anthracene	2013/12/10		91	%	30 - 130
		Fluoranthene	2013/12/10		NC	%	30 - 130
		Fluorene	2013/12/10		NC	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2013/12/10		94	%	30 - 130
		Naphthalene	2013/12/10		NC	%	30 - 130
		Perylene	2013/12/10		94	%	30 - 130
		Phenanthrene	2013/12/10		NC	%	30 - 130
		Pyrene	2013/12/10		NC	%	30 - 130
	Spiked Blank	D10-Anthracene	2013/12/10		105	%	30 - 130
		D14-Terphenyl	2013/12/10		96	%	30 - 130
		D8-Acenaphthylene	2013/12/10		104	%	30 - 130
		1-Methylnaphthalene	2013/12/10		92	%	30 - 130
		2-Methylnaphthalene	2013/12/10		98	%	30 - 130
		Acenaphthene	2013/12/10		101	%	30 - 130
		Acenaphthylene	2013/12/10		97	%	30 - 130
		Anthracene	2013/12/10		93	%	30 - 130
		Benzo(a)anthracene	2013/12/10		97	%	30 - 130
		Benzo(a)pyrene	2013/12/10		95	%	30 - 130
		Benzo(b)fluoranthene	2013/12/10		92	%	30 - 130
		Benzo(g,h,i)perylene	2013/12/10		101	%	30 - 130
		Benzo(j)fluoranthene	2013/12/10		91	%	30 - 130
		Benzo(k)fluoranthene	2013/12/10		92	%	30 - 130
		Chrysene	2013/12/10		98	%	30 - 130
		Dibenz(a,h)anthracene	2013/12/10		88	%	30 - 130
		Fluoranthene	2013/12/10		89	%	30 - 130
		Fluorene	2013/12/10		102	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2013/12/10		98	%	30 - 130
		Naphthalene	2013/12/10		104	%	30 - 130
		Perylene	2013/12/10		94	%	30 - 130
		Phenanthrene	2013/12/10		90	%	30 - 130
		Pyrene	2013/12/10		94	%	30 - 130
	Method Blank	D10-Anthracene	2013/12/10		95	%	30 - 130
		D14-Terphenyl	2013/12/10		92	%	30 - 130

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QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3448861	GTH	Method Blank	D8-Acenaphthylene	2013/12/10		96	%	30 - 130
			1-Methylnaphthalene	2013/12/10	<0.050		ug/L	
			2-Methylnaphthalene	2013/12/10	<0.050		ug/L	
			Acenaphthene	2013/12/10	<0.010		ug/L	
			Acenaphthylene	2013/12/10	<0.010		ug/L	
			Anthracene	2013/12/10	<0.010		ug/L	
			Benzo(a)anthracene	2013/12/10	<0.010		ug/L	
			Benzo(a)pyrene	2013/12/10	<0.010		ug/L	
			Benzo(b)fluoranthene	2013/12/10	<0.010		ug/L	
			Benzo(g,h,i)perylene	2013/12/10	<0.010		ug/L	
			Benzo(j)fluoranthene	2013/12/10	<0.010		ug/L	
			Benzo(k)fluoranthene	2013/12/10	<0.010		ug/L	
			Chrysene	2013/12/10	<0.010		ug/L	
			Dibenz(a,h)anthracene	2013/12/10	<0.010		ug/L	
			Fluoranthene	2013/12/10	<0.010		ug/L	
			Fluorene	2013/12/10	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2013/12/10	<0.010		ug/L	
			Naphthalene	2013/12/10	<0.20		ug/L	
			Perylene	2013/12/10	<0.010		ug/L	
			Phenanthrene	2013/12/10	<0.010		ug/L	
			Pyrene	2013/12/10	<0.010		ug/L	
		RPD	1-Methylnaphthalene	2013/12/10	49.0 (2)		%	40
			2-Methylnaphthalene	2013/12/10	12.6		%	40
			Acenaphthene	2013/12/10	42.5 (2)		%	40
			Acenaphthylene	2013/12/10	43.9 (2)		%	40
			Anthracene	2013/12/10	44.5 (2)		%	40
			Benzo(a)anthracene	2013/12/10	NC		%	40
			Benzo(a)pyrene	2013/12/10	NC		%	40
			Benzo(b)fluoranthene	2013/12/10	NC		%	40
			Benzo(g,h,i)perylene	2013/12/10	NC		%	40
			Benzo(j)fluoranthene	2013/12/10	NC		%	40
			Benzo(k)fluoranthene	2013/12/10	NC		%	40
			Chrysene	2013/12/10	NC		%	40
			Dibenz(a,h)anthracene	2013/12/10	NC		%	40
			Fluoranthene	2013/12/10	54.3 (2)		%	40
			Fluorene	2013/12/10	46.4 (2)		%	40
			Indeno(1,2,3-cd)pyrene	2013/12/10	NC		%	40
			Naphthalene	2013/12/10	NC		%	40
			Perylene	2013/12/10	NC		%	40
			Phenanthrene	2013/12/10	58.8 (2)		%	40
			Pyrene	2013/12/10	53.0 (2)		%	40
3451277	GTH	Matrix Spike [UD4733-03]	D10-Anthracene	2013/12/11		90	%	30 - 130
			D14-Terphenyl	2013/12/11		96	%	30 - 130
			D8-Acenaphthylene	2013/12/11		96	%	30 - 130
			1-Methylnaphthalene	2013/12/11		86	%	30 - 130
			2-Methylnaphthalene	2013/12/11		89	%	30 - 130
			Acenaphthene	2013/12/11		93	%	30 - 130
			Acenaphthylene	2013/12/11		87	%	30 - 130
			Anthracene	2013/12/11		94	%	30 - 130
			Benzo(a)anthracene	2013/12/11		91	%	30 - 130
			Benzo(a)pyrene	2013/12/11		91	%	30 - 130
			Benzo(b)fluoranthene	2013/12/11		91	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/11		95	%	30 - 130
			Benzo(j)fluoranthene	2013/12/11		87	%	30 - 130

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SLR Consulting (Canada) Ltd
Attention: Kelly Henderson
Client Project #: 210.05890.00000
P.O. #: HAL1988
Site Location: GWMP/HCP

Quality Assurance Report (Continued)

Maxxam Job Number: KB3K8824

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3451277	GTH	Matrix Spike [UD4733-03]	Benzo(k)fluoranthene	2013/12/11		89	%	30 - 130
			Chrysene	2013/12/11		92	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/11		82	%	30 - 130
			Fluoranthene	2013/12/11		85	%	30 - 130
			Fluorene	2013/12/11		92	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/11		88	%	30 - 130
			Naphthalene	2013/12/11		96	%	30 - 130
			Perylene	2013/12/11		91	%	30 - 130
			Phenanthrene	2013/12/11		86	%	30 - 130
			Pyrene	2013/12/11		89	%	30 - 130
		Spiked Blank	D10-Anthracene	2013/12/11		93	%	30 - 130
			D14-Terphenyl	2013/12/11		93	%	30 - 130
			D8-Acenaphthylene	2013/12/11		101	%	30 - 130
			1-Methylnaphthalene	2013/12/11		91	%	30 - 130
			2-Methylnaphthalene	2013/12/11		95	%	30 - 130
			Acenaphthene	2013/12/11		99	%	30 - 130
			Acenaphthylene	2013/12/11		93	%	30 - 130
			Anthracene	2013/12/11		97	%	30 - 130
			Benzo(a)anthracene	2013/12/11		90	%	30 - 130
			Benzo(a)pyrene	2013/12/11		96	%	30 - 130
			Benzo(b)fluoranthene	2013/12/11		94	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/11		103	%	30 - 130
			Benzo(j)fluoranthene	2013/12/11		91	%	30 - 130
			Benzo(k)fluoranthene	2013/12/11		93	%	30 - 130
			Chrysene	2013/12/11		95	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/11		87	%	30 - 130
			Fluoranthene	2013/12/11		85	%	30 - 130
			Fluorene	2013/12/11		98	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/11		96	%	30 - 130
			Naphthalene	2013/12/11		101	%	30 - 130
			Perylene	2013/12/11		97	%	30 - 130
			Phenanthrene	2013/12/11		101	%	30 - 130
			Pyrene	2013/12/11		88	%	30 - 130
		Method Blank	D10-Anthracene	2013/12/11		94	%	30 - 130
			D14-Terphenyl	2013/12/11		96	%	30 - 130
			D8-Acenaphthylene	2013/12/11		102	%	30 - 130
			1-Methylnaphthalene	2013/12/11	<0.050		ug/L	
			2-Methylnaphthalene	2013/12/11	<0.050		ug/L	
			Acenaphthene	2013/12/11	<0.010		ug/L	
			Acenaphthylene	2013/12/11	<0.010		ug/L	
			Anthracene	2013/12/11	<0.010		ug/L	
			Benzo(a)anthracene	2013/12/11	<0.010		ug/L	
			Benzo(a)pyrene	2013/12/11	<0.010		ug/L	
			Benzo(b)fluoranthene	2013/12/11	<0.010		ug/L	
			Benzo(g,h,i)perylene	2013/12/11	<0.010		ug/L	
			Benzo(j)fluoranthene	2013/12/11	<0.010		ug/L	
			Benzo(k)fluoranthene	2013/12/11	<0.010		ug/L	
			Chrysene	2013/12/11	<0.010		ug/L	
			Dibenz(a,h)anthracene	2013/12/11	<0.010		ug/L	
			Fluoranthene	2013/12/11	<0.010		ug/L	
			Fluorene	2013/12/11	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2013/12/11	<0.010		ug/L	
			Naphthalene	2013/12/11	<0.20		ug/L	
			Perylene	2013/12/11	<0.010		ug/L	

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SLR Consulting (Canada) Ltd
Attention: Kelly Henderson
Client Project #: 210.05890.00000
P.O. #: HAL1988
Site Location: GWMP/HCP

Quality Assurance Report (Continued)

Maxxam Job Number: KB3K8824

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3451277	GTH	Method Blank	Phenanthrene	2013/12/11	<0.010		ug/L	
			Pyrene	2013/12/11	<0.010		ug/L	
		RPD [UD4732-03]	1-Methylnaphthalene	2013/12/11	NC		%	40
			2-Methylnaphthalene	2013/12/11	NC		%	40
			Acenaphthene	2013/12/11	NC		%	40
			Acenaphthylene	2013/12/11	NC		%	40
			Anthracene	2013/12/11	11.0		%	40
			Benzo(a)anthracene	2013/12/11	NC		%	40
			Benzo(a)pyrene	2013/12/11	NC		%	40
			Benzo(b)fluoranthene	2013/12/11	NC		%	40
			Benzo(g,h,i)perylene	2013/12/11	NC		%	40
			Benzo(j)fluoranthene	2013/12/11	NC		%	40
			Benzo(k)fluoranthene	2013/12/11	NC		%	40
			Chrysene	2013/12/11	2.8		%	40
			Dibenz(a,h)anthracene	2013/12/11	NC		%	40
			Fluoranthene	2013/12/11	12.6		%	40
			Fluorene	2013/12/11	NC		%	40
			Indeno(1,2,3-cd)pyrene	2013/12/11	NC		%	40
			Naphthalene	2013/12/11	NC		%	40
			Perylene	2013/12/11	NC		%	40
			Phenanthrene	2013/12/11	5.9		%	40
			Pyrene	2013/12/11	4.6		%	40
3452792	MKH	Matrix Spike	Total Mercury (Hg)	2013/12/10		103	%	80 - 120
		Spiked Blank	Total Mercury (Hg)	2013/12/10		102	%	80 - 120
		Method Blank	Total Mercury (Hg)	2013/12/10	<0.013		ug/L	
		RPD	Total Mercury (Hg)	2013/12/10	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) Recovery is within QC acceptance limits. < 10 % of compounds in multi-component analysis in violation.
(2) Duplicate: results are outside acceptance limit. Insufficient sample for repeat analysis.

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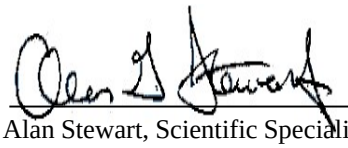
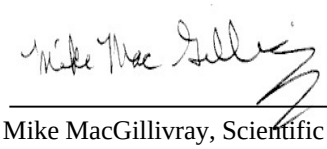
Validation Signature Page

Maxxam Job #: B3K8824

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Alan Stewart, Scientific Specialist (Organics)



Mike MacGillivray, Scientific Specialist (Inorganics)

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Your P.O. #: HAL1988
Your Project #: 210.05890.00000
Site Location: GWMP/HCP
Your C.O.C. #: B161489

Attention:Kelly Henderson

SLR Consulting (Canada) Ltd
45 Wabana Crt., Suite 122
PO Box 791, Station A
Sydney, NS
B1P 6J1

Report Date: 2013/12/12

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B3L0110
Received: 2013/12/04, 16:45

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
TEH in Water (PIRI) (1)	7	2013/12/09	2013/12/10	ATL SOP 00113	Based on Atl. PIRI
Mercury - Total (CVAA,LL) (1)	6	2013/12/11	2013/12/11	ATL SOP 00026	Based on EPA245.1
Metals Water Diss. MS (as rec'd) (1)	3	N/A	2013/12/10	ATL SOP 00058	Based on EPA6020A
Metals Water Diss. MS (as rec'd) (1)	3	N/A	2013/12/11	ATL SOP 00058	Based on EPA6020A
PAH in Water by GC/MS (SIM) (1)	6	2013/12/10	2013/12/12	ATL SOP 00103	Based on EPA 8270C
VPH in Water (PIRI) (1)	3	2013/12/09	2013/12/09	ATL SOP 00118	Based on Atl. PIRI
VPH in Water (PIRI) (1)	3	2013/12/09	2013/12/10	ATL SOP 00118	Based on Atl. PIRI
VPH in Water (PIRI) (1)	1	2013/12/09	2013/12/11	ATL SOP 00118	Based on Atl. PIRI
ModTPH (T1) Calc. for Water (1)	6	N/A	2013/12/10	N/A	Based on Atl. PIRI
ModTPH (T1) Calc. for Water (1)	1	N/A	2013/12/11	N/A	Based on Atl. PIRI

Remarks:

Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Bedford

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Natalie MacAskill, Sr. Project Manager
Email: NMacAskill@maxxam.ca
Phone# (902)567-1255 Ext:17

==========

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Maxxam Job #: B3L0110
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		UE0571	UE0572	UE0573	UE0574	UE0575		
Sampling Date		2013/12/04	2013/12/04	2013/12/04	2013/12/04	2013/12/04		
COC Number		B161489	B161489	B161489	B161489	B161489		
	Units	SCU16-013-MW	SCU16-011-MWC	SCU16-011-MWB	SCU16-011-MWA	SCU31-013-MWB	RDL	QC Batch
Metals								
Total Mercury (Hg)	ug/L	<0.013	<0.013	<0.013	<0.013	<0.013	0.013	3454194

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		UE0576		
Sampling Date		2013/12/04		
COC Number		B161489		
	Units	SCU31-013-MWC	RDL	QC Batch
Metals				
Total Mercury (Hg)	ug/L	<0.013	0.013	3454194

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L0110
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UE0571	UE0572	UE0573	UE0574		
Sampling Date		2013/12/04	2013/12/04	2013/12/04	2013/12/04		
COC Number		B161489	B161489	B161489	B161489		
	Units	SCU16-013-MW	SCU16-011-MWC	SCU16-011-MWB	SCU16-011-MWA	RDL	QC Batch
Metals							
Dissolved Aluminum (Al)	ug/L	65	13	59	120	5.0	3451938
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	1.6	1.0	3451938
Dissolved Arsenic (As)	ug/L	1.7	11	3.5	2.7	1.0	3451938
Dissolved Barium (Ba)	ug/L	91	35	65	21	1.0	3451938
Dissolved Beryllium (Be)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	3451938
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3451938
Dissolved Boron (B)	ug/L	<50	<50	<50	75	50	3451938
Dissolved Cadmium (Cd)	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	3451938
Dissolved Calcium (Ca)	ug/L	220000	48000	70000	70000	100	3451938
Dissolved Chromium (Cr)	ug/L	17	<1.0	<1.0	18	1.0	3451938
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	3451938
Dissolved Copper (Cu)	ug/L	3.0	<2.0	<2.0	<2.0	2.0	3451938
Dissolved Iron (Fe)	ug/L	<50	<50	<50	<50	50	3451938
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	3451938
Dissolved Magnesium (Mg)	ug/L	<100	1000	<100	2100	100	3451938
Dissolved Manganese (Mn)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3451938
Dissolved Molybdenum (Mo)	ug/L	7.5	38	13	32	2.0	3451938
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3451938
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	<100	100	3451938
Dissolved Potassium (K)	ug/L	20000	4300	7600	16000	100	3451938
Dissolved Selenium (Se)	ug/L	3.3	4.5	8.4	3.5	1.0	3451938
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	3451938
Dissolved Sodium (Na)	ug/L	31000	54000	55000	10000	100	3451938
Dissolved Strontium (Sr)	ug/L	1100	630	830	380	2.0	3451938
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	3451938
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3451938
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3451938
Dissolved Uranium (U)	ug/L	<0.10	<0.10	<0.10	0.44	0.10	3451938
Dissolved Vanadium (V)	ug/L	3.9	<2.0	<2.0	40	2.0	3451938
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	3451938

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L0110
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UE0575		UE0576		
Sampling Date		2013/12/04		2013/12/04		
COC Number		B161489		B161489		
	Units	SCU31-013-MWB	RDL	SCU31-013-MWC	RDL	QC Batch
Metals						
Dissolved Aluminum (Al)	ug/L	37	5.0	61	5.0	3451938
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	<1.0	1.0	3451938
Dissolved Arsenic (As)	ug/L	5.0	1.0	16	1.0	3451938
Dissolved Barium (Ba)	ug/L	110	1.0	13	1.0	3451938
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	<1.0	1.0	3451938
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	2.0	3451938
Dissolved Boron (B)	ug/L	730	50	590	50	3451938
Dissolved Cadmium (Cd)	ug/L	<0.010	0.010	<0.010	0.010	3451938
Dissolved Calcium (Ca)	ug/L	350000	100	330000	100	3451938
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	<1.0	1.0	3451938
Dissolved Cobalt (Co)	ug/L	<0.40	0.40	<0.40	0.40	3451938
Dissolved Copper (Cu)	ug/L	<2.0	2.0	<2.0	2.0	3451938
Dissolved Iron (Fe)	ug/L	<50	50	1700	50	3451938
Dissolved Lead (Pb)	ug/L	<0.50	0.50	<0.50	0.50	3451938
Dissolved Magnesium (Mg)	ug/L	120000	1000	66000	100	3451938
Dissolved Manganese (Mn)	ug/L	600	2.0	270	2.0	3451938
Dissolved Molybdenum (Mo)	ug/L	4.9	2.0	8.2	2.0	3451938
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	<2.0	2.0	3451938
Dissolved Phosphorus (P)	ug/L	150	100	<100	100	3451938
Dissolved Potassium (K)	ug/L	38000	100	15000	100	3451938
Dissolved Selenium (Se)	ug/L	<1.0	1.0	<1.0	1.0	3451938
Dissolved Silver (Ag)	ug/L	<0.10	0.10	<0.10	0.10	3451938
Dissolved Sodium (Na)	ug/L	890000	100	1500000	1000	3451938
Dissolved Strontium (Sr)	ug/L	12000	20	14000	20	3451938
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	<0.10	0.10	3451938
Dissolved Tin (Sn)	ug/L	<2.0	2.0	<2.0	2.0	3451938
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	2.1	2.0	3451938
Dissolved Uranium (U)	ug/L	0.90	0.10	1.5	0.10	3451938
Dissolved Vanadium (V)	ug/L	2.3	2.0	<2.0	2.0	3451938
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	5.8	5.0	3451938

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L0110
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UE0571	UE0572	UE0573	UE0574	UE0575		
Sampling Date		2013/12/04	2013/12/04	2013/12/04	2013/12/04	2013/12/04		
COC Number		B161489	B161489	B161489	B161489	B161489		
	Units	SCU16-013-MW	SCU16-011-MWC	SCU16-011-MWB	SCU16-011-MWA	SCU31-013-MWB	RDL	QC Batch
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	ug/L	<0.050	0.19	0.43	<0.050	0.069	0.050	3452353
2-Methylnaphthalene	ug/L	<0.050	0.18	0.42	<0.050	<0.050	0.050	3452353
Acenaphthene	ug/L	0.032	0.053	0.11	0.026	0.052	0.010	3452353
Acenaphthylene	ug/L	<0.010	0.012	0.024	<0.010	0.030	0.010	3452353
Anthracene	ug/L	0.029	0.026	0.060	0.024	0.10	0.010	3452353
Benzo(a)anthracene	ug/L	0.016	<0.010	<0.010	<0.010	0.15	0.010	3452353
Benzo(a)pyrene	ug/L	0.011	<0.010	<0.010	<0.010	0.18	0.010	3452353
Benzo(b)fluoranthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.16	0.010	3452353
Benzo(g,h,i)perylene	ug/L	<0.010	<0.010	<0.010	<0.010	0.12	0.010	3452353
Benzo(j)fluoranthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.086	0.010	3452353
Benzo(k)fluoranthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.089	0.010	3452353
Chrysene	ug/L	0.016	<0.010	<0.010	<0.010	0.18	0.010	3452353
Dibenz(a,h)anthracene	ug/L	<0.010	<0.010	<0.010	<0.010	0.026	0.010	3452353
Fluoranthene	ug/L	0.071	0.057	0.16	0.030	0.36	0.010	3452353
Fluorene	ug/L	0.027	0.047	0.10	0.025	0.080	0.010	3452353
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	<0.010	<0.010	<0.010	0.097	0.010	3452353
Naphthalene	ug/L	<0.20	0.26	0.56	<0.20	<0.20	0.20	3452353
Perylene	ug/L	<0.010	<0.010	<0.010	<0.010	0.044	0.010	3452353
Phenanthrene	ug/L	0.10	0.12	0.28	0.066	0.32	0.010	3452353
Pyrene	ug/L	0.051	0.046	0.12	0.027	0.30	0.010	3452353
Surrogate Recovery (%)								
D10-Anthracene	%	98	93	100	89	74		3452353
D14-Terphenyl	%	103	99	105	87	90 (1)		3452353
D8-Acenaphthylene	%	101	104	103	83	89		3452353

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) PAH sample contained sediment.

