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WESTSIDE LANDFILL, WEST KELOWNA, BC

2009 Annual Operations and Monitoring Report

Submitted to:
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REPORT

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Executive Summary

An annual operations and monitoring report for the Westside Landfill is required under the Operational Certificate (OC) PR#12217 issued by British Columbia Ministry of Environment (MoE). This report includes results of measurements of municipal solid waste volumes for remaining capacity calculations, operational plans and budgets, and groundwater and landfill gas monitoring results.

The mass of waste accepted by the Westside Landfill in 2009, based on RDCO weigh scale data, is as follows:

- 4,348 metric tonnes received from routine sources, such as compactor trucks and bin trucks passing over the on-site scale,
- 1,692 metric tonnes of construction and demolition debris, and
- 4,535 metric tonnes of residential bag drop off (based on an assumed 10 kg per bag), and rate loads (based on an assumed 125 kg per load).

The above data sum to a total of approximately 10,575 metric tonnes of material landfilled in 2009. The amount of material disposed in 2009 is approximately 31% of the 33,659 metric tonnes landfilled in 2008. The reduction in disposal volumes reflects the closure of commercial compactor trucks and demolition debris at the landfill since April 2009.

The mass of recycled and yard waste accepted by the Westside Landfill in 2009, based on RDCO weigh scale data, is as follows:

- 505 metric tonnes of yard waste drop off,
- 1,623 metric tonnes of recycled material and,
- 1,389 metric tonnes of separated construction materials (wood).

The above data sum to a total of approximately 3,517 metric tonnes of recycled and yard waste accepted by Westside Landfill in 2009. This amount represents a 32% of recycled and yard waste accepted by Westside Landfill in 2008 (11,122 metric tonnes). According to the RDCO, the yard waste drop off weight is low compared to 2008, as many people were let into the landfill to drop off yard waste free of charge without going over the scales. In addition, batteries were not accepted at the landfill in 2009.

A survey completed by CTQ Consultants Ltd. (CTQ) in October 2003 indicated that approximately 575,300 m^3 of available volume remained at the landfill. This volume was based on a model completed by Reid Crowther, which assumed a 3:1 slope for the perimeter of the landfill to an ultimate elevation of 555 m (geodetic). An additional survey was conducted by Ansell Construction in 2009. However, the final cap elevation and surface grading is being designed as part of the landfill closure plan being prepared in 2010.

The results of the 2009 monitoring program at the Westside landfill are summarized below:

- Similar to 2008 results, monitoring wells BH1, BH2, and BH4 (at the landfill boundary) showed elevated concentrations of several parameters relative to Dobbin's Well (background). Parameters elevated above background conditions included conductivity, TDS, alkalinity, chloride, sulphate, nitrate plus nitrite, ammonia, barium, boron, calcium, chromium, cobalt, iron, magnesium, manganese, molybdenum, nickel, potassium, sodium, silicon, strontium, and uranium. Concentrations of these indicator parameters remained relatively constant during the 2009 monitoring program.
- With the exception of increased chloride and nitrite plus nitrate concentrations between 2005 and 2009, concentrations of indicator parameters at downgradient well BH5 have not shown significant increases between 1994 and 2009, but rather appear to have remained relatively consistent at low concentrations (with minor fluctuations) for this time period.
- Similar to previous monitoring programs, concentrations at BH1, located within the landfill, had the highest concentrations above background conditions, followed by BH2, BH4, BH5 and Shannon Lake Mobile Home Park (SLMHP), respectively.
- Concentrations of parameters at BH1, BH2, BH4, BH5, and SLMHP exceeded both the CSR DW and GCDWQ Standards during the 2009 monitoring program. No samples exhibited concentrations of analyzed parameters exceeding Aquatic Life (CSR-AW) Standards. The only exceedance at the Shannon Lake Mobile Home Park well was total dissolved solids (TDS).
- Methane concentrations at all locations along the site boundary were less than 2,500 ppm, and continue to be much less than the 50,000 ppm (lower explosive limit) guideline in the BC Landfill Criteria. In 2009, methane concentrations remained within the range of historical concentrations but continue to vary throughout the year.
- Other landfill gas parameters at the perimeter of the site remain low.

Based on the 2009 groundwater monitoring results, Golder recommends the current prescribed monitoring program be continued through 2010. The groundwater and landfill gas monitoring program after 2010 should be reviewed when the landfill Closure Plan is finalized.

Given that the landfill closure process is underway, the scope of future monitoring reports should also be reviewed, as many of the operational aspects discussed in Sections 2 and 3 will no longer apply.