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SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UE0576		
Sampling Date		2013/12/04		
COC Number		B161489		
	Units	SCU31-013-MWC	RDL	QC Batch
Polyaromatic Hydrocarbons				
1-Methylnaphthalene	ug/L	<0.050	0.050	3452353
2-Methylnaphthalene	ug/L	<0.050	0.050	3452353
Acenaphthene	ug/L	<0.010	0.010	3452353
Acenaphthylene	ug/L	<0.010	0.010	3452353
Anthracene	ug/L	<0.010	0.010	3452353
Benzo(a)anthracene	ug/L	<0.010	0.010	3452353
Benzo(a)pyrene	ug/L	<0.010	0.010	3452353
Benzo(b)fluoranthene	ug/L	<0.010	0.010	3452353
Benzo(g,h,i)perylene	ug/L	<0.010	0.010	3452353
Benzo(j)fluoranthene	ug/L	<0.010	0.010	3452353
Benzo(k)fluoranthene	ug/L	<0.010	0.010	3452353
Chrysene	ug/L	<0.010	0.010	3452353
Dibenz(a,h)anthracene	ug/L	<0.010	0.010	3452353
Fluoranthene	ug/L	0.019	0.010	3452353
Fluorene	ug/L	<0.010	0.010	3452353
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	0.010	3452353
Naphthalene	ug/L	<0.20	0.20	3452353
Perylene	ug/L	<0.010	0.010	3452353
Phenanthrene	ug/L	0.030	0.010	3452353
Pyrene	ug/L	0.020	0.010	3452353
Surrogate Recovery (%)				
D10-Anthracene	%	86		3452353
D14-Terphenyl	%	99 (1)		3452353
D8-Acenaphthylene	%	101		3452353

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) PAH sample contained sediment.

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ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UE0570		UE0571	UE0572	UE0573		
Sampling Date		2013/12/04		2013/12/04	2013/12/04	2013/12/04		
COC Number		B161489		B161489	B161489	B161489		
	Units	**TRIP BLANK**	**QC Batch**	**SCU16-013-MW**	**SCU16-011-MWC**	**SCU16-011-MWB**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	3451240	<0.0010	<0.0010	<0.0010	0.0010	3451274
Toluene	mg/L	<0.0010	3451240	<0.0010	<0.0010	<0.0010	0.0010	3451274
Ethylbenzene	mg/L	<0.0010	3451240	<0.0010	<0.0010	<0.0010	0.0010	3451274
Xylene (Total)	mg/L	<0.0020	3451240	<0.0020	<0.0020	<0.0020	0.0020	3451274
C6 - C10 (less BTEX)	mg/L	<0.010	3451240	<0.010	<0.010	<0.010	0.010	3451274
>C10-C16 Hydrocarbons	mg/L	<0.050	3450525	<0.050	<0.050	<0.050	0.050	3450525
>C16-C21 Hydrocarbons	mg/L	<0.050	3450525	<0.050	<0.050	<0.050	0.050	3450525
>C21-<C32 Hydrocarbons	mg/L	<0.10	3450525	<0.10	<0.10	<0.10	0.10	3450525
Modified TPH (Tier1)	mg/L	<0.10	3447020	<0.10	<0.10	<0.10	0.10	3447020
Reached Baseline at C32	mg/L	NA	3450525	NA	NA	NA		3450525
Hydrocarbon Resemblance	mg/L	NA	3450525	NA	NA	NA		3450525
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	99	3450525	90	99	103		3450525
n-Dotriacontane - Extractable	%	100	3450525	92	101	103		3450525
Isobutylbenzene - Volatile	%	95	3451240	105	105	106		3451274

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UE0574	UE0575	UE0576		
Sampling Date		2013/12/04	2013/12/04	2013/12/04		
COC Number		B161489	B161489	B161489		
	Units	SCU16-011-MWA	SCU31-013-MWB	SCU31-013-MWC	RDL	QC Batch
Petroleum Hydrocarbons						
Benzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	3451274
Toluene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	3451274
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	3451274
Xylene (Total)	mg/L	<0.0020	<0.0020	<0.0020	0.0020	3451274
C6 - C10 (less BTEX)	mg/L	<0.010	<0.010	<0.010	0.010	3451274
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	0.050	3450525
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	0.050	3450525
>C21-<C32 Hydrocarbons	mg/L	<0.10	0.14	<0.10	0.10	3450525
Modified TPH (Tier1)	mg/L	<0.10	0.14	<0.10	0.10	3447020
Reached Baseline at C32	mg/L	NA	Yes	NA		3450525
Hydrocarbon Resemblance	mg/L	NA	COMMENT (1)	NA		3450525
Surrogate Recovery (%)						
Isobutylbenzene - Extractable	%	102	84	102		3450525
n-Dotriacontane - Extractable	%	108	95	108		3450525
Isobutylbenzene - Volatile	%	104	100	104		3451274

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Lube oil fraction.

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GENERAL COMMENTS

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3450525	AJS	Matrix Spike	Isobutylbenzene - Extractable	2013/12/10		106	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/10		108	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/10		98	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/10		114	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/10		116	%	30 - 130
3450525	AJS	Spiked Blank	Isobutylbenzene - Extractable	2013/12/10		104	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/10		109	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/10		98	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/10		116	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/10		122	%	30 - 130
3450525	AJS	Method Blank	Isobutylbenzene - Extractable	2013/12/10		105	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/10		102	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/10	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2013/12/10	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2013/12/10	<0.10		mg/L	
3450525	AJS	RPD	>C10-C16 Hydrocarbons	2013/12/10	3.1		%	40
			>C16-C21 Hydrocarbons	2013/12/10	NC		%	40
			>C21-<C32 Hydrocarbons	2013/12/10	NC		%	40
3451240	THL	Matrix Spike	Isobutylbenzene - Volatile	2013/12/10		102	%	70 - 130
			Benzene	2013/12/10		106	%	70 - 130
			Toluene	2013/12/10		108	%	70 - 130
			Ethylbenzene	2013/12/10		109	%	70 - 130
			Xylene (Total)	2013/12/10		113	%	70 - 130
3451240	THL	Spiked Blank	Isobutylbenzene - Volatile	2013/12/10		100	%	70 - 130
			Benzene	2013/12/10		105	%	70 - 130
			Toluene	2013/12/10		107	%	70 - 130
			Ethylbenzene	2013/12/10		109	%	70 - 130
			Xylene (Total)	2013/12/10		111	%	70 - 130
3451240	THL	Method Blank	Isobutylbenzene - Volatile	2013/12/10		104	%	70 - 130
			Benzene	2013/12/10	<0.0010		mg/L	
			Toluene	2013/12/10	<0.0010		mg/L	
			Ethylbenzene	2013/12/10	<0.0010		mg/L	
			Xylene (Total)	2013/12/10	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2013/12/10	<0.010		mg/L	
3451240	THL	RPD	Benzene	2013/12/10	NC		%	40
			Toluene	2013/12/10	NC		%	40
			Ethylbenzene	2013/12/10	NC		%	40
			Xylene (Total)	2013/12/10	NC		%	40
			C6 - C10 (less BTEX)	2013/12/10	NC		%	40
3451274	MS3	Matrix Spike [UE0571]	Isobutylbenzene - Volatile	2013/12/09		103	%	70 - 130
			Benzene	2013/12/09		106	%	70 - 130
			Toluene	2013/12/09		107	%	70 - 130
			Ethylbenzene	2013/12/09		111	%	70 - 130
			Xylene (Total)	2013/12/09		112	%	70 - 130
3451274	MS3	Spiked Blank	Isobutylbenzene - Volatile	2013/12/09		107	%	70 - 130
			Benzene	2013/12/09		105	%	70 - 130
			Toluene	2013/12/09		109	%	70 - 130
			Ethylbenzene	2013/12/09		112	%	70 - 130
			Xylene (Total)	2013/12/09		113	%	70 - 130
3451274	MS3	Method Blank	Isobutylbenzene - Volatile	2013/12/09		105	%	70 - 130
			Benzene	2013/12/09	<0.0010		mg/L	
			Toluene	2013/12/09	<0.0010		mg/L	
			Ethylbenzene	2013/12/09	<0.0010		mg/L	
			Xylene (Total)	2013/12/09	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2013/12/09	<0.010		mg/L	
3451274	MS3	RPD	Benzene	2013/12/09	NC		%	40
			Toluene	2013/12/09	NC		%	40
			Ethylbenzene	2013/12/09	NC		%	40
			Xylene (Total)	2013/12/09	NC		%	40
			C6 - C10 (less BTEX)	2013/12/09	NC		%	40
3451938	DLB	Matrix Spike [UE0574]	Dissolved Aluminum (Al)	2013/12/10		97	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Dissolved Antimony (Sb)	2013/12/10		106	%	80 - 120
			Dissolved Arsenic (As)	2013/12/10		101	%	80 - 120
			Dissolved Barium (Ba)	2013/12/10		99	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/10		101	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/10		105	%	80 - 120
			Dissolved Boron (B)	2013/12/10		105	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/10		100	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/10		NC	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/10		97	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/10		98	%	80 - 120
			Dissolved Copper (Cu)	2013/12/10		97	%	80 - 120
			Dissolved Iron (Fe)	2013/12/10		100	%	80 - 120
			Dissolved Lead (Pb)	2013/12/10		97	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/10		102	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/10		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/10		NC	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/10		100	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/10		103	%	80 - 120
			Dissolved Potassium (K)	2013/12/10		NC	%	80 - 120
			Dissolved Selenium (Se)	2013/12/10		101	%	80 - 120
			Dissolved Silver (Ag)	2013/12/10		97	%	80 - 120
			Dissolved Sodium (Na)	2013/12/10		100	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/10		NC	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/10		105	%	80 - 120
			Dissolved Tin (Sn)	2013/12/10		107	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/10		105	%	80 - 120
			Dissolved Uranium (U)	2013/12/10		107	%	80 - 120
			Dissolved Vanadium (V)	2013/12/10		100	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/10		100	%	80 - 120
3451938	DLB	Spiked Blank	Dissolved Aluminum (Al)	2013/12/10		99	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/10		104	%	80 - 120
			Dissolved Arsenic (As)	2013/12/10		100	%	80 - 120
			Dissolved Barium (Ba)	2013/12/10		97	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/10		101	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/10		106	%	80 - 120
			Dissolved Boron (B)	2013/12/10		105	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/10		99	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/10		93	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/10		98	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/10		99	%	80 - 120
			Dissolved Copper (Cu)	2013/12/10		98	%	80 - 120
			Dissolved Iron (Fe)	2013/12/10		101	%	80 - 120
			Dissolved Lead (Pb)	2013/12/10		97	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/10		102	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/10		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/10		102	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/10		102	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/10		103	%	80 - 120
			Dissolved Potassium (K)	2013/12/10		103	%	80 - 120
			Dissolved Selenium (Se)	2013/12/10		100	%	80 - 120
			Dissolved Silver (Ag)	2013/12/10		97	%	80 - 120
			Dissolved Sodium (Na)	2013/12/10		101	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/10		97	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/10		105	%	80 - 120
			Dissolved Tin (Sn)	2013/12/10		106	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/10		103	%	80 - 120
			Dissolved Uranium (U)	2013/12/10		106	%	80 - 120
			Dissolved Vanadium (V)	2013/12/10		100	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/10		102	%	80 - 120
3451938	DLB	Method Blank	Dissolved Aluminum (Al)	2013/12/10	<5.0		ug/L	
			Dissolved Antimony (Sb)	2013/12/10	<1.0		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Dissolved Arsenic (As)	2013/12/10	<1.0		ug/L	
			Dissolved Barium (Ba)	2013/12/10	<1.0		ug/L	
			Dissolved Beryllium (Be)	2013/12/10	<1.0		ug/L	
			Dissolved Bismuth (Bi)	2013/12/10	<2.0		ug/L	
			Dissolved Boron (B)	2013/12/10	<50		ug/L	
			Dissolved Cadmium (Cd)	2013/12/10	<0.010		ug/L	
			Dissolved Calcium (Ca)	2013/12/10	<100		ug/L	
			Dissolved Chromium (Cr)	2013/12/10	<1.0		ug/L	
			Dissolved Cobalt (Co)	2013/12/10	<0.40		ug/L	
			Dissolved Copper (Cu)	2013/12/10	<2.0		ug/L	
			Dissolved Iron (Fe)	2013/12/10	<50		ug/L	
			Dissolved Lead (Pb)	2013/12/10	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2013/12/10	<100		ug/L	
			Dissolved Manganese (Mn)	2013/12/10	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2013/12/10	<2.0		ug/L	
			Dissolved Nickel (Ni)	2013/12/10	<2.0		ug/L	
			Dissolved Phosphorus (P)	2013/12/10	<100		ug/L	
			Dissolved Potassium (K)	2013/12/10	<100		ug/L	
			Dissolved Selenium (Se)	2013/12/10	<1.0		ug/L	
			Dissolved Silver (Ag)	2013/12/10	<0.10		ug/L	
			Dissolved Sodium (Na)	2013/12/10	<100		ug/L	
			Dissolved Strontium (Sr)	2013/12/10	<2.0		ug/L	
			Dissolved Thallium (Tl)	2013/12/10	<0.10		ug/L	
			Dissolved Tin (Sn)	2013/12/10	<2.0		ug/L	
			Dissolved Titanium (Ti)	2013/12/10	<2.0		ug/L	
			Dissolved Uranium (U)	2013/12/10	<0.10		ug/L	
			Dissolved Vanadium (V)	2013/12/10	<2.0		ug/L	
			Dissolved Zinc (Zn)	2013/12/10	<5.0		ug/L	
3451938	DLB	RPD [UE0574]	Dissolved Aluminum (Al)	2013/12/11	2.4		%	20
			Dissolved Antimony (Sb)	2013/12/11	NC		%	20
			Dissolved Arsenic (As)	2013/12/11	NC		%	20
			Dissolved Barium (Ba)	2013/12/11	0.8		%	20
			Dissolved Beryllium (Be)	2013/12/11	NC		%	20
			Dissolved Bismuth (Bi)	2013/12/11	NC		%	20
			Dissolved Boron (B)	2013/12/11	NC		%	20
			Dissolved Cadmium (Cd)	2013/12/11	NC		%	20
			Dissolved Calcium (Ca)	2013/12/11	0.6		%	20
			Dissolved Chromium (Cr)	2013/12/11	0.7		%	20
			Dissolved Cobalt (Co)	2013/12/11	NC		%	20
			Dissolved Copper (Cu)	2013/12/11	NC		%	20
			Dissolved Iron (Fe)	2013/12/11	NC		%	20
			Dissolved Lead (Pb)	2013/12/11	NC		%	20
			Dissolved Magnesium (Mg)	2013/12/11	0.8		%	20
			Dissolved Manganese (Mn)	2013/12/11	NC		%	20
			Dissolved Molybdenum (Mo)	2013/12/11	0.9		%	20
			Dissolved Nickel (Ni)	2013/12/11	NC		%	20
			Dissolved Phosphorus (P)	2013/12/11	NC		%	20
			Dissolved Potassium (K)	2013/12/11	0.2		%	20
			Dissolved Selenium (Se)	2013/12/11	NC		%	20
			Dissolved Silver (Ag)	2013/12/11	NC		%	20
			Dissolved Sodium (Na)	2013/12/11	0.2		%	20
			Dissolved Strontium (Sr)	2013/12/11	0.4		%	20
			Dissolved Thallium (Tl)	2013/12/11	NC		%	20
			Dissolved Tin (Sn)	2013/12/11	NC		%	20
			Dissolved Titanium (Ti)	2013/12/11	NC		%	20
			Dissolved Uranium (U)	2013/12/11	NC		%	20
			Dissolved Vanadium (V)	2013/12/11	2		%	20
			Dissolved Zinc (Zn)	2013/12/11	NC		%	20
3452353	GTH	Matrix Spike	1-Methylnaphthalene	2013/12/12		87	%	30 - 130
			2-Methylnaphthalene	2013/12/12		94	%	30 - 130
			Acenaphthene	2013/12/12		93	%	30 - 130

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Maxxam Job #: B3L0110
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Acenaphthylene	2013/12/12		91	%	30 - 130
			Anthracene	2013/12/12		94	%	30 - 130
			Benzo(a)anthracene	2013/12/12		116	%	30 - 130
			Benzo(a)pyrene	2013/12/12		89	%	30 - 130
			Benzo(b)fluoranthene	2013/12/12		91	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/12		76	%	30 - 130
			Benzo(j)fluoranthene	2013/12/12		89	%	30 - 130
			Benzo(k)fluoranthene	2013/12/12		89	%	30 - 130
			Chrysene	2013/12/12		105	%	30 - 130
			D10-Anthracene	2013/12/12		88	%	30 - 130
			D14-Terphenyl	2013/12/12		102	%	30 - 130
			D8-Acenaphthylene	2013/12/12		99	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/12		68	%	30 - 130
			Fluoranthene	2013/12/12		94	%	30 - 130
			Fluorene	2013/12/12		92	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/12		76	%	30 - 130
			Naphthalene	2013/12/12		99	%	30 - 130
			Perylene	2013/12/12		88	%	30 - 130
			Phenanthrene	2013/12/12		100	%	30 - 130
			Pyrene	2013/12/12		96	%	30 - 130
3452353	GTH	Spiked Blank	1-Methylnaphthalene	2013/12/12		91	%	30 - 130
			2-Methylnaphthalene	2013/12/12		95	%	30 - 130
			Acenaphthene	2013/12/12		100	%	30 - 130
			Acenaphthylene	2013/12/12		93	%	30 - 130
			Anthracene	2013/12/12		97	%	30 - 130
			Benzo(a)anthracene	2013/12/12		88	%	30 - 130
			Benzo(a)pyrene	2013/12/12		95	%	30 - 130
			Benzo(b)fluoranthene	2013/12/12		94	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/12		97	%	30 - 130
			Benzo(j)fluoranthene	2013/12/12		93	%	30 - 130
			Benzo(k)fluoranthene	2013/12/12		94	%	30 - 130
			Chrysene	2013/12/12		93	%	30 - 130
			D10-Anthracene	2013/12/12		89	%	30 - 130
			D14-Terphenyl	2013/12/12		93	%	30 - 130
			D8-Acenaphthylene	2013/12/12		99	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/12		77	%	30 - 130
			Fluoranthene	2013/12/12		85	%	30 - 130
			Fluorene	2013/12/12		98	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/12		87	%	30 - 130
			Naphthalene	2013/12/12		102	%	30 - 130
			Perylene	2013/12/12		97	%	30 - 130
			Phenanthrene	2013/12/12		89	%	30 - 130
			Pyrene	2013/12/12		88	%	30 - 130
3452353	GTH	Method Blank	1-Methylnaphthalene	2013/12/11	<0.050		ug/L	
			2-Methylnaphthalene	2013/12/11	<0.050		ug/L	
			Acenaphthene	2013/12/11	<0.010		ug/L	
			Acenaphthylene	2013/12/11	<0.010		ug/L	
			Anthracene	2013/12/11	<0.010		ug/L	
			Benzo(a)anthracene	2013/12/11	<0.010		ug/L	
			Benzo(a)pyrene	2013/12/11	<0.010		ug/L	
			Benzo(b)fluoranthene	2013/12/11	<0.010		ug/L	
			Benzo(g,h,i)perylene	2013/12/11	<0.010		ug/L	
			Benzo(j)fluoranthene	2013/12/11	<0.010		ug/L	
			Benzo(k)fluoranthene	2013/12/11	<0.010		ug/L	
			Chrysene	2013/12/11	<0.010		ug/L	
			D10-Anthracene	2013/12/11		99	%	30 - 130
			D14-Terphenyl	2013/12/11		96	%	30 - 130
			D8-Acenaphthylene	2013/12/11		99	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/11	<0.010		ug/L	
			Fluoranthene	2013/12/11	<0.010		ug/L	
			Fluorene	2013/12/11	<0.010		ug/L	

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Maxxam Job #: B3L0110
Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Indeno(1,2,3-cd)pyrene	2013/12/11	<0.010		ug/L	
			Naphthalene	2013/12/11	<0.20		ug/L	
			Perylene	2013/12/11	<0.010		ug/L	
			Phenanthrene	2013/12/11	<0.010		ug/L	
			Pyrene	2013/12/11	<0.010		ug/L	
3452353	GTH	RPD	1-Methylnaphthalene	2013/12/12	0.7		%	40
			2-Methylnaphthalene	2013/12/12	1.2		%	40
			Acenaphthene	2013/12/12	NC		%	40
			Acenaphthylene	2013/12/12	NC		%	40
			Anthracene	2013/12/12	NC		%	40
			Benzo(a)anthracene	2013/12/12	NC		%	40
			Benzo(a)pyrene	2013/12/12	NC		%	40
			Benzo(b)fluoranthene	2013/12/12	NC		%	40
			Benzo(g,h,i)perylene	2013/12/12	NC		%	40
			Benzo(j)fluoranthene	2013/12/12	NC		%	40
			Benzo(k)fluoranthene	2013/12/12	NC		%	40
			Chrysene	2013/12/12	NC		%	40
			Dibenz(a,h)anthracene	2013/12/12	NC		%	40
			Fluoranthene	2013/12/12	NC		%	40
			Fluorene	2013/12/12	NC		%	40
			Indeno(1,2,3-cd)pyrene	2013/12/12	NC		%	40
			Naphthalene	2013/12/12	0.2		%	40
			Perylene	2013/12/12	NC		%	40
			Phenanthrene	2013/12/12	NC		%	40
			Pyrene	2013/12/12	NC		%	40
3454194	MKH	Matrix Spike	Total Mercury (Hg)	2013/12/11		99	%	80 - 120
3454194	MKH	Spiked Blank	Total Mercury (Hg)	2013/12/11		99	%	80 - 120
3454194	MKH	Method Blank	Total Mercury (Hg)	2013/12/11	<0.013		ug/L	
3454194	MKH	RPD	Total Mercury (Hg)	2013/12/11	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Report Date: 2013/12/12

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Alan Stewart, Scientific Specialist (Organics)

Mike MacGillivray, Scientific Specialist (Inorganics)

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Your P.O. #: HAL1988
Your Project #: 210.05890.00000
Site Location: GWMP/HCP
Your C.O.C. #: B161493

Attention:Kelly Henderson

SLR Consulting (Canada) Ltd
45 Wabana Crt., Suite 122
PO Box 791, Station A
Sydney, NS
B1P 6J1

Report Date: 2013/12/13

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B3L1023
Received: 2013/12/05, 16:51

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
TEH in Water (PIRI) (1)	9	2013/12/10	2013/12/11	ATL SOP 00113	Based on Atl. PIRI
TEH in Water (PIRI) (1)	1	2013/12/10	2013/12/12	ATL SOP 00113	Based on Atl. PIRI
Mercury - Total (CVAA,LL) (1)	10	2013/12/11	2013/12/11	ATL SOP 00026	Based on EPA245.1
Metals Water Diss. MS (as rec'd) (1)	7	N/A	2013/12/11	ATL SOP 00058	Based on EPA6020A
Metals Water Diss. MS (as rec'd) (1)	3	N/A	2013/12/12	ATL SOP 00058	Based on EPA6020A
PAH in Water by GC/MS (SIM) (1)	10	2013/12/10	2013/12/13	ATL SOP 00103	Based on EPA 8270C
VPH in Water (PIRI) (1)	10	2013/12/11	2013/12/12	ATL SOP 00118	Based on Atl. PIRI
ModTPH (T1) Calc. for Water (1)	10	N/A	2013/12/13	N/A	Based on Atl. PIRI

Remarks:

Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Bedford

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Natalie MacAskill, Sr. Project Manager
Email: NMacAskill@maxxam.ca
Phone# (902)567-1255 Ext:17

==========

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Maxxam Job #: B3L1023
Report Date: 2013/12/13

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UE4949	UE4950	UE4951	UE4952	UE4953		
Sampling Date		2013/12/05	2013/12/05	2013/12/05	2013/12/05	2013/12/05		
COC Number		B161493	B161493	B161493	B161493	B161493		
	Units	FD#5	SCU32-002-MW	SCU32-001-MWA	SCU32-001-MWB	SCU32-003-MW	RDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	0.0010	3454123
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	3454123
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	3454123
Xylene (Total)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	3454123
C6 - C10 (less BTEX)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	3454123
>C10-C16 Hydrocarbons	mg/L	0.14	<0.050	0.99	<0.050	2.1	0.050	3451945
>C16-C21 Hydrocarbons	mg/L	0.11	<0.050	0.82	<0.050	2.5	0.050	3451945
>C21-<C32 Hydrocarbons	mg/L	0.24	<0.10	0.56	<0.10	1.9	0.10	3451945
Modified TPH (Tier1)	mg/L	0.50	<0.10	2.4	<0.10	6.6	0.10	3448572
Reached Baseline at C32	mg/L	Yes	NA	Yes	NA	Yes		3451945
Hydrocarbon Resemblance	mg/L	COMMENT (1)	NA	COMMENT (2)	NA	COMMENT (3)		3451945
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	101	104	107	105	104		3451945
n-Dotriacontane - Extractable	%	109	104	97	107	103		3451945
Isobutylbenzene - Volatile	%	99	100	79	98	88		3454123

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) One product in fuel / lube range.
(2) Weathered fuel oil fraction.
(3) Fuel oil fraction. Lube oil fraction.

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Maxxam Job #: B3L1023
Report Date: 2013/12/13

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UE4960	UE4961	UE4962	UE4975		
Sampling Date		2013/12/05	2013/12/05	2013/12/05	2013/12/05		
COC Number		B161493	B161493	B161493	B161493		
	Units	SCU32-004-MW	SCU26-001-MW	SCU26-002-MW	SCU27-002-MW	RDL	QC Batch
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0010	<0.0010	0.023	<0.0010	0.0010	3454123
Toluene	mg/L	<0.0010	<0.0010	0.018	<0.0010	0.0010	3454123
Ethylbenzene	mg/L	<0.0010	<0.0010	0.0011	<0.0010	0.0010	3454123
Xylene (Total)	mg/L	<0.0020	<0.0020	0.016	<0.0020	0.0020	3454123
C6 - C10 (less BTEX)	mg/L	<0.010	<0.010	0.066	<0.010	0.010	3454123
>C10-C16 Hydrocarbons	mg/L	0.16	0.089	0.31	<0.050	0.050	3451945
>C16-C21 Hydrocarbons	mg/L	0.15	<0.050	0.13	0.063	0.050	3451945
>C21-<C32 Hydrocarbons	mg/L	0.35	0.12	0.12	0.14	0.10	3451945
Modified TPH (Tier1)	mg/L	0.66	0.21	0.63	0.20	0.10	3448572
Reached Baseline at C32	mg/L	Yes	Yes	Yes	Yes		3451945
Hydrocarbon Resemblance	mg/L	COMMENT (1)	COMMENT (2)	COMMENT (3)	COMMENT (4)		3451945
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	117	109	110	87		3451945
n-Dotriacontane - Extractable	%	128	107	109	97		3451945
Isobutylbenzene - Volatile	%	98	101	103	85		3454123

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) One product in fuel / lube range.
(2) One product in fuel oil range. Possible lube oil fraction.
(3) One product in fuel oil range.
(4) Unidentified compound(s) in fuel / lube range.

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Maxxam Job #: B3L1023
Report Date: 2013/12/13

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UE4976		
Sampling Date		2013/12/05		
COC Number		B161493		
	Units	**MCES-007-MW**	**RDL**	**QC Batch**
Petroleum Hydrocarbons				
Benzene	mg/L	<0.0010	0.0010	3454123
Toluene	mg/L	<0.0010	0.0010	3454123
Ethylbenzene	mg/L	<0.0010	0.0010	3454123
Xylene (Total)	mg/L	<0.0020	0.0020	3454123
C6 - C10 (less BTEX)	mg/L	<0.010	0.010	3454123
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	3451945
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	3451945
>C21-<C32 Hydrocarbons	mg/L	<0.10	0.10	3451945
Modified TPH (Tier1)	mg/L	<0.10	0.10	3448572
Reached Baseline at C32	mg/L	NA		3451945
Hydrocarbon Resemblance	mg/L	NA		3451945
Surrogate Recovery (%)				
Isobutylbenzene - Extractable	%	107		3451945
n-Dotriacontane - Extractable	%	106		3451945
Isobutylbenzene - Volatile	%	100		3454123

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L1023
Report Date: 2013/12/13

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		UE4949	UE4950	UE4951		UE4952		
Sampling Date		2013/12/05	2013/12/05	2013/12/05		2013/12/05		
COC Number		B161493	B161493	B161493		B161493		
	Units	FD#5	SCU32-002-MW	SCU32-001-MWA	QC Batch	SCU32-001-MWB	RDL	QC Batch
Metals								
Total Mercury (Hg)	ug/L	0.023	<0.013	<0.013	3454194	<0.013	0.013	3454206

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		UE4953	UE4960	UE4961	UE4962	UE4975		
Sampling Date		2013/12/05	2013/12/05	2013/12/05	2013/12/05	2013/12/05		
COC Number		B161493	B161493	B161493	B161493	B161493		
	Units	SCU32-003-MW	SCU32-004-MW	SCU26-001-MW	SCU26-002-MW	SCU27-002-MW	RDL	QC Batch
Metals								
Total Mercury (Hg)	ug/L	<0.013	0.013	0.027	0.045	<0.013	0.013	3454206

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		UE4976		
Sampling Date		2013/12/05		
COC Number		B161493		
	Units	MCES-007-MW	RDL	QC Batch
Metals				
Total Mercury (Hg)	ug/L	<0.013	0.013	3454206

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L1023
Report Date: 2013/12/13

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UE4949	UE4950	UE4951		UE4952		
Sampling Date		2013/12/05	2013/12/05	2013/12/05		2013/12/05		
COC Number		B161493	B161493	B161493		B161493		
	Units	FD#5	SCU32-002-MW	SCU32-001-MWA	RDL	SCU32-001-MWB	RDL	QC Batch
Metals								
Dissolved Aluminum (Al)	ug/L	1000	670	360	5.0	44	5.0	3453489
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	1.0	<1.0	1.0	3453489
Dissolved Arsenic (As)	ug/L	<1.0	5.0	1.6	1.0	2.3	1.0	3453489
Dissolved Barium (Ba)	ug/L	310	47	94	1.0	290	1.0	3453489
Dissolved Beryllium (Be)	ug/L	<1.0	<1.0	<1.0	1.0	<1.0	1.0	3453489
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	2.0	<2.0	2.0	3453489
Dissolved Boron (B)	ug/L	<50	<50	<50	50	190	50	3453489
Dissolved Cadmium (Cd)	ug/L	0.026	<0.010	0.011	0.010	0.028	0.010	3453489
Dissolved Calcium (Ca)	ug/L	310000	200000	220000	100	3300000	1000	3453489
Dissolved Chromium (Cr)	ug/L	9.0	<1.0	<1.0	1.0	<1.0	1.0	3453489
Dissolved Cobalt (Co)	ug/L	0.44	<0.40	<0.40	0.40	1.9	0.40	3453489
Dissolved Copper (Cu)	ug/L	<2.0	<2.0	5.8	2.0	<2.0	2.0	3453489
Dissolved Iron (Fe)	ug/L	4000	180	<50	50	2900	50	3453489
Dissolved Lead (Pb)	ug/L	6.3	<0.50	<0.50	0.50	0.68	0.50	3453489
Dissolved Magnesium (Mg)	ug/L	530	<100	180	100	660000	1000	3453489
Dissolved Manganese (Mn)	ug/L	180	2.1	2.0	2.0	2600	2.0	3453489
Dissolved Molybdenum (Mo)	ug/L	12	42	58	2.0	5.9	2.0	3453489
Dissolved Nickel (Ni)	ug/L	2.5	<2.0	<2.0	2.0	3.5	2.0	3453489
Dissolved Phosphorus (P)	ug/L	400	<100	<100	100	<100	100	3453489
Dissolved Potassium (K)	ug/L	49000	29000	45000	100	43000	100	3453489
Dissolved Selenium (Se)	ug/L	19	3.9	4.7	1.0	<1.0	1.0	3453489
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	0.10	<0.10	0.10	3453489
Dissolved Sodium (Na)	ug/L	82000	76000	64000	100	2300000	1000	3453489
Dissolved Strontium (Sr)	ug/L	2600	920	2300	2.0	170000	200	3453489
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	0.10	<0.10	0.10	3453489
Dissolved Tin (Sn)	ug/L	<2.0	7.8	8.6	2.0	<2.0	2.0	3453489
Dissolved Titanium (Ti)	ug/L	42	<2.0	<2.0	2.0	2.3	2.0	3453489
Dissolved Uranium (U)	ug/L	0.20	<0.10	<0.10	0.10	1.1	0.10	3453489
Dissolved Vanadium (V)	ug/L	26	<2.0	9.4	2.0	<2.0	2.0	3453489
Dissolved Zinc (Zn)	ug/L	9.2	<5.0	5.2	5.0	15	5.0	3453489

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L1023
Report Date: 2013/12/13

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UE4953	UE4960	UE4961	UE4962		
Sampling Date		2013/12/05	2013/12/05	2013/12/05	2013/12/05		
COC Number		B161493	B161493	B161493	B161493		
	Units	SCU32-003-MW	SCU32-004-MW	SCU26-001-MW	SCU26-002-MW	RDL	QC Batch
Metals							
Dissolved Aluminum (Al)	ug/L	79	360	25	49	5.0	3453489
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	3453489
Dissolved Arsenic (As)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	3453489
Dissolved Barium (Ba)	ug/L	130	300	440	420	1.0	3453489
Dissolved Beryllium (Be)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	3453489
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3453489
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	50	3453489
Dissolved Cadmium (Cd)	ug/L	0.014	0.015	<0.010	<0.010	0.010	3453489
Dissolved Calcium (Ca)	ug/L	250000	300000	370000	390000	100	3453489
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	3.6	<1.0	1.0	3453489
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	3453489
Dissolved Copper (Cu)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3453489
Dissolved Iron (Fe)	ug/L	<50	180	<50	<50	50	3453489
Dissolved Lead (Pb)	ug/L	<0.50	2.5	0.53	<0.50	0.50	3453489
Dissolved Magnesium (Mg)	ug/L	<100	360	<100	<100	100	3453489
Dissolved Manganese (Mn)	ug/L	<2.0	11	<2.0	<2.0	2.0	3453489
Dissolved Molybdenum (Mo)	ug/L	58	30	3.8	5.1	2.0	3453489
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3453489
Dissolved Phosphorus (P)	ug/L	<100	100	<100	<100	100	3453489
Dissolved Potassium (K)	ug/L	67000	50000	27000	35000	100	3453489
Dissolved Selenium (Se)	ug/L	7.1	16	5.1	4.3	1.0	3453489
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	3453489
Dissolved Sodium (Na)	ug/L	90000	83000	29000	33000	100	3453489
Dissolved Strontium (Sr)	ug/L	2700	2600	2700	3100	2.0	3453489
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	3453489
Dissolved Tin (Sn)	ug/L	6.9	<2.0	7.5	<2.0	2.0	3453489
Dissolved Titanium (Ti)	ug/L	<2.0	8.9	<2.0	<2.0	2.0	3453489
Dissolved Uranium (U)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	3453489
Dissolved Vanadium (V)	ug/L	3.9	2.1	<2.0	<2.0	2.0	3453489
Dissolved Zinc (Zn)	ug/L	<5.0	5.9	<5.0	<5.0	5.0	3453489

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2013/12/13

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UE4975		UE4976		
Sampling Date		2013/12/05		2013/12/05		
COC Number		B161493		B161493		
	Units	SCU27-002-MW	RDL	MCES-007-MW	RDL	QC Batch
Metals						
Dissolved Aluminum (Al)	ug/L	<50	50	23	5.0	3453489
Dissolved Antimony (Sb)	ug/L	<10	10	<1.0	1.0	3453489
Dissolved Arsenic (As)	ug/L	<10	10	1.6	1.0	3453489
Dissolved Barium (Ba)	ug/L	23000	100	32	1.0	3453489
Dissolved Beryllium (Be)	ug/L	<10	10	<1.0	1.0	3453489
Dissolved Bismuth (Bi)	ug/L	<20	20	<2.0	2.0	3453489
Dissolved Boron (B)	ug/L	2700	500	<50	50	3453489
Dissolved Cadmium (Cd)	ug/L	<0.10	0.10	<0.010	0.010	3453489
Dissolved Calcium (Ca)	ug/L	1200000	1000	34000	100	3453489
Dissolved Chromium (Cr)	ug/L	<10	10	10	1.0	3453489
Dissolved Cobalt (Co)	ug/L	<4.0	4.0	<0.40	0.40	3453489
Dissolved Copper (Cu)	ug/L	<20	20	<2.0	2.0	3453489
Dissolved Iron (Fe)	ug/L	44000	500	54	50	3453489
Dissolved Lead (Pb)	ug/L	<5.0	5.0	0.56	0.50	3453489
Dissolved Magnesium (Mg)	ug/L	700000	1000	320	100	3453489
Dissolved Manganese (Mn)	ug/L	4900	20	5.4	2.0	3453489
Dissolved Molybdenum (Mo)	ug/L	<20	20	5.0	2.0	3453489
Dissolved Nickel (Ni)	ug/L	<20	20	<2.0	2.0	3453489
Dissolved Phosphorus (P)	ug/L	<1000	1000	100	100	3453489
Dissolved Potassium (K)	ug/L	96000	1000	4500	100	3453489
Dissolved Selenium (Se)	ug/L	<10	10	<1.0	1.0	3453489
Dissolved Silver (Ag)	ug/L	<1.0	1.0	<0.10	0.10	3453489
Dissolved Sodium (Na)	ug/L	5200000	1000	45000	100	3453489
Dissolved Strontium (Sr)	ug/L	78000	200	220	2.0	3453489
Dissolved Thallium (Tl)	ug/L	<1.0	1.0	<0.10	0.10	3453489
Dissolved Tin (Sn)	ug/L	<20	20	<2.0	2.0	3453489
Dissolved Titanium (Ti)	ug/L	<20	20	<2.0	2.0	3453489
Dissolved Uranium (U)	ug/L	3.8	1.0	<0.10	0.10	3453489
Dissolved Vanadium (V)	ug/L	<20	20	27	2.0	3453489
Dissolved Zinc (Zn)	ug/L	<50	50	<5.0	5.0	3453489

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UE4949	UE4950		UE4951		UE4952		
Sampling Date		2013/12/05	2013/12/05		2013/12/05		2013/12/05		
COC Number		B161493	B161493		B161493		B161493		
	Units	FD#5	SCU32-002-MW	RDL	SCU32-001-MWA	RDL	SCU32-001-MWB	RDL	QC Batch
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	ug/L	2.4	0.91	0.050	15	0.050	0.082	0.050	3452379
2-Methylnaphthalene	ug/L	1.9	0.80	0.050	4.1	0.050	0.078	0.050	3452379
Acenaphthene	ug/L	0.63	0.65	0.010	5.3	0.010	0.20	0.010	3452379
Acenaphthylene	ug/L	0.83	0.62	0.010	1.8	0.010	<0.030 (1)	0.030	3452379
Anthracene	ug/L	0.91	1.5	0.010	7.4	0.010	0.37	0.010	3452379
Benzo(a)anthracene	ug/L	0.22	2.7	0.010	13	0.010	0.55	0.010	3452379
Benzo(a)pyrene	ug/L	0.15	2.8	0.010	8.0	0.010	0.46	0.010	3452379
Benzo(b)fluoranthene	ug/L	0.13	2.1	0.010	6.1	0.010	0.35	0.010	3452379
Benzo(g,h,i)perylene	ug/L	0.066	1.4	0.010	3.1	0.010	0.22	0.010	3452379
Benzo(j)fluoranthene	ug/L	0.093	1.3	0.010	4.0	0.010	0.22	0.010	3452379
Benzo(k)fluoranthene	ug/L	0.073	1.3	0.010	3.8	0.010	0.21	0.010	3452379
Chrysene	ug/L	0.23	2.6	0.010	12	0.010	0.52	0.010	3452379
Dibenz(a,h)anthracene	ug/L	0.019	0.38	0.010	0.91	0.010	0.051	0.010	3452379
Fluoranthene	ug/L	2.1	6.9	0.010	23	0.010	1.2	0.010	3452379
Fluorene	ug/L	1.6	1.2	0.010	8.8	0.010	0.26	0.010	3452379
Indeno(1,2,3-cd)pyrene	ug/L	0.054	1.2	0.010	3.0	0.010	0.19	0.010	3452379
Naphthalene	ug/L	10	6.7	0.20	3.3	0.20	0.22	0.20	3452379
Perylene	ug/L	0.042	0.68	0.010	1.9	0.010	0.11	0.010	3452379
Phenanthrene	ug/L	4.4	6.7	0.010	39 (2)	0.10	1.3	0.010	3452379
Pyrene	ug/L	1.4	5.8	0.010	20	0.010	1.0	0.010	3452379
Surrogate Recovery (%)									
D10-Anthracene	%	83	96		95		89		3452379
D14-Terphenyl	%	108 (3)	122 (3)		115 (3)		107 (3)		3452379
D8-Acenaphthylene	%	98	109		112		104		3452379

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to matrix / co-extractive interference.
(2) Elevated PAH RDL(s) due to sample dilution.
(3) PAH sample contained sediment.