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1.0 INTRODUCTION

An annual operations and monitoring report for the Westside Landfill is required under the Operational Certificate (OC) PR#12217 issued by British Columbia Ministry of Environment (MoE). As outlined in Section 3.0 of the OC, the following information is included in this report:

- Summary of service population and waste discharge rates to 2009, with trend analysis compared to 1990 baseline discharge rate;
- authorized design volume;
- estimates of remaining site lifespan and capacity as of 2009;
- an operational plan for the next 12 months;
- operating and maintenance expenditures for the landfill;
- changes from authorized reports, plans and specifications;
- groundwater, leachate and landfill gas monitoring data and interpretation;
- review of closure plan and associated estimated costs; and
- other data relevant to the OC

The above elements have been divided into three sections in this report: Municipal Solid Waste Measurement (Section 2), Operational Plans and Budgets (Section 3), and Groundwater and Landfill Gas Monitoring (Section 4).

The Regional District of Central Okanagan (RDCO) is currently in the process of closing the landfill in 2010, which involves preparation of a final Closure Plan.

As part of this report, solid waste measurement data were supplied by the Regional District of Central Okanagan (RDCO), and previous landfill survey results were provided by Reid Crowther and CTQ Consultants Ltd. (CTQ).

A location plan and site plan for the Westside Landfill are presented as Figures 1 and 2, respectively.

2.0 MUNICIPAL AND SOLID WASTE MEASUREMENT

2.1 Waste Tonnages

The mass of waste accepted by the Westside Landfill in 2009, based on RDCO weigh scale data, is as follows:

- 4,348 metric tonnes received from routine sources, such as compactor trucks and bin trucks passing over the on-site scale;
- 1,692 metric tonnes of construction and demolition debris; and
- 4,535 metric tonnes of residential bag drop off (based on an assumed 10 kg per bag), and rate loads (based on an assumed 125 kg per load).

The above data sum to a total of approximately 10,575 metric tonnes of material landfilled in 2009. The amount of material disposed in 2009 is approximately 31% of the 33,659 metric tonnes landfilled in 2008. The reduction in disposal volumes reflects the closure of commercial compactor trucks and demolition debris at the landfill since April 2009.

The mass of recycled and yard waste accepted by the Westside Landfill in 2009, based on RDCO weigh scale data, is as follows:

- 505 metric tonnes of yard waste drop off;
- 1,623 metric tonnes of recycled material; and
- 1,389 metric tonnes of separated construction materials (wood).

The above data sum to a total of approximately 3,517 metric tonnes of recycled and yard waste accepted by Westside Landfill in 2009. This amount represents a 32% of recycled and yard waste accepted by Westside Landfill in 2008 (11,122 metric tonnes). According to the RDCO, the yard waste drop off weight is low compared to 2008, as many people were let into the landfill to drop off yard waste free of charge without going over the scales. In addition, batteries were not accepted at the landfill in 2009.

2.2 Waste Volumes and Density

In the years 1999 and 2000, Reid Crowther completed volume surveys of the Westside Landfill. Based on the survey results and estimated tonnages, Reid Crowther determined that the compacted density of refuse and cover at the Westside Landfill was approximately 0.80 tonnes/m^3. Furthermore, Reid Crowther determined that the compacted density of refuse alone was approximately 0.57 tonnes/m^3. Typical compacted densities for combined waste and cover in municipal landfills are generally in the 0.50 to 0.70 tonnes/m^3 range.

For the purpose of landfill life span estimates, a compacted density for combined waste and cover of 0.80 tonnes/m^3 and a compacted density for refuse only of 0.55 tonnes/m^3 will be used. Using a compacted density for refuse of 0.55 tonnes/m^3 is considered to be slightly conservative.

A summary of the densities and waste volumes calculated for 2009 are presented in Table 1.

2.3 Service Population and Waste Discharge Rates

The per capita generation rates since 1990 are summarized in Figure 3. A 50% reduction in per-capita waste volumes relative to 1990 rates by the end of 2000 was the objective under the Regional Solid Waste Management Plan. The generation rate objective continues to be met through 2009, with respect to compactor trucks, bin trucks, as well as residential bag drop off, and rate loads. Total landfilled volumes, including construction and demolition debris, bring the reduction in per-capita waste volumes to 20% of the 1990 rates. However, that percentage reflects the closure of commercial compactor trucks and demolition debris to the landfill since April 2009.

2.4 Design Volume and Remaining Capacity

A survey completed by CTQ Consultants Ltd. (CTQ) in October 2003 indicated that approximately 575,300 m^3 of available volume remained at the landfill. This volume was based on a model completed by Reid Crowther, which assumed a 3:1 slope for the perimeter of the landfill to an ultimate elevation of 555 m (geodetic). An additional survey was conducted by Ansell Construction in 2009. However, the final cap elevation and surface grading is being designed as part of the landfill closure plan being prepared in 2010.

In 2009, commercial landfilling was halted, and the waste discharge rate reduced significantly. Residential drop off is also expected to be halted once a transfer station is operating on site.