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Report Date: 2013/12/13

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UE4953	UE4960	UE4961	UE4962	UE4975		
Sampling Date		2013/12/05	2013/12/05	2013/12/05	2013/12/05	2013/12/05		
COC Number		B161493	B161493	B161493	B161493	B161493		
	Units	SCU32-003-MW	SCU32-004-MW	SCU26-001-MW	SCU26-002-MW	SCU27-002-MW	RDL	QC Batch
Polyaromatic Hydrocarbons								
1-Methylnaphthalene	ug/L	5.2	2.4	1.7	7.9	<0.050	0.050	3452379
2-Methylnaphthalene	ug/L	2.9	2.0	1.5	9.0	<0.050	0.050	3452379
Acenaphthene	ug/L	4.4	0.65	0.33	0.33	0.058	0.010	3452379
Acenaphthylene	ug/L	1.3	0.90	0.60	0.63	0.017	0.010	3452379
Anthracene	ug/L	8.7	1.0	0.47	0.24	0.13	0.010	3452379
Benzo(a)anthracene	ug/L	19	0.29	0.25	0.11	0.18	0.010	3452379
Benzo(a)pyrene	ug/L	11	0.15	0.18	0.10	0.18	0.010	3452379
Benzo(b)fluoranthene	ug/L	8.4	0.14	0.15	0.086	0.14	0.010	3452379
Benzo(g,h,i)perylene	ug/L	4.3	0.060	0.093	0.051	0.089	0.010	3452379
Benzo(j)fluoranthene	ug/L	5.6	0.10	0.091	0.056	0.087	0.010	3452379
Benzo(k)fluoranthene	ug/L	5.3	0.078	0.086	0.050	0.082	0.010	3452379
Chrysene	ug/L	17	0.29	0.23	0.11	0.18	0.010	3452379
Dibenz(a,h)anthracene	ug/L	1.3	0.017	0.025	0.015	0.024	0.010	3452379
Fluoranthene	ug/L	33	2.5	1.4	0.60	0.45	0.010	3452379
Fluorene	ug/L	6.7	1.8	1.0	1.0	0.096	0.010	3452379
Indeno(1,2,3-cd)pyrene	ug/L	4.2	0.053	0.078	0.044	0.076	0.010	3452379
Naphthalene	ug/L	4.0	11	4.4	6.6	<0.20	0.20	3452379
Perylene	ug/L	2.6	0.040	0.046	0.032	0.046	0.010	3452379
Phenanthrene	ug/L	35	4.6	2.0	1.8	0.47	0.010	3452379
Pyrene	ug/L	27	1.7	0.91	0.44	0.40	0.010	3452379
Surrogate Recovery (%)								
D10-Anthracene	%	99	83	86	81	90		3452379
D14-Terphenyl	%	126 (1)	108 (1)	106 (1)	108 (1)	112 (1)		3452379
D8-Acenaphthylene	%	117	103	104	103	106		3452379

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) PAH sample contained sediment.

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Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UE4976		
Sampling Date		2013/12/05		
COC Number		B161493		
	Units	**MCES-007-MW**	**RDL**	**QC Batch**
Polyaromatic Hydrocarbons				
1-Methylnaphthalene	ug/L	<0.050	0.050	3452379
2-Methylnaphthalene	ug/L	<0.050	0.050	3452379
Acenaphthene	ug/L	<0.010	0.010	3452379
Acenaphthylene	ug/L	<0.010	0.010	3452379
Anthracene	ug/L	0.015	0.010	3452379
Benzo(a)anthracene	ug/L	0.015	0.010	3452379
Benzo(a)pyrene	ug/L	0.019	0.010	3452379
Benzo(b)fluoranthene	ug/L	0.014	0.010	3452379
Benzo(g,h,i)perylene	ug/L	0.014	0.010	3452379
Benzo(j)fluoranthene	ug/L	<0.010	0.010	3452379
Benzo(k)fluoranthene	ug/L	<0.010	0.010	3452379
Chrysene	ug/L	0.018	0.010	3452379
Dibenz(a,h)anthracene	ug/L	<0.010	0.010	3452379
Fluoranthene	ug/L	0.039	0.010	3452379
Fluorene	ug/L	0.010	0.010	3452379
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	0.010	3452379
Naphthalene	ug/L	<0.20	0.20	3452379
Perylene	ug/L	<0.010	0.010	3452379
Phenanthrene	ug/L	0.015	0.010	3452379
Pyrene	ug/L	0.042	0.010	3452379
Surrogate Recovery (%)				
D10-Anthracene	%	104		3452379
D14-Terphenyl	%	126		3452379
D8-Acenaphthylene	%	114		3452379

RDL = Reportable Detection Limit
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SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

GENERAL COMMENTS

Sample UE4975-01 : Elevated reporting limits for trace metals due to sample matrix.

Results relate only to the items tested.

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Maxxam Job #: B3L1023
Report Date: 2013/12/13

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3451945	AJS	Matrix Spike	Isobutylbenzene - Extractable	2013/12/11		107	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/11		98	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/11		94	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/11		105	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/11		102	%	30 - 130
3451945	AJS	Spiked Blank	Isobutylbenzene - Extractable	2013/12/10		102	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/10		103	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/10		89	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/10		100	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/10		100	%	30 - 130
3451945	AJS	Method Blank	Isobutylbenzene - Extractable	2013/12/10		105	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/10		106	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/10	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2013/12/10	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2013/12/10	<0.10		mg/L	
3451945	AJS	RPD	>C10-C16 Hydrocarbons	2013/12/11	NC		%	40
			>C16-C21 Hydrocarbons	2013/12/11	NC		%	40
			>C21-<C32 Hydrocarbons	2013/12/11	NC		%	40
3452379	GTH	Matrix Spike [UE4950-03]	1-Methylnaphthalene	2013/12/13		NC	%	30 - 130
			2-Methylnaphthalene	2013/12/13		NC	%	30 - 130
			Acenaphthene	2013/12/13		NC	%	30 - 130
			Acenaphthylene	2013/12/13		NC	%	30 - 130
			Anthracene	2013/12/13		NC	%	30 - 130
			Benzo(a)anthracene	2013/12/13		NC	%	30 - 130
			Benzo(a)pyrene	2013/12/13		NC	%	30 - 130
			Benzo(b)fluoranthene	2013/12/13		NC	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/13		NC	%	30 - 130
			Benzo(j)fluoranthene	2013/12/13		NC	%	30 - 130
			Benzo(k)fluoranthene	2013/12/13		NC	%	30 - 130
			Chrysene	2013/12/13		NC	%	30 - 130
			D10-Anthracene	2013/12/13		91	%	30 - 130
			D14-Terphenyl	2013/12/13		117	%	30 - 130
			D8-Acenaphthylene	2013/12/13		104	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/13		65	%	30 - 130
			Fluoranthene	2013/12/13		NC	%	30 - 130
			Fluorene	2013/12/13		NC	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/13		NC	%	30 - 130
			Naphthalene	2013/12/13		NC	%	30 - 130
			Perylene	2013/12/13		NC	%	30 - 130
			Phenanthrene	2013/12/13		NC	%	30 - 130
			Pyrene	2013/12/13		NC	%	30 - 130
3452379	GTH	Spiked Blank	1-Methylnaphthalene	2013/12/12		92	%	30 - 130
			2-Methylnaphthalene	2013/12/12		100	%	30 - 130
			Acenaphthene	2013/12/12		101	%	30 - 130
			Acenaphthylene	2013/12/12		97	%	30 - 130
			Anthracene	2013/12/12		106	%	30 - 130
			Benzo(a)anthracene	2013/12/12		90	%	30 - 130
			Benzo(a)pyrene	2013/12/12		95	%	30 - 130
			Benzo(b)fluoranthene	2013/12/12		97	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/12		91	%	30 - 130
			Benzo(j)fluoranthene	2013/12/12		98	%	30 - 130
			Benzo(k)fluoranthene	2013/12/12		94	%	30 - 130
			Chrysene	2013/12/12		89	%	30 - 130
			D10-Anthracene	2013/12/12		95	%	30 - 130
			D14-Terphenyl	2013/12/12		102	%	30 - 130
			D8-Acenaphthylene	2013/12/12		102	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/12		63	%	30 - 130
			Fluoranthene	2013/12/12		91	%	30 - 130
			Fluorene	2013/12/12		102	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/12		76	%	30 - 130
			Naphthalene	2013/12/12		107	%	30 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Perylene	2013/12/12		101	%	30 - 130
			Phenanthrene	2013/12/12		104	%	30 - 130
			Pyrene	2013/12/12		94	%	30 - 130
3452379	GTH	Method Blank	1-Methylnaphthalene	2013/12/12	<0.050		ug/L	
			2-Methylnaphthalene	2013/12/12	<0.050		ug/L	
			Acenaphthene	2013/12/12	<0.010		ug/L	
			Acenaphthylene	2013/12/12	<0.010		ug/L	
			Anthracene	2013/12/12	<0.010		ug/L	
			Benzo(a)anthracene	2013/12/12	<0.010		ug/L	
			Benzo(a)pyrene	2013/12/12	<0.010		ug/L	
			Benzo(b)fluoranthene	2013/12/12	<0.010		ug/L	
			Benzo(g,h,i)perylene	2013/12/12	<0.010		ug/L	
			Benzo(j)fluoranthene	2013/12/12	<0.010		ug/L	
			Benzo(k)fluoranthene	2013/12/12	<0.010		ug/L	
			Chrysene	2013/12/12	<0.010		ug/L	
			D10-Anthracene	2013/12/12		101	%	30 - 130
			D14-Terphenyl	2013/12/12		105	%	30 - 130
			D8-Acenaphthylene	2013/12/12		100	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/12	<0.010		ug/L	
			Fluoranthene	2013/12/12	<0.010		ug/L	
			Fluorene	2013/12/12	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2013/12/12	<0.010		ug/L	
			Naphthalene	2013/12/12	<0.20		ug/L	
			Perylene	2013/12/12	<0.010		ug/L	
			Phenanthrene	2013/12/12	<0.010		ug/L	
			Pyrene	2013/12/12	<0.010		ug/L	
3452379	GTH	RPD	1-Methylnaphthalene	2013/12/12	NC		%	40
			2-Methylnaphthalene	2013/12/12	NC		%	40
			Acenaphthene	2013/12/12	NC		%	40
			Acenaphthylene	2013/12/12	NC		%	40
			Anthracene	2013/12/12	NC		%	40
			Benzo(a)anthracene	2013/12/12	NC		%	40
			Benzo(a)pyrene	2013/12/12	NC		%	40
			Benzo(b)fluoranthene	2013/12/12	NC		%	40
			Benzo(g,h,i)perylene	2013/12/12	NC		%	40
			Benzo(j)fluoranthene	2013/12/12	NC		%	40
			Benzo(k)fluoranthene	2013/12/12	NC		%	40
			Chrysene	2013/12/12	NC		%	40
			Dibenz(a,h)anthracene	2013/12/12	NC		%	40
			Fluoranthene	2013/12/12	NC		%	40
			Fluorene	2013/12/12	NC		%	40
			Indeno(1,2,3-cd)pyrene	2013/12/12	NC		%	40
			Naphthalene	2013/12/12	NC		%	40
			Perylene	2013/12/12	NC		%	40
			Phenanthrene	2013/12/12	NC		%	40
			Pyrene	2013/12/12	NC		%	40
3453489	DLB	Matrix Spike	Dissolved Aluminum (Al)	2013/12/11		102	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/11		104	%	80 - 120
			Dissolved Arsenic (As)	2013/12/11		99	%	80 - 120
			Dissolved Barium (Ba)	2013/12/11		NC	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/11		99	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/11		106	%	80 - 120
			Dissolved Boron (B)	2013/12/11		99	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/11		100	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/11		NC	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/11		96	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/11		98	%	80 - 120
			Dissolved Copper (Cu)	2013/12/11		96	%	80 - 120
			Dissolved Iron (Fe)	2013/12/11		100	%	80 - 120
			Dissolved Lead (Pb)	2013/12/11		102	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/11		101	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Dissolved Manganese (Mn)	2013/12/11		96	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/11		105	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/11		96	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/11		105	%	80 - 120
			Dissolved Potassium (K)	2013/12/11		104	%	80 - 120
			Dissolved Selenium (Se)	2013/12/11		100	%	80 - 120
			Dissolved Silver (Ag)	2013/12/11		96	%	80 - 120
			Dissolved Sodium (Na)	2013/12/11		99	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/11		98	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/11		106	%	80 - 120
			Dissolved Tin (Sn)	2013/12/11		105	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/11		97	%	80 - 120
			Dissolved Uranium (U)	2013/12/11		104	%	80 - 120
			Dissolved Vanadium (V)	2013/12/11		99	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/11		99	%	80 - 120
3453489	DLB	Spiked Blank	Dissolved Aluminum (Al)	2013/12/11		102	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/11		103	%	80 - 120
			Dissolved Arsenic (As)	2013/12/11		99	%	80 - 120
			Dissolved Barium (Ba)	2013/12/11		101	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/11		98	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/11		105	%	80 - 120
			Dissolved Boron (B)	2013/12/11		98	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/11		99	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/11		96	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/11		99	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/11		100	%	80 - 120
			Dissolved Copper (Cu)	2013/12/11		99	%	80 - 120
			Dissolved Iron (Fe)	2013/12/11		103	%	80 - 120
			Dissolved Lead (Pb)	2013/12/11		101	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/11		105	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/11		101	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/11		102	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/11		100	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/11		104	%	80 - 120
			Dissolved Potassium (K)	2013/12/11		103	%	80 - 120
			Dissolved Selenium (Se)	2013/12/11		98	%	80 - 120
			Dissolved Silver (Ag)	2013/12/11		91	%	80 - 120
			Dissolved Sodium (Na)	2013/12/11		103	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/11		102	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/11		105	%	80 - 120
			Dissolved Tin (Sn)	2013/12/11		104	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/11		100	%	80 - 120
			Dissolved Uranium (U)	2013/12/11		104	%	80 - 120
			Dissolved Vanadium (V)	2013/12/11		101	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/11		101	%	80 - 120
3453489	DLB	Method Blank	Dissolved Aluminum (Al)	2013/12/11	<5.0		ug/L	
			Dissolved Antimony (Sb)	2013/12/11	<1.0		ug/L	
			Dissolved Arsenic (As)	2013/12/11	<1.0		ug/L	
			Dissolved Barium (Ba)	2013/12/11	<1.0		ug/L	
			Dissolved Beryllium (Be)	2013/12/11	<1.0		ug/L	
			Dissolved Bismuth (Bi)	2013/12/11	<2.0		ug/L	
			Dissolved Boron (B)	2013/12/11	<50		ug/L	
			Dissolved Cadmium (Cd)	2013/12/11	<0.010		ug/L	
			Dissolved Calcium (Ca)	2013/12/11	<100		ug/L	
			Dissolved Chromium (Cr)	2013/12/11	<1.0		ug/L	
			Dissolved Cobalt (Co)	2013/12/11	<0.40		ug/L	
			Dissolved Copper (Cu)	2013/12/11	<2.0		ug/L	
			Dissolved Iron (Fe)	2013/12/11	<50		ug/L	
			Dissolved Lead (Pb)	2013/12/11	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2013/12/11	<100		ug/L	
			Dissolved Manganese (Mn)	2013/12/11	<2.0		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Dissolved Molybdenum (Mo)	2013/12/11	<2.0		ug/L	
			Dissolved Nickel (Ni)	2013/12/11	<2.0		ug/L	
			Dissolved Phosphorus (P)	2013/12/11	<100		ug/L	
			Dissolved Potassium (K)	2013/12/11	<100		ug/L	
			Dissolved Selenium (Se)	2013/12/11	<1.0		ug/L	
			Dissolved Silver (Ag)	2013/12/11	<0.10		ug/L	
			Dissolved Sodium (Na)	2013/12/11	<100		ug/L	
			Dissolved Strontium (Sr)	2013/12/11	<2.0		ug/L	
			Dissolved Thallium (Tl)	2013/12/11	<0.10		ug/L	
			Dissolved Tin (Sn)	2013/12/11	<2.0		ug/L	
			Dissolved Titanium (Ti)	2013/12/11	<2.0		ug/L	
			Dissolved Uranium (U)	2013/12/11	<0.10		ug/L	
			Dissolved Vanadium (V)	2013/12/11	<2.0		ug/L	
			Dissolved Zinc (Zn)	2013/12/11	<5.0		ug/L	
3453489	DLB	RPD	Dissolved Aluminum (Al)	2013/12/11	2.4		%	20
			Dissolved Antimony (Sb)	2013/12/11	NC		%	20
			Dissolved Arsenic (As)	2013/12/11	NC		%	20
			Dissolved Barium (Ba)	2013/12/11	0.9		%	20
			Dissolved Beryllium (Be)	2013/12/11	NC		%	20
			Dissolved Bismuth (Bi)	2013/12/11	NC		%	20
			Dissolved Boron (B)	2013/12/11	NC		%	20
			Dissolved Cadmium (Cd)	2013/12/11	10.0		%	20
			Dissolved Calcium (Ca)	2013/12/11	1.5		%	20
			Dissolved Chromium (Cr)	2013/12/11	NC		%	20
			Dissolved Cobalt (Co)	2013/12/11	NC		%	20
			Dissolved Copper (Cu)	2013/12/11	NC		%	20
			Dissolved Iron (Fe)	2013/12/11	NC		%	20
			Dissolved Lead (Pb)	2013/12/11	NC		%	20
			Dissolved Magnesium (Mg)	2013/12/11	1.1		%	20
			Dissolved Manganese (Mn)	2013/12/11	0.07		%	20
			Dissolved Molybdenum (Mo)	2013/12/11	NC		%	20
			Dissolved Nickel (Ni)	2013/12/11	NC		%	20
			Dissolved Phosphorus (P)	2013/12/11	NC		%	20
			Dissolved Potassium (K)	2013/12/11	3.8		%	20
			Dissolved Selenium (Se)	2013/12/11	NC		%	20
			Dissolved Silver (Ag)	2013/12/11	NC		%	20
			Dissolved Sodium (Na)	2013/12/11	0.4		%	20
			Dissolved Strontium (Sr)	2013/12/11	5.1		%	20
			Dissolved Thallium (Tl)	2013/12/11	NC		%	20
			Dissolved Tin (Sn)	2013/12/11	NC		%	20
			Dissolved Titanium (Ti)	2013/12/11	NC		%	20
			Dissolved Uranium (U)	2013/12/11	NC		%	20
			Dissolved Vanadium (V)	2013/12/11	NC		%	20
			Dissolved Zinc (Zn)	2013/12/11	NC		%	20
3454123	MS3	Matrix Spike	Isobutylbenzene - Volatile	2013/12/12		94	%	70 - 130
			Benzene	2013/12/12		108	%	70 - 130
			Toluene	2013/12/12		109	%	70 - 130
			Ethylbenzene	2013/12/12		112	%	70 - 130
			Xylene (Total)	2013/12/12		112	%	70 - 130
3454123	MS3	Spiked Blank	Isobutylbenzene - Volatile	2013/12/12		85	%	70 - 130
			Benzene	2013/12/12		110	%	70 - 130
			Toluene	2013/12/12		107	%	70 - 130
			Ethylbenzene	2013/12/12		105	%	70 - 130
			Xylene (Total)	2013/12/12		109	%	70 - 130
3454123	MS3	Method Blank	Isobutylbenzene - Volatile	2013/12/12		99	%	70 - 130
			Benzene	2013/12/12	<0.0010		mg/L	
			Toluene	2013/12/12	<0.0010		mg/L	
			Ethylbenzene	2013/12/12	<0.0010		mg/L	
			Xylene (Total)	2013/12/12	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2013/12/12	<0.010		mg/L	
3454123	MS3	RPD	Benzene	2013/12/12	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Toluene	2013/12/12	26.5		%	40
			Ethylbenzene	2013/12/12	NC		%	40
			Xylene (Total)	2013/12/12	NC		%	40
			C6 - C10 (less BTEX)	2013/12/12	NC		%	40
3454194	MKH	Matrix Spike	Total Mercury (Hg)	2013/12/11		99	%	80 - 120
3454194	MKH	Spiked Blank	Total Mercury (Hg)	2013/12/11		99	%	80 - 120
3454194	MKH	Method Blank	Total Mercury (Hg)	2013/12/11	<0.013		ug/L	
3454194	MKH	RPD	Total Mercury (Hg)	2013/12/11	NC		%	25
3454206	MKH	Matrix Spike [UE4953-05]	Total Mercury (Hg)	2013/12/11		98	%	80 - 120
3454206	MKH	Spiked Blank	Total Mercury (Hg)	2013/12/11		99	%	80 - 120
3454206	MKH	Method Blank	Total Mercury (Hg)	2013/12/11	<0.013		ug/L	
3454206	MKH	RPD [UE4952-05]	Total Mercury (Hg)	2013/12/11	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Maxxam Job #: B3L1023
Report Date: 2013/12/13

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Alan Stewart, Scientific Specialist (Organics)

Mike MacGillivray, Scientific Specialist (Inorganics)

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Your P.O. #: HAL1988
Your Project #: 210.05890.00000
Site Location: GWMP/HCP
Your C.O.C. #: B161495

Attention:Kelly Henderson

SLR Consulting (Canada) Ltd
45 Wabana Crt. Suite 122
PO Box 791, Station A
Sydney, NS
CANADA B1P 6J1

Report Date: 2013/12/17

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B3L2174
Received: 2013/12/06, 16:55

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
TEH in Water (PIRI) (1)	1	2013/12/10	2013/12/12	ATL SOP 00113	Based on Atl. PIRI
TEH in Water (PIRI) (1)	1	2013/12/11	2013/12/11	ATL SOP 00113	Based on Atl. PIRI
TEH in Water (PIRI) (1)	1	2013/12/11	2013/12/12	ATL SOP 00113	Based on Atl. PIRI
Mercury - Total (CVAA,LL) (1)	4	2013/12/13	2013/12/13	ATL SOP 00026	Based on EPA245.1
Metals Water Diss. MS (as rec'd) (1)	4	N/A	2013/12/12	ATL SOP 00058	Based on EPA6020A
PAH in Water by GC/MS (SIM) (1)	5	2013/12/12	2013/12/14	ATL SOP 00103	Based on EPA 8270C
VPH in Water (PIRI) (1)	2	2013/12/12	2013/12/12	ATL SOP 00118	Based on Atl. PIRI
VPH in Water (PIRI) (1)	1	2013/12/12	2013/12/17	ATL SOP 00118	Based on Atl. PIRI
ModTPH (T1) Calc. for Water (1)	2	N/A	2013/12/16	N/A	Based on Atl. PIRI
ModTPH (T1) Calc. for Water (1)	1	N/A	2013/12/17	N/A	Based on Atl. PIRI

Remarks:

Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Bedford

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Natalie MacAskill, Sr. Project Manager
Email: NMacAskill@maxxam.ca
Phone# (902)567-1255 Ext:17

==========

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Maxxam Job #: B3L2174
Report Date: 2013/12/17

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC MUST IN WATER - PIRI TIER I (WATER)

Maxxam ID		UF2240		UF2241	UF2243		
Sampling Date		2013/12/06		2013/12/06	2013/12/06		
COC Number		B161495		B161495	B161495		
	Units	SCU16-014-MW	RDL	SCU25-001-MW	SCU25-007-MW	RDL	QC Batch
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0013	0.0013	<0.0010	<0.0010	0.0010	3455698
Toluene	mg/L	<0.0013	0.0013	<0.0010	<0.0010	0.0010	3455698
Ethylbenzene	mg/L	<0.0013	0.0013	<0.0010	<0.0010	0.0010	3455698
Xylene (Total)	mg/L	<0.0026	0.0026	<0.0020	<0.0020	0.0020	3455698
C6 - C10 (less BTEX)	mg/L	<0.013	0.013	<0.010	<0.010	0.010	3455698
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	<0.050	<0.050	0.050	3453482
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	<0.050	0.055	0.050	3453482
>C21-<C32 Hydrocarbons	mg/L	<0.10	0.10	<0.10	<0.10	0.10	3453482
Modified TPH (Tier1)	mg/L	<0.10	0.10	<0.10	<0.10	0.10	3450984
Reached Baseline at C32	mg/L	NA	N/A	NA	NA	N/A	3453482
Hydrocarbon Resemblance	mg/L	NA	N/A	NA	NA	N/A	3453482
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	100		98	100		3453482
n-Dotriacontane - Extractable	%	108		105	105		3453482
Isobutylbenzene - Volatile	%	89 (1)		88	86		3455698

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) VPH analysis performed on previously opened vial.

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Maxxam Job #: B3L2174
Report Date: 2013/12/17

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		UF2240	UF2241	UF2242	UF2243		
Sampling Date		2013/12/06	2013/12/06	2013/12/06	2013/12/06		
COC Number		B161495	B161495	B161495	B161495		
	Units	SCU16-014-MW	SCU25-001-MW	SCU25-004-MW	SCU25-007-MW	RDL	QC Batch
Metals							
Total Mercury (Hg)	ug/L	<0.013	<0.013	0.027	<0.013	0.013	3457102

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2013/12/17

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Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UF2240	UF2241	UF2242	UF2243		
Sampling Date		2013/12/06	2013/12/06	2013/12/06	2013/12/06		
COC Number		B161495	B161495	B161495	B161495		
	Units	SCU16-014-MW	SCU25-001-MW	SCU25-004-MW	SCU25-007-MW	RDL	QC Batch
Metals							
Dissolved Aluminum (Al)	ug/L	22	110	38	77	5.0	3455016
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	3455016
Dissolved Arsenic (As)	ug/L	9.2	<1.0	<1.0	2.6	1.0	3455016
Dissolved Barium (Ba)	ug/L	47	140	200	130	1.0	3455016
Dissolved Beryllium (Be)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	3455016
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3455016
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	50	3455016
Dissolved Cadmium (Cd)	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	3455016
Dissolved Calcium (Ca)	ug/L	66000	250000	290000	200000	100	3455016
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	3455016
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	3455016
Dissolved Copper (Cu)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3455016
Dissolved Iron (Fe)	ug/L	720	160	<50	<50	50	3455016
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	3455016
Dissolved Magnesium (Mg)	ug/L	10000	<100	<100	<100	100	3455016
Dissolved Manganese (Mn)	ug/L	1800	4.9	<2.0	<2.0	2.0	3455016
Dissolved Molybdenum (Mo)	ug/L	20	5.2	8.2	86	2.0	3455016
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3455016
Dissolved Phosphorus (P)	ug/L	110	<100	<100	<100	100	3455016
Dissolved Potassium (K)	ug/L	17000	15000	10000	28000	100	3455016
Dissolved Selenium (Se)	ug/L	<1.0	5.6	1.6	2.6	1.0	3455016
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	3455016
Dissolved Sodium (Na)	ug/L	64000	37000	17000	28000	100	3455016
Dissolved Strontium (Sr)	ug/L	430	1200	1400	1400	2.0	3455016
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	3455016
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	3455016
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	<2.0	<2.0	2.0	3455016
Dissolved Uranium (U)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	3455016
Dissolved Vanadium (V)	ug/L	2.4	2.5	<2.0	7.0	2.0	3455016
Dissolved Zinc (Zn)	ug/L	<5.0	11	5.0	<5.0	5.0	3455016

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L2174
Report Date: 2013/12/17

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UF2238		UF2239		UF2240	UF2241		
Sampling Date		2013/12/06		2013/12/06		2013/12/06	2013/12/06		
COC Number		B161495		B161495		B161495	B161495		
	Units	SCU26-007-MW	RDL	SCU25-003-MW	RDL	SCU16-014-MW	SCU25-001-MW	RDL	QC Batch
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	ug/L	<0.050	0.050	0.25	0.050	<0.050	0.48	0.050	3455197
2-Methylnaphthalene	ug/L	<0.050	0.050	0.19	0.050	<0.050	0.48	0.050	3455197
Acenaphthene	ug/L	0.029	0.010	0.096	0.010	<0.010	0.17	0.010	3455197
Acenaphthylene	ug/L	0.076	0.010	0.12	0.010	<0.010	0.36	0.010	3455197
Anthracene	ug/L	0.058	0.010	0.14	0.010	<0.010	0.21	0.010	3455197
Benzo(a)anthracene	ug/L	0.30	0.010	0.044	0.010	<0.010	0.031	0.010	3455197
Benzo(a)pyrene	ug/L	0.30	0.010	0.011	0.010	0.010	0.014	0.010	3455197
Benzo(b)fluoranthene	ug/L	0.25	0.010	0.012	0.010	<0.010	0.011	0.010	3455197
Benzo(g,h,i)perylene	ug/L	0.065	0.010	<0.010	0.010	<0.010	<0.010	0.010	3455197
Benzo(j)fluoranthene	ug/L	0.21	0.010	<0.020 (1)	0.020	<0.010	<0.010	0.010	3455197
Benzo(k)fluoranthene	ug/L	0.16	0.010	<0.010	0.010	<0.010	<0.010	0.010	3455197
Chrysene	ug/L	0.29	0.010	0.038	0.010	<0.010	0.036	0.010	3455197
Dibenz(a,h)anthracene	ug/L	0.023	0.010	<0.010	0.010	<0.010	<0.010	0.010	3455197
Fluoranthene	ug/L	0.48	0.010	0.39	0.010	0.027	0.63	0.010	3455197
Fluorene	ug/L	0.052	0.010	0.39	0.010	<0.010	0.52	0.010	3455197
Indeno(1,2,3-cd)pyrene	ug/L	0.066	0.010	<0.010	0.010	<0.010	<0.010	0.010	3455197
Naphthalene	ug/L	<0.20	0.20	0.52	0.20	<0.20	3.0	0.20	3455197
Perylene	ug/L	0.075	0.010	<0.010	0.010	<0.010	<0.010	0.010	3455197
Phenanthrene	ug/L	0.18	0.010	0.67	0.010	0.027	0.89	0.010	3455197
Pyrene	ug/L	0.60	0.010	0.26	0.010	0.026	0.37	0.010	3455197
Surrogate Recovery (%)									
D10-Anthracene	%	95		102		102	97		3455197
D14-Terphenyl	%	105 (2)		113		111	108		3455197
D8-Acenaphthylene	%	98		102		102	100		3455197

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to matrix / co-extractive interference.
(2) PAH sample contained sediment.

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Maxxam Job #: B3L2174
Report Date: 2013/12/17

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UF2243		
Sampling Date		2013/12/06		
COC Number		B161495		
	Units	SCU25-007-MW	RDL	QC Batch
Polyaromatic Hydrocarbons				
1-Methylnaphthalene	ug/L	0.078	0.050	3455197
2-Methylnaphthalene	ug/L	0.062	0.050	3455197
Acenaphthene	ug/L	0.051	0.010	3455197
Acenaphthylene	ug/L	0.059	0.010	3455197
Anthracene	ug/L	0.071	0.010	3455197
Benzo(a)anthracene	ug/L	0.038	0.010	3455197
Benzo(a)pyrene	ug/L	0.029	0.010	3455197
Benzo(b)fluoranthene	ug/L	0.020	0.010	3455197
Benzo(g,h,i)perylene	ug/L	0.011	0.010	3455197
Benzo(j)fluoranthene	ug/L	0.013	0.010	3455197
Benzo(k)fluoranthene	ug/L	0.013	0.010	3455197
Chrysene	ug/L	0.036	0.010	3455197
Dibenz(a,h)anthracene	ug/L	<0.010	0.010	3455197
Fluoranthene	ug/L	0.31	0.010	3455197
Fluorene	ug/L	0.083	0.010	3455197
Indeno(1,2,3-cd)pyrene	ug/L	0.012	0.010	3455197
Naphthalene	ug/L	<0.20	0.20	3455197
Perylene	ug/L	<0.010	0.010	3455197
Phenanthrene	ug/L	0.23	0.010	3455197
Pyrene	ug/L	0.23	0.010	3455197
Surrogate Recovery (%)				
D10-Anthracene	%	100		3455197
D14-Terphenyl	%	109		3455197
D8-Acenaphthylene	%	100		3455197

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L2174
Report Date: 2013/12/17

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
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Sampler Initials: KM

GENERAL COMMENTS

Results relate only to the items tested.

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SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
3453482	AJS	Matrix Spike [UF2240-02]	Isobutylbenzene - Extractable	2013/12/12		105	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/12		117	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/12		90	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/12		101	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/12		104	%	30 - 130
3453482	AJS	Spiked Blank	Isobutylbenzene - Extractable	2013/12/11		108	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/11		115	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/11		94	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/11		109	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/11		115	%	30 - 130
3453482	AJS	Method Blank	Isobutylbenzene - Extractable	2013/12/11		103	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/11		107	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/11	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2013/12/11	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2013/12/11	<0.10		mg/L	
3453482	AJS	RPD [UF2243-02]	>C10-C16 Hydrocarbons	2013/12/11	NC		%	40
			>C16-C21 Hydrocarbons	2013/12/11	NC		%	40
			>C21-<C32 Hydrocarbons	2013/12/11	NC		%	40
3455016	DLB	Matrix Spike	Dissolved Aluminum (Al)	2013/12/12		102	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/12		105	%	80 - 120
			Dissolved Arsenic (As)	2013/12/12		98	%	80 - 120
			Dissolved Barium (Ba)	2013/12/12		NC	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/12		100	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/12		101	%	80 - 120
			Dissolved Boron (B)	2013/12/12		99	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/12		99	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/12		NC	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/12		98	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/12		98	%	80 - 120
			Dissolved Copper (Cu)	2013/12/12		96	%	80 - 120
			Dissolved Iron (Fe)	2013/12/12		NC	%	80 - 120
			Dissolved Lead (Pb)	2013/12/12		99	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/12		NC	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/12		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/12		101	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/12		98	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/12		105	%	80 - 120
			Dissolved Potassium (K)	2013/12/12		NC	%	80 - 120
			Dissolved Selenium (Se)	2013/12/12		98	%	80 - 120
			Dissolved Silver (Ag)	2013/12/12		97	%	80 - 120
			Dissolved Sodium (Na)	2013/12/12		100	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/12		NC	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/12		104	%	80 - 120
			Dissolved Tin (Sn)	2013/12/12		105	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/12		103	%	80 - 120
			Dissolved Uranium (U)	2013/12/12		103	%	80 - 120
			Dissolved Vanadium (V)	2013/12/12		100	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/12		98	%	80 - 120
3455016	DLB	Spiked Blank	Dissolved Aluminum (Al)	2013/12/12		102	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/12		99	%	80 - 120
			Dissolved Arsenic (As)	2013/12/12		97	%	80 - 120
			Dissolved Barium (Ba)	2013/12/12		100	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/12		98	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/12		102	%	80 - 120
			Dissolved Boron (B)	2013/12/12		98	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/12		97	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/12		103	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/12		99	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/12		98	%	80 - 120
			Dissolved Copper (Cu)	2013/12/12		97	%	80 - 120
			Dissolved Iron (Fe)	2013/12/12		101	%	80 - 120

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Client Project #: 210.05890.00000
Site Location: GWMP/HCP
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Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Dissolved Lead (Pb)	2013/12/12		100	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/12		103	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/12		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/12		100	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/12		100	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/12		103	%	80 - 120
			Dissolved Potassium (K)	2013/12/12		103	%	80 - 120
			Dissolved Selenium (Se)	2013/12/12		97	%	80 - 120
			Dissolved Silver (Ag)	2013/12/12		96	%	80 - 120
			Dissolved Sodium (Na)	2013/12/12		103	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/12		99	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/12		102	%	80 - 120
			Dissolved Tin (Sn)	2013/12/12		102	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/12		102	%	80 - 120
			Dissolved Uranium (U)	2013/12/12		103	%	80 - 120
			Dissolved Vanadium (V)	2013/12/12		101	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/12		100	%	80 - 120
3455016	DLB	Method Blank	Dissolved Aluminum (Al)	2013/12/12	<5.0		ug/L	
			Dissolved Antimony (Sb)	2013/12/12	<1.0		ug/L	
			Dissolved Arsenic (As)	2013/12/12	<1.0		ug/L	
			Dissolved Barium (Ba)	2013/12/12	<1.0		ug/L	
			Dissolved Beryllium (Be)	2013/12/12	<1.0		ug/L	
			Dissolved Bismuth (Bi)	2013/12/12	<2.0		ug/L	
			Dissolved Boron (B)	2013/12/12	<50		ug/L	
			Dissolved Cadmium (Cd)	2013/12/12	<0.010		ug/L	
			Dissolved Calcium (Ca)	2013/12/12	<100		ug/L	
			Dissolved Chromium (Cr)	2013/12/12	<1.0		ug/L	
			Dissolved Cobalt (Co)	2013/12/12	<0.40		ug/L	
			Dissolved Copper (Cu)	2013/12/12	<2.0		ug/L	
			Dissolved Iron (Fe)	2013/12/12	<50		ug/L	
			Dissolved Lead (Pb)	2013/12/12	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2013/12/12	<100		ug/L	
			Dissolved Manganese (Mn)	2013/12/12	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2013/12/12	<2.0		ug/L	
			Dissolved Nickel (Ni)	2013/12/12	<2.0		ug/L	
			Dissolved Phosphorus (P)	2013/12/12	<100		ug/L	
			Dissolved Potassium (K)	2013/12/12	<100		ug/L	
			Dissolved Selenium (Se)	2013/12/12	<1.0		ug/L	
			Dissolved Silver (Ag)	2013/12/12	<0.10		ug/L	
			Dissolved Sodium (Na)	2013/12/12	<100		ug/L	
			Dissolved Strontium (Sr)	2013/12/12	<2.0		ug/L	
			Dissolved Thallium (Tl)	2013/12/12	<0.10		ug/L	
			Dissolved Tin (Sn)	2013/12/12	<2.0		ug/L	
			Dissolved Titanium (Ti)	2013/12/12	<2.0		ug/L	
			Dissolved Uranium (U)	2013/12/12	<0.10		ug/L	
			Dissolved Vanadium (V)	2013/12/12	<2.0		ug/L	
			Dissolved Zinc (Zn)	2013/12/12	<5.0		ug/L	
3455016	DLB	RPD	Dissolved Aluminum (Al)	2013/12/12	NC		%	20
			Dissolved Antimony (Sb)	2013/12/12	NC		%	20
			Dissolved Arsenic (As)	2013/12/12	NC		%	20
			Dissolved Barium (Ba)	2013/12/12	0.2		%	20
			Dissolved Beryllium (Be)	2013/12/12	NC		%	20
			Dissolved Bismuth (Bi)	2013/12/12	NC		%	20
			Dissolved Boron (B)	2013/12/12	NC		%	20
			Dissolved Cadmium (Cd)	2013/12/12	NC		%	20
			Dissolved Calcium (Ca)	2013/12/12	0.6		%	20
			Dissolved Chromium (Cr)	2013/12/12	NC		%	20
			Dissolved Cobalt (Co)	2013/12/12	2.7		%	20
			Dissolved Copper (Cu)	2013/12/12	NC		%	20
			Dissolved Iron (Fe)	2013/12/12	0.7		%	20
			Dissolved Lead (Pb)	2013/12/12	NC		%	20

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Maxxam Job #: B3L2174
Report Date: 2013/12/17

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Dissolved Magnesium (Mg)	2013/12/12	0.2		%	20
			Dissolved Manganese (Mn)	2013/12/12	1.2		%	20
			Dissolved Molybdenum (Mo)	2013/12/12	NC		%	20
			Dissolved Nickel (Ni)	2013/12/12	NC		%	20
			Dissolved Phosphorus (P)	2013/12/12	NC		%	20
			Dissolved Potassium (K)	2013/12/12	1.6		%	20
			Dissolved Selenium (Se)	2013/12/12	NC		%	20
			Dissolved Silver (Ag)	2013/12/12	NC		%	20
			Dissolved Sodium (Na)	2013/12/12	1.2		%	20
			Dissolved Strontium (Sr)	2013/12/12	0.03		%	20
			Dissolved Thallium (Tl)	2013/12/12	NC		%	20
			Dissolved Tin (Sn)	2013/12/12	NC		%	20
			Dissolved Titanium (Ti)	2013/12/12	NC		%	20
			Dissolved Uranium (U)	2013/12/12	NC		%	20
			Dissolved Vanadium (V)	2013/12/12	NC		%	20
			Dissolved Zinc (Zn)	2013/12/12	NC		%	20
3455197	GTH	Matrix Spike	1-Methylnaphthalene	2013/12/14		84	%	30 - 130
			2-Methylnaphthalene	2013/12/14		88	%	30 - 130
			Acenaphthene	2013/12/14		90	%	30 - 130
			Acenaphthylene	2013/12/14		85	%	30 - 130
			Anthracene	2013/12/14		84	%	30 - 130
			Benzo(a)anthracene	2013/12/14		72	%	30 - 130
			Benzo(a)pyrene	2013/12/14		75	%	30 - 130
			Benzo(b)fluoranthene	2013/12/14		74	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/14		66	%	30 - 130
			Benzo(j)fluoranthene	2013/12/14		68	%	30 - 130
			Benzo(k)fluoranthene	2013/12/14		72	%	30 - 130
			Chrysene	2013/12/14		74	%	30 - 130
			D10-Anthracene	2013/12/14		89	%	30 - 130
			D14-Terphenyl	2013/12/14		101	%	30 - 130
			D8-Acenaphthylene	2013/12/14		91	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/14		57	%	30 - 130
			Fluoranthene	2013/12/14		73	%	30 - 130
			Fluorene	2013/12/14		90	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/14		60	%	30 - 130
			Naphthalene	2013/12/14		91	%	30 - 130
			Perylene	2013/12/14		66	%	30 - 130
			Phenanthrene	2013/12/14		86	%	30 - 130
			Pyrene	2013/12/14		77	%	30 - 130
3455197	GTH	Spiked Blank	1-Methylnaphthalene	2013/12/14		86	%	30 - 130
			2-Methylnaphthalene	2013/12/14		92	%	30 - 130
			Acenaphthene	2013/12/14		96	%	30 - 130
			Acenaphthylene	2013/12/14		90	%	30 - 130
			Anthracene	2013/12/14		91	%	30 - 130
			Benzo(a)anthracene	2013/12/14		80	%	30 - 130
			Benzo(a)pyrene	2013/12/14		90	%	30 - 130
			Benzo(b)fluoranthene	2013/12/14		87	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/14		82	%	30 - 130
			Benzo(j)fluoranthene	2013/12/14		87	%	30 - 130
			Benzo(k)fluoranthene	2013/12/14		86	%	30 - 130
			Chrysene	2013/12/14		77	%	30 - 130
			D10-Anthracene	2013/12/14		100	%	30 - 130
			D14-Terphenyl	2013/12/14		101	%	30 - 130
			D8-Acenaphthylene	2013/12/14		98	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/14		68	%	30 - 130
			Fluoranthene	2013/12/14		79	%	30 - 130
			Fluorene	2013/12/14		96	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/14		82	%	30 - 130
			Naphthalene	2013/12/14		96	%	30 - 130
			Perylene	2013/12/14		89	%	30 - 130
			Phenanthrene	2013/12/14		92	%	30 - 130