At the end of 2000, the projected volume remaining in the landfill was 713,147 m^3. As a check, Golder has calculated the estimated total volume landfilled between 2001 and 2009 based on the refuse totals provided by the RDCO for the years 2001 to 2009, and are summarized in Table 2.

3.0 OPERATIONAL PLANS AND BUDGETS

3.1 Operational Plan for 2010

Since April 2009, commercial compactor trucks and demolition debris was no longer accepted at the landfill. Residential municipal solid and yard waste drop off are currently accepted until a transfer station is operating at the site. According to the RDCO, this will continue through 2010.

3.2 Operation and Maintenance Expenditures

According to the RDCO, the 2010 operational and maintenance budget for the landfill is $749,245. The annual operations budget for the landfill monitoring is approximately $31,913 per year.

3.3 Changes to Reports, Plans, and Specifications

According to the RDCO, there are presently no changes to reports, plans or specifications regarding the Westside Landfill for 2010.

3.4 Review of Closure Plan

The Regional District of Central Okanagan (RDCO) is currently in the process of closing the landfill in 2010, which involves preparation of a final Closure Plan. Preparation of the Westside Landfill closure plan was initially completed in September 1997. The RDCO retained CH2M Hill to provide an updated closure plan for the Westside Landfill. A concept closure plan was issued on May 19, 2009, and a final closure plan is due in 2010.

3.5 2010 Closure Cost Estimate

RDCO estimated a landfill closure budget for 2010 of $500,000. This was developed as part of the final Closure Plan currently being developed by CH2M Hill. The estimates provided by the RDCO in 2010 are presented in Table 3.

4.0 GROUNDWATER AND LANDFILL GAS MONITORING

The purpose of the groundwater and landfill gas monitoring program is to monitor the potential impacts that the landfill may have on the local groundwater quality and the potential for landfill gas migration.

4.1 Permit Requirements

The groundwater monitoring requirements for the Westside Landfill were revised in 2001 from those stated in the OC (OC No. PR 12217, dated May 28, 1997). The revisions to the permit were outlined in a letter issued on May 3, 2001 by MoE. The current groundwater and landfill gas monitoring requirements are presented in Table 4.

4.2 Regulatory Framework

The BC MoE Contaminated Sites Regulation ([CSR] April 1997, amendments to January 2009) is the principal document for the evaluation of the environmental quality of groundwater in British Columbia. The standards listed in the CSR provide numerical concentrations for the evaluation of groundwater quality and identify remedial requirements. Groundwater results were compared to the CSR Schedule 6: Generic Numerical Water Standards and Schedule 10: Generic Numeric Soil and Water. The CSR water standards are divided into four categories based on water use: Irrigation (IW), Livestock (LW), Drinking Water (DW) and Aquatic Life (AW).

Based on previous reports, the direction of groundwater flow across the Site is inferred to be south to southwest. Regional groundwater flow likely follows topography in the area and flows to the west. Potential receptors to groundwater leaving the Site include: i) drinking water wells (SLMHP) present downgradient (south) of the Site; and ii) Shannon Lake, the nearest surface water body to support aquatic life, which is located at a distance of approximately 300 m downgradient of the Site.

In addition, the Guidelines for Canadian Drinking Water Quality ([GCDWQ] sixth edition, May 2008) published by Health Canada on behalf of the Federal – Provincial – Territorial Committee on Drinking Water (CDW) will also be used. These heath-based guidelines are based on current published research related to drinking water quality and potential contaminant health effects, aesthetic effects, and treatment considerations.

4.3 Methodology

4.3.1 Groundwater Monitoring

The 2009 groundwater monitoring program for the Westside Landfill was carried out by members of Golder's technical staff. The Dobbin's Well has been used in the past to represent background groundwater conditions and monitoring wells BH1, BH2, BH4 and BH5 represent downgradient groundwater conditions. The Shannon Lake Mobile Home Park (SLMHP) well is located approximately 320 m downgradient of the site.

Groundwater samples collected from the wells during the 2009 monitoring program were submitted to Caro Environmental Services of Kelowna, BC (Caro) for chemical analyses. Groundwater samples collected from BH1, BH2, BH4, BH5, and the SLMHP well were analyzed for several or all of the following inorganic parameters: pH, conductivity, total dissolved solids, hardness, alkalinity, chloride, sulphate, ammonia nitrogen, nitrate nitrogen, nitrate plus nitrite, and dissolved metals. However, based on information provided by the owner of Dobbin's Well, the well is temporarily out of service, and the property is currently being supplied by Westbank, BC municipal water supply. Therefore, since the well is currently not operational, no water samples were collected from Dobbin's Well during the 2009 monitoring program, and instead the 2005 monitoring results will be used for background comparison purposes.