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Maxxam Job #: B3L2174
Report Date: 2013/12/17

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Pyrene	2013/12/14		82	%	30 - 130
3455197	GTH	Method Blank	1-Methylnaphthalene	2013/12/14	<0.050		ug/L	
			2-Methylnaphthalene	2013/12/14	<0.050		ug/L	
			Acenaphthene	2013/12/14	<0.010		ug/L	
			Acenaphthylene	2013/12/14	<0.010		ug/L	
			Anthracene	2013/12/14	<0.010		ug/L	
			Benzo(a)anthracene	2013/12/14	<0.010		ug/L	
			Benzo(a)pyrene	2013/12/14	<0.010		ug/L	
			Benzo(b)fluoranthene	2013/12/14	<0.010		ug/L	
			Benzo(g,h,i)perylene	2013/12/14	<0.010		ug/L	
			Benzo(j)fluoranthene	2013/12/14	<0.010		ug/L	
			Benzo(k)fluoranthene	2013/12/14	<0.010		ug/L	
			Chrysene	2013/12/14	<0.010		ug/L	
			D10-Anthracene	2013/12/14		100	%	30 - 130
			D14-Terphenyl	2013/12/14		97	%	30 - 130
			D8-Acenaphthylene	2013/12/14		94	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/14	<0.010		ug/L	
			Fluoranthene	2013/12/14	<0.010		ug/L	
			Fluorene	2013/12/14	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2013/12/14	<0.010		ug/L	
			Naphthalene	2013/12/14	<0.20		ug/L	
			Perylene	2013/12/14	<0.010		ug/L	
			Phenanthrene	2013/12/14	<0.010		ug/L	
			Pyrene	2013/12/14	<0.010		ug/L	
3455197	GTH	RPD	1-Methylnaphthalene	2013/12/14	NC		%	40
			2-Methylnaphthalene	2013/12/14	NC		%	40
			Acenaphthene	2013/12/14	NC		%	40
			Acenaphthylene	2013/12/14	NC		%	40
			Anthracene	2013/12/14	NC		%	40
			Benzo(a)anthracene	2013/12/14	NC		%	40
			Benzo(a)pyrene	2013/12/14	NC		%	40
			Benzo(b)fluoranthene	2013/12/14	NC		%	40
			Benzo(g,h,i)perylene	2013/12/14	NC		%	40
			Benzo(j)fluoranthene	2013/12/14	NC		%	40
			Benzo(k)fluoranthene	2013/12/14	NC		%	40
			Chrysene	2013/12/14	NC		%	40
			Dibenz(a,h)anthracene	2013/12/14	NC		%	40
			Fluoranthene	2013/12/14	NC		%	40
			Fluorene	2013/12/14	NC		%	40
			Indeno(1,2,3-cd)pyrene	2013/12/14	NC		%	40
			Naphthalene	2013/12/14	NC		%	40
			Perylene	2013/12/14	NC		%	40
			Phenanthrene	2013/12/14	NC		%	40
			Pyrene	2013/12/14	NC		%	40
3455698	MS3	Matrix Spike [UF2243-03]	Isobutylbenzene - Volatile	2013/12/17		91	%	70 - 130
			Benzene	2013/12/17		115	%	70 - 130
			Toluene	2013/12/17		110	%	70 - 130
			Ethylbenzene	2013/12/17		110	%	70 - 130
			Xylene (Total)	2013/12/17		110	%	70 - 130
3455698	MS3	Spiked Blank	Isobutylbenzene - Volatile	2013/12/12		108	%	70 - 130
			Benzene	2013/12/12		106	%	70 - 130
			Toluene	2013/12/12		94	%	70 - 130
			Ethylbenzene	2013/12/12		113	%	70 - 130
			Xylene (Total)	2013/12/12		115	%	70 - 130
3455698	MS3	Method Blank	Isobutylbenzene - Volatile	2013/12/12		95	%	70 - 130
			Benzene	2013/12/12	<0.0010		mg/L	
			Toluene	2013/12/12	<0.0010		mg/L	
			Ethylbenzene	2013/12/12	<0.0010		mg/L	
			Xylene (Total)	2013/12/12	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2013/12/12	<0.010		mg/L	
3455698	MS3	RPD [UF2241-03]	Benzene	2013/12/17	NC		%	40

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Maxxam Job #: B3L2174
Report Date: 2013/12/17

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
			Toluene	2013/12/17	NC		%	40
			Ethylbenzene	2013/12/17	NC		%	40
			Xylene (Total)	2013/12/17	NC		%	40
			C6 - C10 (less BTEX)	2013/12/17	NC		%	40
3457102	MKH	Matrix Spike	Total Mercury (Hg)	2013/12/13		103	%	80 - 120
3457102	MKH	Spiked Blank	Total Mercury (Hg)	2013/12/13		105	%	80 - 120
3457102	MKH	Method Blank	Total Mercury (Hg)	2013/12/13	<0.013		ug/L	
3457102	MKH	RPD	Total Mercury (Hg)	2013/12/13	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Maxxam Job #: B3L2174
Report Date: 2013/12/17

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Alan Stewart, Scientific Specialist (Organics)

Mike MacGillivray, Scientific Specialist (Inorganics)

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Your P.O. #: HAL1988
Your Project #: 210.05890.00000
Site Location: GWMP/HCP
Your C.O.C. #: B161496

Attention: Kelly Henderson
SLR Consulting (Canada) Ltd
45 Wabana Crt. Suite 122
PO Box 791, Station A
Sydney, NS
CANADA B1P 6J1

Report Date: 2013/12/19

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B3L2607
Received: 2013/12/09, 16:03

Sample Matrix: Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
TEH in Water (PIRI)	7	2013/12/12	2013/12/12	ATL SOP 00113	Based on Atl. PIRI
TEH in Water (PIRI)	1	2013/12/12	2013/12/13	ATL SOP 00113	Based on Atl. PIRI
Mercury - Total (CVAA,LL)	5	2013/12/17	2013/12/17	ATL SOP 00026	Based on EPA245.1
Metals Water Diss. MS (as rec'd)	5	N/A	2013/12/12	ATL SOP 00058	Based on EPA6020A
PAH in Water by GC/MS (SIM)	8	2013/12/12	2013/12/16	ATL SOP 00103	Based on EPA 8270C
PCBs in water by GC/ECD	2	2013/12/11	2013/12/16	ATL SOP 00107	Based on EPA8082
VPH in Water (PIRI)	3	2013/12/12	2013/12/12	ATL SOP 00118	Based on Atl. PIRI
VPH in Water (PIRI)	1	2013/12/12	2013/12/14	ATL SOP 00118	Based on Atl. PIRI
VPH in Water (PIRI)	4	2013/12/12	2013/12/17	ATL SOP 00118	Based on Atl. PIRI
ModTPH (T1) Calc. for Water	8	N/A	2013/12/16	N/A	Based on Atl. PIRI

Remarks:

Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Natalie MacAskill, Sr. Project Manager
Email: NMacAskill@maxxam.ca
Phone# (902) 567-1255 Ext:17

==========

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Total cover pages: 1

Maxxam Job #: B3L2607
Report Date: 2013/12/19

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		UF4234	UF4249	UF4253	UF4276	UF4277		
Sampling Date		2013/12/07	2013/12/07	2013/12/07	2013/12/07	2013/12/07		
COC Number		B161496	B161496	B161496	B161496	B161496		
	Units	**SCU19-029-MW**	**SCU19-030-MW**	**SCU31-002-MWB**	**SCU33-001-MW**	**FD#6**	**RDL**	**QC Batch**
Metals								
Total Mercury (Hg)	ug/L	<0.013	<0.013	<0.013	<0.013	<0.013	0.013	3460781

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L2607
Report Date: 2013/12/19

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UF4234	UF4249		UF4253		UF4276		
Sampling Date		2013/12/07	2013/12/07		2013/12/07		2013/12/07		
COC Number		B161496	B161496		B161496		B161496		
	Units	**SCU19-029-MW**	**SCU19-030-MW**	**RDL**	**SCU31-002-MWB**	**RDL**	**SCU33-001-MW**	**RDL**	**QC Batch**
Metals									
Dissolved Aluminum (Al)	ug/L	240	23	5.0	14	5.0	30	5.0	3455016
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	3455016
Dissolved Arsenic (As)	ug/L	14	<1.0	1.0	1.5	1.0	<1.0	1.0	3455016
Dissolved Barium (Ba)	ug/L	52	61	1.0	29	1.0	130	1.0	3455016
Dissolved Beryllium (Be)	ug/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	3455016
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	3455016
Dissolved Boron (B)	ug/L	570	210	50	540	50	<50	50	3455016
Dissolved Cadmium (Cd)	ug/L	0.028	<0.010	0.010	<0.010	0.010	<0.010	0.010	3455016
Dissolved Calcium (Ca)	ug/L	20000	200000	100	480000	100	300000	100	3455016
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	3455016
Dissolved Cobalt (Co)	ug/L	0.57	<0.40	0.40	<0.40	0.40	<0.40	0.40	3455016
Dissolved Copper (Cu)	ug/L	<2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	3455016
Dissolved Iron (Fe)	ug/L	850	<50	50	100	50	<50	50	3455016
Dissolved Lead (Pb)	ug/L	0.54	0.52	0.50	<0.50	0.50	<0.50	0.50	3455016
Dissolved Magnesium (Mg)	ug/L	4900	37000	100	99000	100	<100	100	3455016
Dissolved Manganese (Mn)	ug/L	1500	370	2.0	530	2.0	<2.0	2.0	3455016
Dissolved Molybdenum (Mo)	ug/L	19	<2.0	2.0	3.0	2.0	54	2.0	3455016
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	3455016
Dissolved Phosphorus (P)	ug/L	790	130	100	<100	100	<100	100	3455016
Dissolved Potassium (K)	ug/L	26000	15000	100	21000	100	22000	100	3455016
Dissolved Selenium (Se)	ug/L	<1.0	1.1	1.0	<1.0	1.0	1.7	1.0	3455016
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	0.10	<0.10	0.10	<0.10	0.10	3455016
Dissolved Sodium (Na)	ug/L	230000	27000	100	1500000	1000	480000	100	3455016
Dissolved Strontium (Sr)	ug/L	100	770	2.0	17000	20	1400	2.0	3455016
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	0.10	<0.10	0.10	<0.10	0.10	3455016
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	3455016
Dissolved Titanium (Ti)	ug/L	6.7	3.3	2.0	<2.0	2.0	<2.0	2.0	3455016
Dissolved Uranium (U)	ug/L	0.35	1.1	0.10	7.0	0.10	<0.10	0.10	3455016
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	2.0	<2.0	2.0	2.1	2.0	3455016
Dissolved Zinc (Zn)	ug/L	37	<5.0	5.0	<5.0	5.0	<5.0	5.0	3455016

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B3L2607
Report Date: 2013/12/19

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		UF4277		
Sampling Date		2013/12/07		
COC Number		B161496		
	Units	**FD#6**	**RDL**	**QC Batch**
Metals				
Dissolved Aluminum (Al)	ug/L	23	5.0	3455016
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	3455016
Dissolved Arsenic (As)	ug/L	1.5	1.0	3455016
Dissolved Barium (Ba)	ug/L	29	1.0	3455016
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	3455016
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	3455016
Dissolved Boron (B)	ug/L	540	50	3455016
Dissolved Cadmium (Cd)	ug/L	0.012	0.010	3455016
Dissolved Calcium (Ca)	ug/L	490000	100	3455016
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	3455016
Dissolved Cobalt (Co)	ug/L	<0.40	0.40	3455016
Dissolved Copper (Cu)	ug/L	<2.0	2.0	3455016
Dissolved Iron (Fe)	ug/L	100	50	3455016
Dissolved Lead (Pb)	ug/L	<0.50	0.50	3455016
Dissolved Magnesium (Mg)	ug/L	98000	100	3455016
Dissolved Manganese (Mn)	ug/L	530	2.0	3455016
Dissolved Molybdenum (Mo)	ug/L	3.0	2.0	3455016
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	3455016
Dissolved Phosphorus (P)	ug/L	100	100	3455016
Dissolved Potassium (K)	ug/L	21000	100	3455016
Dissolved Selenium (Se)	ug/L	<1.0	1.0	3455016
Dissolved Silver (Ag)	ug/L	<0.10	0.10	3455016
Dissolved Sodium (Na)	ug/L	1500000	1000	3455016
Dissolved Strontium (Sr)	ug/L	17000	20	3455016
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	3455016
Dissolved Tin (Sn)	ug/L	<2.0	2.0	3455016
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	3455016
Dissolved Uranium (U)	ug/L	7.1	0.10	3455016
Dissolved Vanadium (V)	ug/L	<2.0	2.0	3455016
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	3455016

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L2607
Report Date: 2013/12/19

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UF4232	UF4234		UF4249		UF4253		
Sampling Date		2013/12/07	2013/12/07		2013/12/07		2013/12/07		
COC Number		B161496	B161496		B161496		B161496		
	Units	**SCU15-001-MWB**	**SCU19-029-MW**	**RDL**	**SCU19-030-MW**	**RDL**	**SCU31-002-MWB**	**RDL**	**QC Batch**
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	<0.050	0.050	<0.050	0.050	3455925
2-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	<0.050	0.050	<0.050	0.050	3455925
Acenaphthene	ug/L	<0.010	0.026	0.010	0.53	0.010	<0.010	0.010	3455925
Acenaphthylene	ug/L	<0.010	0.020	0.010	<0.060 (1)	0.060	<0.010	0.010	3455925
Anthracene	ug/L	<0.010	0.041	0.010	<0.060 (1)	0.060	<0.010	0.010	3455925
Benzo(a)anthracene	ug/L	<0.010	0.091	0.010	0.038	0.010	<0.010	0.010	3455925
Benzo(a)pyrene	ug/L	<0.010	0.090	0.010	0.020	0.010	<0.010	0.010	3455925
Benzo(b)fluoranthene	ug/L	<0.010	0.072	0.010	0.018	0.010	<0.010	0.010	3455925
Benzo(g,h,i)perylene	ug/L	<0.010	0.047	0.010	<0.010	0.010	<0.010	0.010	3455925
Benzo(j)fluoranthene	ug/L	<0.010	0.047	0.010	<0.010	0.010	<0.010	0.010	3455925
Benzo(k)fluoranthene	ug/L	<0.010	0.043	0.010	<0.010	0.010	<0.010	0.010	3455925
Chrysene	ug/L	<0.010	0.080	0.010	0.040	0.010	<0.010	0.010	3455925
Dibenz(a,h)anthracene	ug/L	<0.010	0.014	0.010	<0.010	0.010	<0.010	0.010	3455925
Fluoranthene	ug/L	<0.010	0.16	0.010	0.62	0.010	0.016	0.010	3455925
Fluorene	ug/L	<0.010	0.030	0.010	0.18	0.010	<0.010	0.010	3455925
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	0.044	0.010	<0.010	0.010	<0.010	0.010	3455925
Naphthalene	ug/L	<0.20	<0.20	0.20	<0.20	0.20	<0.20	0.20	3455925
Perylene	ug/L	<0.010	0.026	0.010	<0.010	0.010	<0.010	0.010	3455925
Phenanthrene	ug/L	0.016	0.12	0.010	<0.040 (1)	0.040	0.029	0.010	3455925
Pyrene	ug/L	<0.010	0.15	0.010	0.45	0.010	0.016	0.010	3455925
Surrogate Recovery (%)									
D10-Anthracene	%	110	102		102		99		3455925
D14-Terphenyl	%	119	112 (2)		113		112 (2)		3455925
D8-Acenaphthylene	%	115	109		111		107		3455925

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated PAH RDL(s) due to matrix / co-extractive interference.
(2) PAH sample contained sediment.

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Maxxam Job #: B3L2607
Report Date: 2013/12/19

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		UF4276	UF4277	UF4278	UF4279		
Sampling Date		2013/12/07	2013/12/07	2013/12/09	2013/12/09		
COC Number		B161496	B161496	B161496	B161496		
	Units	**SCU33-001-MW**	**FD#6**	**SCU15-008-MWB**	**SCU15-012-MW**	**RDL**	**QC Batch**
Polyaromatic Hydrocarbons							
1-Methylnaphthalene	ug/L	0.35	<0.050	<0.050	<0.050	0.050	3455925
2-Methylnaphthalene	ug/L	0.20	<0.050	<0.050	<0.050	0.050	3455925
Acenaphthene	ug/L	0.15	0.011	0.013	<0.010	0.010	3455925
Acenaphthylene	ug/L	0.23	<0.010	<0.010	<0.010	0.010	3455925
Anthracene	ug/L	0.18	<0.010	<0.010	<0.010	0.010	3455925
Benzo(a)anthracene	ug/L	0.041	<0.010	<0.010	0.013	0.010	3455925
Benzo(a)pyrene	ug/L	<0.010	<0.010	<0.010	0.010	0.010	3455925
Benzo(b)fluoranthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	3455925
Benzo(g,h,i)perylene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	3455925
Benzo(j)fluoranthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	3455925
Benzo(k)fluoranthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	3455925
Chrysene	ug/L	0.034	<0.010	<0.010	0.013	0.010	3455925
Dibenz(a,h)anthracene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	3455925
Fluoranthene	ug/L	0.87	0.020	0.018	0.030	0.010	3455925
Fluorene	ug/L	0.36	0.010	0.012	<0.010	0.010	3455925
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	3455925
Naphthalene	ug/L	0.74	<0.20	<0.20	<0.20	0.20	3455925
Perylene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	3455925
Phenanthrene	ug/L	0.77	0.031	0.032	0.035	0.010	3455925
Pyrene	ug/L	0.65	0.019	0.018	0.027	0.010	3455925
Surrogate Recovery (%)							
D10-Anthracene	%	100	101	99	97		3455925
D14-Terphenyl	%	110	111 (1)	110	109 (1)		3455925
D8-Acenaphthylene	%	104	107	103	103		3455925

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) PAH sample contained sediment.

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Maxxam Job #: B3L2607
Report Date: 2013/12/19

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

ATLANTIC RBCA HYDROCARBONS (WATER)

Maxxam ID		UF4232	UF4234		UF4249		
Sampling Date		2013/12/07	2013/12/07		2013/12/07		
COC Number		B161496	B161496		B161496		
	Units	**SCU15-001-MWB**	**SCU19-029-MW**	**QC Batch**	**SCU19-030-MW**	**RDL**	**QC Batch**
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0010	<0.0010	3455698	<0.0010	0.0010	3455272
Toluene	mg/L	<0.0010	<0.0010	3455698	<0.0010	0.0010	3455272
Ethylbenzene	mg/L	<0.0010	<0.0010	3455698	<0.0010	0.0010	3455272
Xylene (Total)	mg/L	<0.0020	<0.0020	3455698	<0.0020	0.0020	3455272
C6 - C10 (less BTEX)	mg/L	<0.010	<0.010	3455698	<0.010	0.010	3455272
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	3455043	0.15	0.050	3455043
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	3455043	0.19	0.050	3455043
>C21-<C32 Hydrocarbons	mg/L	<0.10	<0.10	3455043	0.15	0.10	3455043
Modified TPH (Tier1)	mg/L	<0.10	<0.10	3450984	0.49	0.10	3450984
Reached Baseline at C32	mg/L	NA	NA	3455043	Yes	N/A	3455043
Hydrocarbon Resemblance	mg/L	NA	NA	3455043	COMMENT (1)	N/A	3455043
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	104	107	3455043	106		3455043
n-Dotriacontane - Extractable	%	115	123	3455043	121		3455043
Isobutylbenzene - Volatile	%	84	103	3455698	107		3455272

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) One product in fuel / lube range.

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Maxxam Job #: B3L2607
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SLR Consulting (Canada) Ltd
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Sampler Initials: KM

ATLANTIC RBCA HYDROCARBONS (WATER)

Maxxam ID		UF4253	UF4276	UF4277		UF4278		
Sampling Date		2013/12/07	2013/12/07	2013/12/07		2013/12/09		
COC Number		B161496	B161496	B161496		B161496		
	Units	**SCU31-002-MWB**	**SCU33-001-MW**	**FD#6**	**RDL**	**SCU15-008-MWB**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	3455698
Toluene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	3455698
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	3455698
Xylene (Total)	mg/L	<0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	3455698
C6 - C10 (less BTEX)	mg/L	<0.010	<0.010	<0.010	0.010	<0.020	0.020	3455698
>C10-C16 Hydrocarbons	mg/L	<0.050	0.052	<0.050	0.050	0.071	0.050	3455043
>C16-C21 Hydrocarbons	mg/L	<0.050	0.053	<0.050	0.050	0.14	0.050	3455043
>C21-<C32 Hydrocarbons	mg/L	<0.10	<0.10	<0.10	0.10	<0.10	0.10	3455043
Modified TPH (Tier1)	mg/L	<0.10	0.11	<0.10	0.10	0.21	0.10	3450984
Reached Baseline at C32	mg/L	NA	Yes	NA	N/A	Yes	N/A	3455043
Hydrocarbon Resemblance	mg/L	NA	COMMENT (1)	NA	N/A	COMMENT (1)	N/A	3455043
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	95	105	83		94		3455043
n-Dotriacontane - Extractable	%	109	119	99		113		3455043
Isobutylbenzene - Volatile	%	106	87	88		107		3455698

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Weathered fuel oil fraction.