At a frequency of once every two years, groundwater samples collected from BH1 and BH4 are analyzed for total dissolved solids (TDS), light hydrocarbons, extractable petroleum hydrocarbons, volatile organic compounds, as well as acid and base/neutral extractables, biological oxygen demand (BOD) and chemical oxygen demand (COD). Analysis for these parameters was conducted during the 2009 monitoring program on September 25, 2009.

Groundwater analytical results were compared to both aquatic life and drinking water standards and guidelines. The aquatic life standards used are those of the BC Contaminated Sites Regulation (CSR-AW). The drinking water standards and guidelines used are those in both the BC Contaminated Sites Regulation (CSR DW) and the Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ).

4.4 Soil Vapour Monitoring

The 2009 soil vapour monitoring program was conducted by Golder staff on July 24, 2009 and December 17, 2009 at monitoring wells MW99-1, MW99-2, MW99-3, MW99-4, BH1, BH2, BH4, BH5, BH8, BH101 (shallow/deep), BH102 and BH103. In addition, vapour probes VP07-1 (shallow/deep), VP07-2, VP07-3, VP07-14, VP07-15, and VP07-16, located within the east boundary set back between the landfill and residential development were also monitored during both events. Gases were measured using a Gastech GT02 and Gastech GT402 combustible gas monitor. These instruments contain a mechanical pump which is used in conjunction with a hand operated pump to purge the gas from the monitoring wells and vapour probes until desired well/probe volumes are purged and maximum concentrations are recorded. Each instrument had been calibrated prior to use at the site to one or all of the following calibration gases; methane (CH_4), hydrogen sulphide (H_2S), carbon monoxide (CO), oxygen (O_2) and carbon dioxide (CO_2).

4.5 Groundwater Monitoring Results

Groundwater monitoring results are discussed below with specific subsections for:

i) groundwater elevation data;

ii) monitoring results relative to background concentrations;

iii) monitoring results relative to historic data (trend analysis);

iv) monitoring results relative to drinking water and aquatic life standards and guidelines; and

v) monitoring results for SLMHP well.

As noted previously, the Dobbin's Well has been used in the past to represent background groundwater conditions, and monitoring wells BH1, BH2, BH3, BH4, BH5, and BH7 represent downgradient groundwater conditions. In addition, the SLMHP well is also considered downgradient of the site.

4.5.1 Groundwater Elevation Data

The results of groundwater elevations measured between 1994 and 2009 are presented in Table 5. Historical groundwater elevations are presented in graphical form on Figure 4. As shown, groundwater elevations show seasonal fluctuations but are otherwise relatively consistent. During the 2009 monitoring program, water levels were measured in some or all of the following wells; BH1, BH2, BH3, BH4, BH5, BH7 and BH8 during the March, June, September, and December 2009 monitoring events. In general, the 2009 groundwater elevation data is consistent with previous groundwater elevation data.

Based on the groundwater elevations measured in 2009 and the general topography of the area, it is inferred that groundwater flows in an east to southeastern direction at the northeast portion of the site and in a southeastern direction at the southern portion of the site, as shown on Figure 2. This is consistent with previous monitoring results.

4.6 Monitoring Results Relative to Background Concentrations

The analytical results for samples collected from 1994 through 2009 are presented in Table 6 (General Groundwater Chemistry) and Table 7 (Organic Compounds in Groundwater).

4.6.1 Background Wells

Based on information provided by the owner of Dobbin's Well, the well was disconnected in 2006 due to a pipeline rupture, and the property is currently being supplied by the Westbank municipal water supply. Therefore, since the well is currently not operational, no water samples were collected during the 2006, 2007, 2008, and 2009 monitoring program. However, the chemical data for the background well (Dobbin's Well) has been relatively consistent over the past eleven monitoring events conducted from 1994 through to 2005. Therefore, 2005 monitoring results will be used as representative background conditions.

Concentrations of the indicator parameters for 2005 were generally low or below laboratory method detection limits (MDL) at Dobbin's Well with no parameters above the applicable numerical criteria.

4.6.2 Landfill Monitoring Wells

Similar to previous monitoring results, it appears that the landfill does impact the local groundwater quality. In the monitoring wells presented below, the listed parameters were elevated above background concentrations for either one or all sampling events:

- BH1: Conductivity, TDS, alkalinity, chloride, sulphate, ammonia, nitrate & nitrite, aluminum, barium, boron, calcium, chromium, cobalt, iron, magnesium, manganese, nickel, potassium, sodium, strontium, and uranium.

- BH2: Conductivity, TDS, alkalinity, chloride, ammonia, nitrate & nitrite, aluminum, barium, boron, calcium, chromium, cobalt, iron, magnesium, manganese, nickel, potassium, silicon, sodium, strontium, and uranium.
- BH4: Conductivity, TDS, alkalinity, chloride, sulphate, ammonia, aluminum, barium, boron, calcium, chromium, cobalt, iron, lithium, magnesium, manganese, nickel, potassium, sodium, strontium, and uranium.
- BH5: Conductivity, TDS, alkalinity, chloride, sulphate, nitrate & nitrite, aluminum, barium, boron, cadmium, calcium, chromium, cobalt, iron, lead, magnesium, manganese, nickel, potassium, titanium, and uranium.
- SLMHP: Conductivity, TDS, alkalinity, chloride, nitrate & nitrite, barium, calcium, magnesium, nickel, potassium, and uranium.

Similar to the 2008 monitoring program, 2009 results showed groundwater concentrations were most elevated above background levels in monitoring wells BH1, BH2, and BH4.

Groundwater from domestic water supply well SLMHP and monitoring well BH5 exhibited concentrations moderately above background concentrations. The only parameter at SLMHP that was slightly elevated above applicable numerical standards was Total Dissolved Solids (TDS) with concentrations ranging between 502 mg/L to 538 mg/L for all sampling events in 2009, which exceeds the GCDWQ criteria of 500 mg/L. At BH5, TDS concentrations of 566 mg/L (Mar 2009), 522 mg/L (Sep 2009), and 528 mg/L (Dec 2009) exceeded GCDWQ criteria of 500 mg/L, nitrate concentrations of 10.3 mg/L (Mar 2009) and 10.1 mg/L (Sep 2009) exceeded CSR DW standard of 10 mg/L, and nitrate plus nitrite concentrations of 10.6 mg/L (Mar 2009) and 10.3 mg/L (Sep 2009) exceeded both GCDWQ and CSR DW standards of 10 mg/L. Three metal concentrations in BH5 from June and Sept 2009 also exceeded applicable standards including: aluminum concentrations of 6.66 mg/L and 2.86 mg/L exceeding GCDWQ criteria of 0.1 mg/L and CSR DW standard of 0.2 mg/L, iron concentrations of 8.9 mg/L and 3.86 mg/L exceeding both GCDWQ and CSR DW standards of 0.3 mg/L, and manganese concentrations of 0.96 mg/L and 0.321 mg/L exceeding both GCDWQ and CSR DW standards of 0.05 mg/L.

Once every two years, monitoring wells BH1 and BH4 are sampled for volatile organic compounds (VOC's). During the 2009 monitoring program, sampling of BH1 and BH4 for VOC's on September 25, 2009. Although no background (Dobbin's Well) analytical data exist to be used for comparison for organic compounds analyzed in BH1 and BH4, it is expected that background concentrations for most or all of the organic compounds should be very low. In general, based on the 2009 monitoring data, groundwater from BH1 displays a minor influence from organic compounds while groundwater from BH4 appears to have little or no influence from organic compounds. All concentrations for analyzed parameters were near or below laboratory detection limit (MDL) for both BH1 and BH4, with the exception of the following parameters in BH1; chlorobenzene (0.0019 mg/L), 1,4-Dichlorobenzene (0.003 mg/L which exceeds CSR DW standard of 0.001 mg/L), Benzene (0.0012 mg/L), and 1,2,4-Trichlorobenzene (0.003 mg/L). The next sampling for volatile organic compounds is scheduled for 2011.

4.6.3 Monitoring Results Relative to Historical Data (trend analyses)

For reference purposes, trend analysis graphing from 1994 through to 2009 is presented in Appendix A. Concentrations of the various analyzed inorganic parameters in groundwater collected from BH1, BH2 and BH4 all showed marked increases between 1994 and 1997. Since 1998, concentrations of most analyzed

parameters from these three monitoring wells have only shown slight fluctuations and for most parameters, appear to have reached a relatively steady state.

With the exception of an increased nitrite plus nitrate concentrations between 2005 and 2009, concentrations of indicator parameters at BH5 have not shown significant increases between 1994 and 2009, but rather appear to have remained relatively consistent at low concentrations (with minor fluctuations) for this time period. Although the metals aren't plotted in the appendix, it should be noted that BH5 also showed minor increases from 2008 concentrations for metal parameters such as aluminum, boron, cadmium, chromium, cobalt, lead, nickel, and titanium.

A discussion regarding trends in concentrations for analyzed parameters in groundwater samples collected from the SLMHP is presented below.

4.6.4 Monitoring Results Relative to CSR Drinking Water (DW), Aquatic Life (AW), and Health Canada Guidelines for Canadian Drinking Water Quality (GCDWG) Standards and Guidelines

Concentrations of parameters at BH1, BH2, BH4, BH5, and SLMHP exceeded both CSR DW and GCDWQ Standards (note: the CSR DW and GCDWQ for specified parameters are generally identical) during the 2009 monitoring program. No samples exhibited concentrations of analyzed parameters exceeding Aquatic Life (CSR-AW) Standards.