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Report Date: 2013/12/19

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ATLANTIC RBCA HYDROCARBONS (WATER)

Maxxam ID		UF4279		
Sampling Date		2013/12/09		
COC Number		B161496		
	Units	**SCU15-012-MW**	**RDL**	**QC Batch**
Petroleum Hydrocarbons				
Benzene	mg/L	<0.0010	0.0010	3455698
Toluene	mg/L	<0.0010	0.0010	3455698
Ethylbenzene	mg/L	<0.0010	0.0010	3455698
Xylene (Total)	mg/L	<0.0020	0.0020	3455698
C6 - C10 (less BTEX)	mg/L	<0.010	0.010	3455698
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	3455043
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	3455043
>C21-<C32 Hydrocarbons	mg/L	<0.10	0.10	3455043
Modified TPH (Tier1)	mg/L	<0.10	0.10	3450984
Reached Baseline at C32	mg/L	NA	N/A	3455043
Hydrocarbon Resemblance	mg/L	NA	N/A	3455043
Surrogate Recovery (%)				
Isobutylbenzene - Extractable	%	93		3455043
n-Dotriacontane - Extractable	%	108		3455043
Isobutylbenzene - Volatile	%	101		3455698

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B3L2607
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Sampler Initials: KM

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Maxxam ID		UF4234	UF4249		
Sampling Date		2013/12/07	2013/12/07		
COC Number		B161496	B161496		
	Units	**SCU19-029-MW**	**SCU19-030-MW**	**RDL**	**QC Batch**
PCBs					
Total PCB	ug/L	<0.050	<0.050	0.050	3453849
Surrogate Recovery (%)					
Decachlorobiphenyl	%	70 (1)	85		3453849

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) PCB sample contained sediment.

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Maxxam Job #: B3L2607
Report Date: 2013/12/19

SLR Consulting (Canada) Ltd
Client Project #: 210.05890.00000
Site Location: GWMP/HCP
Your P.O. #: HAL1988
Sampler Initials: KM

GENERAL COMMENTS

Results relate only to the items tested.

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SLR Consulting (Canada) Ltd
Attention: Kelly Henderson
Client Project #: 210.05890.00000
P.O. #: HAL1988
Site Location: GWMP/HCP

Quality Assurance Report

Maxxam Job Number: KB3L2607

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3453849	LGE	Matrix Spike						
		[UF4249-06]	Decachlorobiphenyl	2013/12/16		129	%	30 - 130
			Total PCB	2013/12/16		123	%	70 - 130
		Spiked Blank	Decachlorobiphenyl	2013/12/16		78	%	30 - 130
			Total PCB	2013/12/16		114	%	70 - 130
		Method Blank	Decachlorobiphenyl	2013/12/16		62	%	30 - 130
			Total PCB	2013/12/16	<0.050		ug/L	
		RPD [UF4234-06]	Total PCB	2013/12/16	NC		%	40
3455016	DLB	Matrix Spike	Dissolved Aluminum (Al)	2013/12/12		102	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/12		105	%	80 - 120
			Dissolved Arsenic (As)	2013/12/12		98	%	80 - 120
			Dissolved Barium (Ba)	2013/12/12		NC	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/12		100	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/12		101	%	80 - 120
			Dissolved Boron (B)	2013/12/12		99	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/12		99	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/12		NC	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/12		98	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/12		98	%	80 - 120
			Dissolved Copper (Cu)	2013/12/12		96	%	80 - 120
			Dissolved Iron (Fe)	2013/12/12		NC	%	80 - 120
			Dissolved Lead (Pb)	2013/12/12		99	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/12		NC	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/12		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/12		101	%	80 - 120
			Dissolved Nickel (Ni)	2013/12/12		98	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/12		105	%	80 - 120
			Dissolved Potassium (K)	2013/12/12		NC	%	80 - 120
			Dissolved Selenium (Se)	2013/12/12		98	%	80 - 120
			Dissolved Silver (Ag)	2013/12/12		97	%	80 - 120
			Dissolved Sodium (Na)	2013/12/12		100	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/12		NC	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/12		104	%	80 - 120
			Dissolved Tin (Sn)	2013/12/12		105	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/12		103	%	80 - 120
			Dissolved Uranium (U)	2013/12/12		103	%	80 - 120
			Dissolved Vanadium (V)	2013/12/12		100	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/12		98	%	80 - 120
		Spiked Blank	Dissolved Aluminum (Al)	2013/12/12		102	%	80 - 120
			Dissolved Antimony (Sb)	2013/12/12		99	%	80 - 120
			Dissolved Arsenic (As)	2013/12/12		97	%	80 - 120
			Dissolved Barium (Ba)	2013/12/12		100	%	80 - 120
			Dissolved Beryllium (Be)	2013/12/12		98	%	80 - 120
			Dissolved Bismuth (Bi)	2013/12/12		102	%	80 - 120
			Dissolved Boron (B)	2013/12/12		98	%	80 - 120
			Dissolved Cadmium (Cd)	2013/12/12		97	%	80 - 120
			Dissolved Calcium (Ca)	2013/12/12		103	%	80 - 120
			Dissolved Chromium (Cr)	2013/12/12		99	%	80 - 120
			Dissolved Cobalt (Co)	2013/12/12		98	%	80 - 120
			Dissolved Copper (Cu)	2013/12/12		97	%	80 - 120
			Dissolved Iron (Fe)	2013/12/12		101	%	80 - 120
			Dissolved Lead (Pb)	2013/12/12		100	%	80 - 120
			Dissolved Magnesium (Mg)	2013/12/12		103	%	80 - 120
			Dissolved Manganese (Mn)	2013/12/12		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2013/12/12		100	%	80 - 120

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SLR Consulting (Canada) Ltd
Attention: Kelly Henderson
Client Project #: 210.05890.00000
P.O. #: HAL1988
Site Location: GWMP/HCP

Quality Assurance Report (Continued)

Maxxam Job Number: KB3L2607

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3455016	DLB	Spiked Blank	Dissolved Nickel (Ni)	2013/12/12		100	%	80 - 120
			Dissolved Phosphorus (P)	2013/12/12		103	%	80 - 120
			Dissolved Potassium (K)	2013/12/12		103	%	80 - 120
			Dissolved Selenium (Se)	2013/12/12		97	%	80 - 120
			Dissolved Silver (Ag)	2013/12/12		96	%	80 - 120
			Dissolved Sodium (Na)	2013/12/12		103	%	80 - 120
			Dissolved Strontium (Sr)	2013/12/12		99	%	80 - 120
			Dissolved Thallium (Tl)	2013/12/12		102	%	80 - 120
			Dissolved Tin (Sn)	2013/12/12		102	%	80 - 120
			Dissolved Titanium (Ti)	2013/12/12		102	%	80 - 120
			Dissolved Uranium (U)	2013/12/12		103	%	80 - 120
			Dissolved Vanadium (V)	2013/12/12		101	%	80 - 120
			Dissolved Zinc (Zn)	2013/12/12		100	%	80 - 120
		Method Blank	Dissolved Aluminum (Al)	2013/12/12	<5.0		ug/L	
			Dissolved Antimony (Sb)	2013/12/12	<1.0		ug/L	
			Dissolved Arsenic (As)	2013/12/12	<1.0		ug/L	
			Dissolved Barium (Ba)	2013/12/12	<1.0		ug/L	
			Dissolved Beryllium (Be)	2013/12/12	<1.0		ug/L	
			Dissolved Bismuth (Bi)	2013/12/12	<2.0		ug/L	
			Dissolved Boron (B)	2013/12/12	<50		ug/L	
			Dissolved Cadmium (Cd)	2013/12/12	<0.010		ug/L	
			Dissolved Calcium (Ca)	2013/12/12	<100		ug/L	
			Dissolved Chromium (Cr)	2013/12/12	<1.0		ug/L	
			Dissolved Cobalt (Co)	2013/12/12	<0.40		ug/L	
			Dissolved Copper (Cu)	2013/12/12	<2.0		ug/L	
			Dissolved Iron (Fe)	2013/12/12	<50		ug/L	
			Dissolved Lead (Pb)	2013/12/12	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2013/12/12	<100		ug/L	
			Dissolved Manganese (Mn)	2013/12/12	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2013/12/12	<2.0		ug/L	
			Dissolved Nickel (Ni)	2013/12/12	<2.0		ug/L	
			Dissolved Phosphorus (P)	2013/12/12	<100		ug/L	
			Dissolved Potassium (K)	2013/12/12	<100		ug/L	
			Dissolved Selenium (Se)	2013/12/12	<1.0		ug/L	
			Dissolved Silver (Ag)	2013/12/12	<0.10		ug/L	
			Dissolved Sodium (Na)	2013/12/12	<100		ug/L	
			Dissolved Strontium (Sr)	2013/12/12	<2.0		ug/L	
			Dissolved Thallium (Tl)	2013/12/12	<0.10		ug/L	
			Dissolved Tin (Sn)	2013/12/12	<2.0		ug/L	
			Dissolved Titanium (Ti)	2013/12/12	<2.0		ug/L	
			Dissolved Uranium (U)	2013/12/12	<0.10		ug/L	
			Dissolved Vanadium (V)	2013/12/12	<2.0		ug/L	
			Dissolved Zinc (Zn)	2013/12/12	<5.0		ug/L	
		RPD	Dissolved Aluminum (Al)	2013/12/12	NC		%	20
			Dissolved Antimony (Sb)	2013/12/12	NC		%	20
			Dissolved Arsenic (As)	2013/12/12	NC		%	20
			Dissolved Barium (Ba)	2013/12/12	0.2		%	20
			Dissolved Beryllium (Be)	2013/12/12	NC		%	20
			Dissolved Bismuth (Bi)	2013/12/12	NC		%	20
			Dissolved Boron (B)	2013/12/12	NC		%	20
			Dissolved Cadmium (Cd)	2013/12/12	NC		%	20
			Dissolved Calcium (Ca)	2013/12/12	0.6		%	20
			Dissolved Chromium (Cr)	2013/12/12	NC		%	20
			Dissolved Cobalt (Co)	2013/12/12	2.7		%	20
			Dissolved Copper (Cu)	2013/12/12	NC		%	20

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Quality Assurance Report (Continued)

Maxxam Job Number: KB3L2607

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3455016	DLB	RPD	Dissolved Iron (Fe)	2013/12/12	0.7		%	20
			Dissolved Lead (Pb)	2013/12/12	NC		%	20
			Dissolved Magnesium (Mg)	2013/12/12	0.2		%	20
			Dissolved Manganese (Mn)	2013/12/12	1.2		%	20
			Dissolved Molybdenum (Mo)	2013/12/12	NC		%	20
			Dissolved Nickel (Ni)	2013/12/12	NC		%	20
			Dissolved Phosphorus (P)	2013/12/12	NC		%	20
			Dissolved Potassium (K)	2013/12/12	1.6		%	20
			Dissolved Selenium (Se)	2013/12/12	NC		%	20
			Dissolved Silver (Ag)	2013/12/12	NC		%	20
			Dissolved Sodium (Na)	2013/12/12	1.2		%	20
			Dissolved Strontium (Sr)	2013/12/12	0.03		%	20
			Dissolved Thallium (Tl)	2013/12/12	NC		%	20
			Dissolved Tin (Sn)	2013/12/12	NC		%	20
			Dissolved Titanium (Ti)	2013/12/12	NC		%	20
			Dissolved Uranium (U)	2013/12/12	NC		%	20
			Dissolved Vanadium (V)	2013/12/12	NC		%	20
			Dissolved Zinc (Zn)	2013/12/12	NC		%	20
3455043	AJS	Matrix Spike						
		[UF4276-01]	Isobutylbenzene - Extractable	2013/12/12		97	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/12		115	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/12		89	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/12		99	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/12		102	%	30 - 130
		Spiked Blank	Isobutylbenzene - Extractable	2013/12/12		101	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/12		104	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/12		87	%	30 - 130
			>C16-C21 Hydrocarbons	2013/12/12		98	%	30 - 130
			>C21-<C32 Hydrocarbons	2013/12/12		101	%	30 - 130
		Method Blank	Isobutylbenzene - Extractable	2013/12/12		104	%	30 - 130
			n-Dotriacontane - Extractable	2013/12/12		116	%	30 - 130
			>C10-C16 Hydrocarbons	2013/12/12	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2013/12/12	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2013/12/12	<0.10		mg/L	
		RPD [UF4232-01]	>C10-C16 Hydrocarbons	2013/12/13	NC		%	40
			>C16-C21 Hydrocarbons	2013/12/13	NC		%	40
			>C21-<C32 Hydrocarbons	2013/12/13	NC		%	40
3455272	MS3	Matrix Spike	Isobutylbenzene - Volatile	2013/12/13		82	%	70 - 130
			Benzene	2013/12/13		109	%	70 - 130
			Toluene	2013/12/13		104	%	70 - 130
			Ethylbenzene	2013/12/13		93	%	70 - 130
			Xylene (Total)	2013/12/13		87	%	70 - 130
		Spiked Blank	Isobutylbenzene - Volatile	2013/12/13		106	%	70 - 130
			Benzene	2013/12/13		106	%	70 - 130
			Toluene	2013/12/13		105	%	70 - 130
			Ethylbenzene	2013/12/13		105	%	70 - 130
			Xylene (Total)	2013/12/13		109	%	70 - 130
		Method Blank	Isobutylbenzene - Volatile	2013/12/13		107	%	70 - 130
			Benzene	2013/12/13	<0.0010		mg/L	
			Toluene	2013/12/13	<0.0010		mg/L	
			Ethylbenzene	2013/12/13	<0.0010		mg/L	
			Xylene (Total)	2013/12/13	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2013/12/13	<0.010		mg/L	
		RPD	Benzene	2013/12/13	NC		%	40
			Toluene	2013/12/13	NC		%	40

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Quality Assurance Report (Continued)

Maxxam Job Number: KB3L2607

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3455272	MS3	RPD	Ethylbenzene	2013/12/13	NC		%	40
			Xylene (Total)	2013/12/13	NC		%	40
			C6 - C10 (less BTEX)	2013/12/13	NC		%	40
3455698	MS3	Matrix Spike	Isobutylbenzene - Volatile	2013/12/17		91	%	70 - 130
			Benzene	2013/12/17		115	%	70 - 130
			Toluene	2013/12/17		110	%	70 - 130
			Ethylbenzene	2013/12/17		110	%	70 - 130
			Xylene (Total)	2013/12/17		110	%	70 - 130
		Spiked Blank	Isobutylbenzene - Volatile	2013/12/12		108	%	70 - 130
			Benzene	2013/12/12		106	%	70 - 130
			Toluene	2013/12/12		94	%	70 - 130
			Ethylbenzene	2013/12/12		113	%	70 - 130
			Xylene (Total)	2013/12/12		115	%	70 - 130
		Method Blank	Isobutylbenzene - Volatile	2013/12/12		95	%	70 - 130
			Benzene	2013/12/12	<0.0010		mg/L	
			Toluene	2013/12/12	<0.0010		mg/L	
			Ethylbenzene	2013/12/12	<0.0010		mg/L	
			Xylene (Total)	2013/12/12	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2013/12/12	<0.010		mg/L	
		RPD	Benzene	2013/12/17	NC		%	40
			Toluene	2013/12/17	NC		%	40
			Ethylbenzene	2013/12/17	NC		%	40
			Xylene (Total)	2013/12/17	NC		%	40
			C6 - C10 (less BTEX)	2013/12/17	NC		%	40
3455925	GTH	Matrix Spike	D10-Anthracene	2013/12/16		103	%	30 - 130
			D14-Terphenyl	2013/12/16		110	%	30 - 130
			D8-Acenaphthylene	2013/12/16		106	%	30 - 130
			1-Methylnaphthalene	2013/12/16		83	%	30 - 130
			2-Methylnaphthalene	2013/12/16		98	%	30 - 130
			Acenaphthene	2013/12/16		101	%	30 - 130
			Acenaphthylene	2013/12/16		97	%	30 - 130
			Anthracene	2013/12/16		98	%	30 - 130
			Benzo(a)anthracene	2013/12/16		97	%	30 - 130
			Benzo(a)pyrene	2013/12/16		94	%	30 - 130
			Benzo(b)fluoranthene	2013/12/16		92	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/16		86	%	30 - 130
			Benzo(j)fluoranthene	2013/12/16		91	%	30 - 130
			Benzo(k)fluoranthene	2013/12/16		91	%	30 - 130
			Chrysene	2013/12/16		87	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/16		82	%	30 - 130
			Fluoranthene	2013/12/16		84	%	30 - 130
			Fluorene	2013/12/16		100	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/16		88	%	30 - 130
			Naphthalene	2013/12/16		102	%	30 - 130
			Perylene	2013/12/16		97	%	30 - 130
			Phenanthrene	2013/12/16		97	%	30 - 130
			Pyrene	2013/12/16		86	%	30 - 130
		Spiked Blank	D10-Anthracene	2013/12/16		102	%	30 - 130
			D14-Terphenyl	2013/12/16		103	%	30 - 130
			D8-Acenaphthylene	2013/12/16		106	%	30 - 130
			1-Methylnaphthalene	2013/12/16		92	%	30 - 130
			2-Methylnaphthalene	2013/12/16		96	%	30 - 130
			Acenaphthene	2013/12/16		101	%	30 - 130
			Acenaphthylene	2013/12/16		98	%	30 - 130
			Anthracene	2013/12/16		100	%	30 - 130

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Quality Assurance Report (Continued)

Maxxam Job Number: KB3L2607

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3455925	GTH	Spiked Blank	Benzo(a)anthracene	2013/12/16		100	%	30 - 130
			Benzo(a)pyrene	2013/12/16		95	%	30 - 130
			Benzo(b)fluoranthene	2013/12/16		92	%	30 - 130
			Benzo(g,h,i)perylene	2013/12/16		85	%	30 - 130
			Benzo(j)fluoranthene	2013/12/16		90	%	30 - 130
			Benzo(k)fluoranthene	2013/12/16		91	%	30 - 130
			Chrysene	2013/12/16		84	%	30 - 130
			Dibenz(a,h)anthracene	2013/12/16		74	%	30 - 130
			Fluoranthene	2013/12/16		85	%	30 - 130
			Fluorene	2013/12/16		100	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2013/12/16		88	%	30 - 130
			Naphthalene	2013/12/16		100	%	30 - 130
			Perylene	2013/12/16		96	%	30 - 130
			Phenanthrene	2013/12/16		98	%	30 - 130
			Pyrene	2013/12/16		89	%	30 - 130
		Method Blank	D10-Anthracene	2013/12/16		106	%	30 - 130
			D14-Terphenyl	2013/12/16		107	%	30 - 130
			D8-Acenaphthylene	2013/12/16		107	%	30 - 130
			1-Methylnaphthalene	2013/12/16	<0.050		ug/L	
			2-Methylnaphthalene	2013/12/16	<0.050		ug/L	
			Acenaphthene	2013/12/16	0.010, RDL=0.010		ug/L	
			Acenaphthylene	2013/12/16	<0.010		ug/L	
			Anthracene	2013/12/16	<0.010		ug/L	
			Benzo(a)anthracene	2013/12/16	<0.010		ug/L	
			Benzo(a)pyrene	2013/12/16	<0.010		ug/L	
			Benzo(b)fluoranthene	2013/12/16	<0.010		ug/L	
			Benzo(g,h,i)perylene	2013/12/16	<0.010		ug/L	
			Benzo(j)fluoranthene	2013/12/16	<0.010		ug/L	
			Benzo(k)fluoranthene	2013/12/16	<0.010		ug/L	
			Chrysene	2013/12/16	<0.010		ug/L	
			Dibenz(a,h)anthracene	2013/12/16	<0.010		ug/L	
			Fluoranthene	2013/12/16	<0.010		ug/L	
			Fluorene	2013/12/16	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2013/12/16	<0.010		ug/L	
			Naphthalene	2013/12/16	<0.20		ug/L	
			Perylene	2013/12/16	<0.010		ug/L	
			Phenanthrene	2013/12/16	<0.010		ug/L	
			Pyrene	2013/12/16	<0.010		ug/L	
		RPD	1-Methylnaphthalene	2013/12/16	NC		%	40
			2-Methylnaphthalene	2013/12/16	NC		%	40
			Acenaphthene	2013/12/16	NC		%	40
			Acenaphthylene	2013/12/16	NC		%	40
			Anthracene	2013/12/16	NC		%	40
			Benzo(a)anthracene	2013/12/16	NC		%	40
			Benzo(a)pyrene	2013/12/16	NC		%	40
			Benzo(b)fluoranthene	2013/12/16	NC		%	40
			Benzo(g,h,i)perylene	2013/12/16	NC		%	40
			Benzo(j)fluoranthene	2013/12/16	NC		%	40
			Benzo(k)fluoranthene	2013/12/16	NC		%	40
			Chrysene	2013/12/16	NC		%	40
			Dibenz(a,h)anthracene	2013/12/16	NC		%	40
			Fluoranthene	2013/12/16	NC		%	40
			Fluorene	2013/12/16	NC		%	40
			Indeno(1,2,3-cd)pyrene	2013/12/16	NC		%	40
			Naphthalene	2013/12/16	NC		%	40

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Quality Assurance Report (Continued)

Maxxam Job Number: KB3L2607

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3455925	GTH	RPD	Perylene	2013/12/16	NC		%	40
			Phenanthrene	2013/12/16	NC		%	40
			Pyrene	2013/12/16	NC		%	40
3460781	MKH	Matrix Spike	Total Mercury (Hg)	2013/12/17		99	%	80 - 120
		Spiked Blank	Total Mercury (Hg)	2013/12/17		103	%	80 - 120
		Method Blank	Total Mercury (Hg)	2013/12/17	<0.013		ug/L	
		RPD	Total Mercury (Hg)	2013/12/17	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

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Validation Signature Page

Maxxam Job #: B3L2607

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

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APPENDIX C
Statistical Analysis

2013 Groundwater Monitoring Program
Harbourside Commercial Park, Sydney, NS
SLR Project No.: 210.05890.00000

Table C-1: Mann Kendall Analysis - Summary of Results
Harbourside Commercial Park

Mann Kendall Run	Well	Parameter	Analyte	Detection Limit (µg/L)	Period of Record	Qualifier	n	S	COV	Trend	Currently Exceeding Standard?	Notes
1	SCU10-001	VOC	Cis-1,2-Dichloroethylene	1.0	2003 to 2013	1	8	-2	0.07	Stable	Yes (NSE Tier 1 EQS; MoE Table 3)	Plume appears to be stable but Mann-Kendall analysis may be biased by mixed seasonal data.
1a	SCU10-001	VOC	Cis-1,2-Dichloroethylene	1.0	2008 to 2013	no	6	4	0.07	No Trend	Yes (NSE Tier 1 EQS; MoE Table 3)	No trend apparent, based on analysis of data from Fall season only.
2	SCU10-001	VOC	Vinyl Chloride	1.0	2003 to 2013	1	8	-3	0.45	Stable	Yes (MoE Table 3)	Vinyl chloride evaluated because it is a daughter product of cis-1,2-Dichloroethylene. Plume appears to be stable but Mann-Kendall analysis may be biased by mixed seasonal data.
2a	SCU10-001	VOC	Vinyl Chloride	1.0	2008 to 2013	no	6	-7	0.40	Stable	Yes (MoE Table 3)	Vinyl chloride evaluated because it is a daughter product of cis-1,2-Dichloroethylene. Plume appears to be stable based on analysis of data from Fall season only.
3	SCU20-013	PAH	Acenaphthylene	0.01	2010 to 2013	1	5	7	0.28	Increasing	Yes (MoE Table 3)	Plume appears to be increasing but Mann-Kendall analysis may be biased by mixed seasonal data.
3a	SCU20-013	PAH	Acenaphthylene	0.01	2010 to 2013	no	4	4	0.25	No Trend	Yes (MoE Table 3)	No trend apparent, based on analysis of data from Fall season only; summer 2010 data outlier removed.
4	SCU20-013	PAH	Anthracene	0.01	2010 to 2013	1	5	6	0.33	No Trend	Yes (MoE Table 3)	No trend apparent, but Mann-Kendall analysis may be biased by mixed seasonal data.
4a	SCU20-013	PAH	Anthracene	0.01	2010 to 2013	no	4	2	0.28	No Trend	Yes (MoE Table 3)	No trend apparent, based on analysis of data from Fall season only; summer 2010 data outlier removed.
5	SCU20-014	PAH	Acenaphthylene	0.01	2010 to 2013	1	5	6	0.37	No Trend	Yes (MoE Table 3)	No trend apparent, but Mann-Kendall analysis may be biased by mixed seasonal data.