The following list presents the parameters that exceeded the CSR DW and/or the GCDWQ at one or more sampling events during the 2009 monitoring program at specific monitoring locations:

- BH1: TDS, chloride, iron, magnesium, manganese, LEPH and EPH_{c10-19}.
- BH2: TDS, chloride, aluminum, iron, magnesium, and manganese.
- BH4: TDS, chloride, aluminum, iron, magnesium, manganese, uranium, LEPH and EPH_{c10-19}.
- BH5: TDS, nitrate, nitrate plus nitrite, total nitrogen, aluminum, iron, and manganese.
- SLMHP: TDS.

Note that the calculated TDS values not analyzed by the laboratory have been inferred based on conductivity measurements (i.e., conductivity x 0.667). Furthermore, the standards for chloride, iron and manganese are for aesthetic purposes and are not human health based.

4.6.5 Monitoring Results for SLMHP Well

Drinking water samples collected from the Shannon Lake Mobile Home Park water well SLMHP were analyzed primarily for the parameters of chloride and conductivity for the years 1998 through 2000 as per permit requirements. For this time period, only a limited number of samples were also analyzed for parameters such as nutrients and metals. Beginning in 2001, water samples from SLMHP were also analyzed for nutrients and select dissolved metals, in addition to chloride and conductivity (as per the amended operational permit (2001)).

Since the year 2000, concentrations of analyzed parameters at the SLMHP well have generally stabilized, with minor fluctuations. As noted previously, the only parameter to exceed drinking water standards is TDS. These results are similar to previous sampling events conducted between 1998 and 2008.

Chloride concentrations remained relatively steady during the 2009 monitoring with concentrations ranging from 48.1 mg/L in September 2009 to 64.4 mg/L in June 2009. These results are similar to the 2005 through 2008 sampling results.

TDS concentrations for the 2009 monitoring program were similar to the 2008 results, with concentrations ranging from 502 mg/L in December 2009 to 538 mg/L in June 2009. TDS concentrations exceeded applicable GCDWQ guidelines of 500 mg/L during all four 2009 sampling events.

Samples collected from the SLMHP well during the 2009 monitoring program exhibited laboratory tested pH values of 6.8 (March 2009), 7.59 (June and December 2009), and 7.6 (September 2009), and conductivity values ranging from 831 µS/cm (March 2009) to 918 µS/cm (June 2009).

4.7 Landfill Gas Monitoring Results

The 2008 soil vapour monitoring program was conducted by Golder staff on July 24, 2009 and December 17, 2009 at monitoring wells MW99-1, MW99-2, MW99-3, MW99-4, BH1, BH2, BH4, BH5, BH8, BH101 (shallow/deep), BH102 and BH103 and vapour probes VP07-1 (shallow/deep), VP07-2, VP07-3, VP07-14, VP07-15, and VP07-16. Soil vapour readings are presented in Table 8 and summarized below.

Combustible Gas Methane - Methane concentrations were measured using a Gastech GT402 combustible gas meter. In general methane concentrations ranged from 0 parts per million (ppm) (VP07-2 and vp07-14) to 360 ppm (BH102) during the July 2009 monitoring event. During the December 2009 monitoring event, concentrations ranged from 0 ppm (BH4 AND BH5) to >10,000 ppm (BH102). Based on the results, methane concentrations decreased during the July 2009 monitoring and increased slightly during the December 2009 monitoring event when compared to 2008 results. Maximum methane concentrations of 360 ppm (BH102) during July 2009 and >10,000 ppm (BH102) during December 2009 compared to 2008 maximum concentrations of 3,560 ppm (VP07-15) in July 2006 and 8,460 ppm (BH102) in December 2008. It should be noted that concentrations less than 40 ppm are considered representative of background conditions for this instrument.

Oxygen - Oxygen concentrations were measured using a Gastech GT402 combustible gas meter with concentrations ranging from 14.7% at BH8 to near atmospheric level of 20.9% at BH4 and VP07-14 during the July 2009 monitoring event. During the December 2009 monitoring event, oxygen levels ranged from 18.6% at MW99-4 to 20.9% at monitoring locations BH4, BH5, BH8, BH102, and VP07-1S.

Carbon Monoxide – Carbon monoxide was measured using a Gastech GT402 combustible gas meter with concentrations of 0 ppm during both July and December 2009 monitoring events.

Carbon Dioxide - Carbon monoxide was measured using a Gastech GT402 combustible gas meter with concentrations ranging from 0% (BH4, VP07-2, and VP07-14) to >5% (BH2, BH8, and BH101 (deep) during the July 2009 monitoring event and 0% at monitors BH5 and BH8 to >5% at MW99-4, BH102, and VP07-16 during the December 2009 monitoring event.