Table C-1: Mann Kendall Analysis - Summary of Results
Harbourside Commercial Park

5a	SCU20-014	PAH	Acenaphthylene	0.01	2010 to 2013	no	4	2	0.31	No Trend	Yes (MoE Table 3)	No trend apparent, based on analysis of data from Fall season only; summer 2010 data outlier removed.
6	SCU20-016	PAH	Acenaphthylene	0.01	2010 to 2013	1	5	6	0.62	No Trend	Yes (MoE Table 3)	No trend apparent, but Mann-Kendall analysis may be biased by mixed seasonal data.
6a	SCU20-016	PAH	Acenaphthylene	0.01	2010 to 2013	no	4	2	0.43	No Trend	Yes (MoE Table 3)	No trend apparent, based on analysis of data from Fall season only; summer 2010 data outlier removed.

Notes:

n - Number of groundwater sampling events.
S - Mann-Kendall trend statistic.
COV - Coefficient of variation.
1 - All available data was used for this analysis; potential seasonal bias may exist based on sampling dates.

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU10-001-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
cis-1,2-Dichloroethylene	88	90	83	79	80	77	88	92		
Row 1:Compare to Event 1		1	-1	-1	-1	-1	0	1		-2
Row 2:Compare to Event 2			-1	-1	-1	-1	-1	1		-4
Row 3:Compare to Event 3				-1	-1	-1	1	1		-1
Row 4:Compare to Event 4					0	-1	1	1		1
Row 5:Compare to Event 5						-1	1	1		1
Row 6:Compare to Event 6							1	1		2
Row 7:Compare to Event 7								1		1
Row 8:Compare to Event 8										

5.60 standard deviation

84.63 mean

No change = ± 1.00 (User Specified)

Mann-Kendall Statistic (S) = TOTAL -2

Coefficient of Variation (COV) **0.07**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2					S		
± 3							
± 4							
± 5							
± 6							
± 7							
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S	COV>=1 and S≤0, No Trend Indicated S>0, COV >=1 or COV<1, No Trend Indicated COV<1 and S≤0, Plume is stable
S	Trend is Present (≥ 90% Confidence) S < 0 - Probably Decreasing Trend S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU10-001-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
cis-1,2-Dichloroethylene	83	79	80	77	88	92				
Row 1:Compare to Event 1		-1	-1	-1	1	1				-1
Row 2:Compare to Event 2			0	-1	1	1				1
Row 3:Compare to Event 3				-1	1	1				1
Row 4:Compare to Event 4					1	1				2
Row 5:Compare to Event 5						1				1
Row 6:Compare to Event 6										0
Row 7:Compare to Event 7										0
Row 8:Compare to Event 8										

5.78 standard deviation

83.17 mean

No change = ± 1.00 (User Specified)

Mann-Kendall Statistic (S) = TOTAL 4

Coefficient of Variation (COV) **0.07**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2							
± 3							
± 4			S				
± 5							
± 6							
± 7							
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S	COV>=1 and S≤0, No Trend Indicated S>0, COV >=1 or COV<1, No Trend Indicated COV<1 and S≤0, Plume is stable
S	Trend is Present (≥ 90% Confidence) S < 0 - Probably Decreasing Trend S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU10-001-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
Vinyl Chloride	2.3	8.0	8.0	5.7	9.0	9.0	3.5	3.5		
Row 1:Compare to Event 1		1	1	1	1	1	1	1		7
Row 2:Compare to Event 2			0	-1	0	0	-1	-1		-3
Row 3:Compare to Event 3				-1	0	0	-1	-1		-3
Row 4:Compare to Event 4					1	1	-1	-1		0
Row 5:Compare to Event 5						0	-1	-1		-2
Row 6:Compare to Event 6							-1	-1		-2
Row 7:Compare to Event 7								0		0
Row 8:Compare to Event 8										

2.73 standard deviation

6.13 mean

No change = ± 1.00 (User Specified)

Mann-Kendall Statistic (S) = TOTAL -3

Coefficient of Variation (COV) **0.45**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2							
± 3					S		
± 4							
± 5							
± 6							
± 7							
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S	COV>=1 and S≤0, No Trend Indicated S>0, COV >=1 or COV<1, No Trend Indicated COV<1 and S≤0, Plume is stable
S	Trend is Present (≥ 90% Confidence) S < 0 - Probably Decreasing Trend S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU10-001-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
Vinyl Chloride	8.0	5.7	9.0	9.0	3.5	3.5				
Row 1:Compare to Event 1		-1	0	0	-1	-1				-3
Row 2:Compare to Event 2			1	1	-1	-1				0
Row 3:Compare to Event 3				0	-1	-1				-2
Row 4:Compare to Event 4					-1	-1				-2
Row 5:Compare to Event 5						0				0
Row 6:Compare to Event 6										0
Row 7:Compare to Event 7										0
Row 8:Compare to Event 8										

2.58 standard deviation

6.45 mean

No change = ± 1.00 (User Specified)

Mann-Kendall Statistic (S) = TOTAL -7

Coefficient of Variation (COV) **0.40**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2							
± 3							
± 4							
± 5							
± 6							
± 7			S				
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S COV>=1 and S≤0, No Trend Indicated
S>0, COV >=1 or COV<1, No Trend Indicated
COV<1 and S≤0, Plume is stable

S Trend is Present (≥ 90% Confidence)
S < 0 - Probably Decreasing Trend
S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU20-013-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
Acenaphthylene	18.0	26.0	18.0	29.0	34.0					
Row 1:Compare to Event 1		1	0	1	1					3
Row 2:Compare to Event 2			-1	1	1					1
Row 3:Compare to Event 3				1	1					2
Row 4:Compare to Event 4					1					1
Row 5:Compare to Event 5										0
Row 6:Compare to Event 6										0
Row 7:Compare to Event 7										0
Row 8:Compare to Event 8										

7.00 standard deviation

25.00 mean

No change = ± 0.05 (User Specified)

Mann-Kendall Statistic (S) = TOTAL 7

Coefficient of Variation (COV) **0.28**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2							
± 3							
± 4							
± 5							
± 6							
± 7		S					
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S	COV>=1 and S≤0, No Trend Indicated S>0, COV >=1 or COV<1, No Trend Indicated COV<1 and S≤0, Plume is stable
S	Trend is Present (≥ 90% Confidence) S < 0 - Probably Decreasing Trend S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU20-013-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
Acenaphthylene	26.0	18.0	29.0	34.0						
Row 1:Compare to Event 1		-1	1	1						1
Row 2:Compare to Event 2			1	1						2
Row 3:Compare to Event 3				1						1
Row 4:Compare to Event 4										0
Row 5:Compare to Event 5										0
Row 6:Compare to Event 6										0
Row 7:Compare to Event 7										0
Row 8:Compare to Event 8										

6.70 standard deviation

26.75 mean

No change = ± 0.05 (User Specified)

Mann-Kendall Statistic (S) = TOTAL 4

Coefficient of Variation (COV) **0.25**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2							
± 3							
± 4	S						
± 5							
± 6							
± 7							
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S	COV>=1 and S≤0, No Trend Indicated S>0, COV >=1 or COV<1, No Trend Indicated COV<1 and S≤0, Plume is stable
S	Trend is Present (≥ 90% Confidence) S < 0 - Probably Decreasing Trend S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU20-013-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
Anthracene	1.8	2.7	3.1	2.0	4.0					
Row 1:Compare to Event 1		1	1	1	1					4
Row 2:Compare to Event 2			1	-1	1					1
Row 3:Compare to Event 3				-1	1					0
Row 4:Compare to Event 4					1					1
Row 5:Compare to Event 5										0
Row 6:Compare to Event 6										0
Row 7:Compare to Event 7										0
Row 8:Compare to Event 8										

0.89 standard deviation

2.72 mean

No change = ± 0.05 (User Specified)

Mann-Kendall Statistic (S) = TOTAL 6

Coefficient of Variation (COV) **0.33**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2							
± 3							
± 4							
± 5							
± 6		**S**					
± 7							
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S	COV>=1 and S≤0, No Trend Indicated S>0, COV >=1 or COV<1, No Trend Indicated COV<1 and S≤0, Plume is stable
S	Trend is Present (≥ 90% Confidence) S < 0 - Probably Decreasing Trend S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU20-013-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
Anthracene	2.7	3.1	2.0	4.0						
Row 1:Compare to Event 1		1	-1	1						1
Row 2:Compare to Event 2			-1	1						0
Row 3:Compare to Event 3				1						1
Row 4:Compare to Event 4										0
Row 5:Compare to Event 5										0
Row 6:Compare to Event 6										0
Row 7:Compare to Event 7										0
Row 8:Compare to Event 8										

0.83 standard deviation

2.95 mean

No change = ± 0.05 (User Specified)

Mann-Kendall Statistic (S) = TOTAL 2

Coefficient of Variation (COV) **0.28**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2	S						
± 3							
± 4							
± 5							
± 6							
± 7							
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S — COV>=1 and S≤0, No Trend Indicated
S>0, COV >=1 or COV<1, No Trend Indicated
COV<1 and S≤0, Plume is stable

S — Trend is Present (≥ 90% Confidence)
S < 0 - Probably Decreasing Trend
S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU20-014-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
Acenaphthylene	2.8	3.4	7.2	4.6	5.7					
Row 1:Compare to Event 1		1	1	1	1					4
Row 2:Compare to Event 2			1	1	1					3
Row 3:Compare to Event 3				-1	-1					-2
Row 4:Compare to Event 4					1					1
Row 5:Compare to Event 5										0
Row 6:Compare to Event 6										0
Row 7:Compare to Event 7										0
Row 8:Compare to Event 8										

1.77 standard deviation

4.74 mean

No change = ± 0.05 (User Specified)

Mann-Kendall Statistic (S) = TOTAL 6

Coefficient of Variation (COV) **0.37**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2							
± 3							
± 4							
± 5							
± 6		S					
± 7							
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S	COV>=1 and S≤0, No Trend Indicated S>0, COV >=1 or COV<1, No Trend Indicated COV<1 and S≤0, Plume is stable
S	Trend is Present (≥ 90% Confidence) S < 0 - Probably Decreasing Trend S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU20-014-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
Acenaphthylene	3.4	7.2	4.6	5.7						
Row 1:Compare to Event 1		1	1	1						3
Row 2:Compare to Event 2			-1	-1						-2
Row 3:Compare to Event 3				1						1
Row 4:Compare to Event 4										0
Row 5:Compare to Event 5										0
Row 6:Compare to Event 6										0
Row 7:Compare to Event 7										0
Row 8:Compare to Event 8										1

1.62 standard deviation

5.23 mean

No change = ± 0.05 (User Specified)

Mann-Kendall Statistic (S) = TOTAL 2

Coefficient of Variation (COV) **0.31**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2	S						
± 3							
± 4							
± 5							
± 6							
± 7							
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S	COV>=1 and S≤0, No Trend Indicated
	S>0, COV >=1 or COV<1, No Trend Indicated
	COV<1 and S≤0, Plume is stable
S	Trend is Present (≥ 90% Confidence)
	S < 0 - Probably Decreasing Trend
	S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU20-016-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
Acenaphthylene	0.48	1.20	3.70	2.20	3.10					
Row 1:Compare to Event 1		1	1	1	1					4
Row 2:Compare to Event 2			1	1	1					3
Row 3:Compare to Event 3				-1	-1					-2
Row 4:Compare to Event 4					1					1
Row 5:Compare to Event 5										0
Row 6:Compare to Event 6										0
Row 7:Compare to Event 7										0
Row 8:Compare to Event 8										

1.32 standard deviation

2.14 mean

No change = ± 0.05 (User Specified)

Mann-Kendall Statistic (S) = TOTAL 6

Coefficient of Variation (COV) **0.62**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2							
± 3							
± 4							
± 5							
± 6		S					
± 7							
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S COV>=1 and S≤0, No Trend Indicated
S>0, COV >=1 or COV<1, No Trend Indicated
COV<1 and S≤0, Plume is stable

S Trend is Present (≥ 90% Confidence)
S < 0 - Probably Decreasing Trend
S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Mann-Kendall Analysis of Plume **Monitor Well No.** SCU20-016-MW

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Sum Rows
Acenaphthylene	1.2	3.7	2.2	3.1						
Row 1:Compare to Event 1		1	1	1						3
Row 2:Compare to Event 2			-1	-1						-2
Row 3:Compare to Event 3				1						1
Row 4:Compare to Event 4										0
Row 5:Compare to Event 5										0
Row 6:Compare to Event 6										0
Row 7:Compare to Event 7										0
Row 8:Compare to Event 8										

1.09 standard deviation

2.55 mean

No change = ± 0.05 (User Specified)

Mann-Kendall Statistic (S) = TOTAL 2

Coefficient of Variation (COV) **0.43**

Confidence Level Chart

S Value	Total No. Sampling Events 4	5	6	7	8	9	10
0							
± 1							
± 2	S						
± 3							
± 4							
± 5							
± 6							
± 7							
± 8							
± 9							
± 10							
± 11							
± 12							
± 13							
± 14							
± 15							
± 16							
± 17							
± 18							
± 19							
>20							

Stability Evaluation Results:

S COV>=1 and S≤0, No Trend Indicated
S>0, COV >=1 or COV<1, No Trend Indicated
COV<1 and S≤0, Plume is stable

S Trend is Present (≥ 90% Confidence)
S < 0 - Probably Decreasing Trend
S > 0 - Probably Increasing Trend

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

APPENDIX D
Monitor Well Observations (Monitoring Only)

2013 Groundwater Monitoring Program
Harbourside Commercial Park, Sydney, NS
SLR Project No.: 210.05890.00000

Table D-1

Monitor Well Observations (Monitoring Only)

ID	Date Monitored	Comments	Recommendations	Photos
SCU10-002-MW	November 18, 2013	• Product not detected by O/W interface probe • Thick black product on the end of the probe • Strong HC odour from product • Sampling bailer was lowered to the bottom of the well; product was on the outside of the bailer and in the water on the inside of the bailer, especially bottom 0.20 m • No obvious changes since last monitored (August 20, 2013) • No monitor wells are located down-gradient of this location	• Continued quarterly monitoring • Confirm that the monitor well is located more than 30 m from Protocase Building #2	 
SCU10-003-MW	November 18, 2013	• Product not detected by O/W interface probe • No product on tape or probe • No HC odour • No obvious changes since last monitored (August 20, 2013)	• Continued quarterly monitoring	
SCU11-001-MWA	November 15, 2013	• Product not detected by O/W interface probe • No product on tape or probe • No HC odour • Sampling pump in well • No obvious changes since last monitored (August 20, 2013)	• Continued quarterly monitoring	
SCU11-001-MWB	November 15, 2013	• Product not detected by O/W interface probe • No product on tape or probe • No HC odour • Sampling pump in well • No obvious changes since last monitored (August 20, 2013)	• Continued quarterly monitoring	

Table D-1 (Continued)

Monitor Well Observations (Monitoring Only)

SCU15-001-MWA	November 15, 2013	• Product not detected by O/W interface probe • Spots of black product on tape • Thick black product/sediment on end of probe; rust coloured sediment on top of probe • Slight HC odour from material on end of probe • No obvious changes since last monitored (August 16, 2012)	• SCU15-001-MWB (nested pair) should be sampled to confirm product has not entered the shallow bedrock. It is the only other well in the immediate vicinity. Laboratory analyses of TPH/BTEX and PAHs recommended. This well was last monitored during the ESA (2003) and TPH/BTEX and PAHs were generally not detected. • Confirm that the monitor well is located more than 30 m from the nearest building.	 
SCU15-008-R	November 18, 2013	• Product not detected by O/W interface probe • Product covered probe and tape • Product was black/dark brown, thick and sticky (molasses-like) • Slight HC odour observed • Sampling bailer was lowered into the well; product covered the outside of the bailer; the product was removed from the outside of the bailer with an absorbent pad; only a very thin layer of product was inside of the bailer on top of the water • Changes noted since last monitored (August 15, 2012). Previously stated that a small amount of residual oil was observed on the tape. While the bailer was coated when retrieved from the monitor well, but the actual thickness of the product is minimal during current monitoring; there is an obvious change in the amount of product in the recovery well. • The recovery well is located within 30 m of Source Atlantic's building.	• The recovery well should be pumped out and quarterly monitoring re-instated. The well is likely within 30 m of the Source Atlantic Building which allows for the indoor air pathway to be open. • SCU15-008-MWB (nested pair) should be sampled to confirm product has not entered the shallow bedrock. Laboratory analyses of TPH/BTEX and PAHs recommended. This well was last monitored during the ESA (2007) and TPH/BTEX and PAHs were generally not detected. • SCU15-012-MW appears to be located down-gradient of SCU15-008-R. Laboratory analyses of TPH/BTEX and PAHs recommended. This well was last monitored during the ESA (2007) and TPH/BTEX and PAHs were generally not detected, but there was an issue with some PAHs and VOCs having laboratory detection limits greater than guidelines. • Confirm that the monitor well is located more than 30 m from the nearest building.	  

Table D-1 (Continued)

Monitor Well Observations (Monitoring Only)

SCU15-016-MW	November 15, 2013	• Product not detected by O/W interface probe • Orange sediment on probe • Sampling bailer was lowered to the bottom of the well; orange sediment was on the outside of the bailer and orange sediment and floatables were in the water inside of the bailer • No significant changes noted since last monitored (August 15, 2012). It was previously observed that some oil and rust were identified in the bottom 2 m of the well (probe/tape only). No obvious oil noted on probe or in bailer in 2013.	• No recommendation	
SCU31-002-MWA	November 15, 2013	• Product not detected by O/W interface probe • Spots of black product on tape and probe • Product was black, thick and sticky • Slight HC odour from material on end of probe • Sampling bailer was lowered into the well; water inside of the bailer was clear, but product was on the outside of the bailer • No obvious changes since last monitored (November 21, 2013) • Free product observed in monitor well since October 2005.	• No recommendation (nested well already part of the sampling program.	
RW1	November 18, 2013	• Product not detected by O/W interface probe • Black/grey sediment on end of probe • HC odour from sediment on end of probe • No obvious changes since last monitored (August 20, 2013)	• Continued quarterly monitoring	
RW2	November 18, 2013	• Product not detected by O/W interface probe • No product on tape or probe • No HC odour • No obvious changes since last monitored (August 20, 2013)	• Continued quarterly monitoring	

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