Hydrogen Sulphide – Consistent with previous monitoring events, concentrations of H_2S were 0 ppm in all wells during the July and December 2009 monitoring events.

4.8 Quality Assurance / Quality Control

To ensure that the sampling and analytical data were interpretable, meaningful and reproducible, conformance to a Golder Quality Assurance and Quality Control (QA/QC) program was followed. This involved using QA/QC measures in both the collection (field program) and analysis (laboratory) of environmental samples. The following discussion includes a brief summary of the QA/QC measures implemented by Golder during the field program and during our review of the data, as well as the QA/QC measures implemented by the analytical laboratory.

Quality Control (QC) measures used in the collection, preservation and delivery of samples included the following measures:

- sampling methods were consistent with established Golder protocols and provincial/federal requirements;
- field notes were recorded during all stages of the investigation and are available upon request;
- samples were subsequently transported to the laboratory using Golder and laboratory chain of custody procedures. Copies of the chain-of-custody forms are provided in Appendix B.

The Quality Assurance (QA) measures established for the field program included:

- Submission of blind field duplicate samples for a minimum of 10% of the samples analyzed. A blind field duplicate sample is a second sample of a certain media (e.g., soil, water) from the same location that is submitted to the analytical lab under a separate label.
- The relative percent difference (RPD) between field duplicate sample results was used to assess duplicate sample data. The RPD is a measure of the variability between two outcomes from the same procedure or process and is calculated by

$$absolute\left(\frac{(x_1 - x_2)}{average(x_1, x_2)}\right) \times 100$$

  where x_1 is the original sample result and x_2 is the blind field duplicate result. In general, the RPD should not be more than 30%. A RPD greater than 30% may reflect "within jar" variability (which reflects the nature of the contaminant distribution) or variation in the test procedures. If analytical results are within five times the laboratory detection limit for the parameter, then calculation of a RPD is not a valid means of assessing laboratory bias.

The following Data Quality Objectives were established for the laboratory program:

- The chemical laboratory that was used must have achieved proficiency certification by the CAEAL for the analyses conducted.
- Caro performed all the chemical analysis of the water samples for this investigation. Caro is certified by CAEAL for all analytical methods used for this program. Each Caro batch includes at least one analytical

blank, one laboratory duplicate sample and one reference sample, as required by the data quality objectives.

- All reports from the labs are internally reviewed prior to submission to Golder. If any internal QA/QC problems are encountered, the field samples and internal QA/QC samples are re-analysed. No samples were re-analysed for this field investigation. The results are included in the analytical laboratory reports, provided in Appendix A.

4.9 Results of QA / QC

A total of four duplicate water samples were collected during the 2009 Monitoring program, one for each sampling event. The duplicate water samples collected during the March and June 2009 events were both labelled BH6 and were duplicates from samples collected from monitoring well BH1. The duplicate water samples collected during the September and December 2009 events were both labelled BHA and were duplicates from samples collected from SLMHP and BH2 respectively. All samples were analyzed for pH, conductivity, total dissolved solids, hardness, alkalinity, chloride, sulphate, ammonia nitrogen, nitrate nitrogen, nitrate plus nitrite, and dissolved metals to determine any laboratory bias. This satisfies the 10% duplicate samples guideline discussed in Section 4.0.

Results for the duplicate samples collected during the 2009 monitoring events are presented in Table 9 and were generally similar (less than 30% RPD values) to that of the duplicate samples with the exception of ammonia concentrations RPD of 40.0% during the September 2009 event, and nitrate (40% RPD), barium (168% RPD), and copper (42.9% RPD) during the December 2009 sampling event. The overall difference in concentrations for all these duplicates were quite low (0.01 mg/L, 0.31 mg/L, 0.155 mg/L, and 0.0024 mg/L respectively). Thus it is considered that these differences are a result of in jar variability and that the results would not exceed applicable CSR-AW standards even if the RPD variations were applied to these concentrations. These results are considered acceptable for the purposes of the monitoring program.

5.0 DISCUSSION OF GROUNDWATER AND LANDFILL GAS MONITORING

The results of the 2009 monitoring program at the Westside landfill are summarized below:

- Similar to 2008 results, monitoring wells BH1, BH2, and BH4 (at the landfill boundary) showed elevated concentrations of several parameters relative to Dobbin's Well (background). Parameters elevated above background conditions included conductivity, TDS, alkalinity, chloride, sulphate, nitrate plus nitrite, ammonia, barium, boron, calcium, chromium, cobalt, iron, magnesium, manganese, molybdenum, nickel, potassium, sodium, silicon, strontium, and uranium. Concentrations of these indicator parameters remained relatively constant during the 2009 monitoring program.
- With the exception of increased chloride and nitrite plus nitrate concentrations between 2005 and 2009, concentrations of indicator parameters at downgradient well BH5 have not shown significant increases between 1994 and 2009, but rather appear to have remained relatively consistent at low concentrations (with minor fluctuations) for this time period.

- Similar to previous monitoring programs, concentrations at BH1, located within the landfill, had the highest concentrations above background conditions, followed by BH2, BH4, BH5 and Shannon Lake Mobile Home Park (SLMHP), respectively.
- Concentrations of parameters at BH1, BH2, BH4, BH5, and SLMHP exceeded both the CSR DW and GCDWQ Standards during the 2009 monitoring program. No samples exhibited concentrations of analyzed parameters exceeding Aquatic Life (CSR-AW) Standards. The only exceedance at the Shannon Lake Mobile Home Park well was total dissolved solids (TDS).
- Methane concentrations at all locations along the site boundary were less than 2,500 ppm, and continue to be much less than the 50,000 ppm (lower explosive limit) guideline in the BC Landfill Criteria. In 2009, methane concentrations remained within the range of historical concentrations but continue to vary throughout the year.
- Other landfill gas parameters at the perimeter of the site remain low.

6.0 RECOMMENDATIONS

Based on the 2009 groundwater monitoring results, Golder recommends the current prescribed monitoring program be continued through 2010. The groundwater and landfill gas monitoring program after 2010 should be reviewed when the landfill Closure Plan is finalized.

Given that the landfill closure process is underway, the scope of future monitoring reports should also be reviewed, as many of the operational aspects discussed in Sections 2 and 3 will no longer apply.

7.0 LIMITATIONS AND USE OF REPORT

This report was prepared for the exclusive use of Regional District of the Central Okanagan. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it are the responsibility of such third parties. Golder accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken based on this report.

The report, which includes all appendices and attachments, is based on data and information collected during the investigation conducted by Golder Associates Ltd.'s personnel. It provides a level of assurance commensurate with the level of study. The report is based solely on the Site conditions at the time of the site investigation conducted in 2008, as described in this report.

In evaluating the site, Golder has relied in good faith on information provided by the individuals and agencies noted in this report. We accept no responsibility for any deficiency, misstatements or inaccuracies contained in this report as a result of omissions, misinterpretations of fraudulent acts of the persons or agencies interviewed.

The assessment of environmental conditions and possible hazards at this Site has been made using the results of chemical analysis of discrete groundwater samples from a limited number of locations. The Site conditions between sampling locations have been inferred based on conditions observed at borehole, monitoring well and test pit locations. Subsurface conditions may vary from these sample locations. Additional study, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of study.

However, it is never possible, even with exhaustive sampling and testing, to dismiss the possibility that part of a site may be contaminated and remain undetected.

This investigation was performed according to current professional standards and practices in the environmental field. If new information is discovered during future work, including excavations, borings or other activities or studies, Golder should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

8.0 CLOSURE

We trust that this report provides you with the information that you require at this time. Should you require additional information or have any questions, please feel free to contact the undersigned at your earliest convenience.

GOLDER ASSOCIATES LTD.

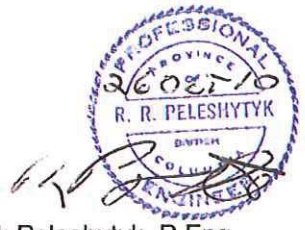

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TABLE 1:
SUMMARY OF LANDFILL ESTIMATES FOR 2009
WESTSIDE LANDFILL
WEST KELOWNA, BC

April 2010 04-1440-062

Mass of refuse landfilled in 2009	10,575 metric tonnes
Volume of refuse landfilled (assume compacted refuse density of 0.55 tonnnes/m3)	19,227 m^3
Volume of cover material landfilled (asssume 33% of final volume is cover)	6,345 m^3
Total volume of refuse and cover landfilled	25,572 m^3

TABLE 2:
REMAINING VOLUME
WESTSIDE LANDFILL,
WEST KELOWNA, BC

Year	Contributing Population	Per Capita Production (tonnes/ person/ year)[2]	Production Rate (tonnes)[1]	Compacted Refuse Density (kg/m^3)	Production Vol.(m^3)	Cover Requirement @ 33% of total volume	Total Volume (m^3)	Remaining Volume (m^3)
1997	31837	0.524	16698					
1998	37669	0.481	18122					803242
1999	37895	0.502	19042	550	34622	11425	46047	759310
2000	38653	0.498	19249	550	34998	11549	46548	713147
2001	39426	0.502	19790	550	35982	11994	47976	665171
2002	40214	0.524	21057	550	38285	12634	50920	614251
2003	40932	0.564	23099	550	41998	13859	55858	558394
2004	42770	0.713	30497	550	55449	18298	73747	484646
2005	43905	0.643	28244	550	51353	16946	68299	416347
2006	45293	0.637	28857	550	52467	17314	69781	346566
2007	42101	0.713	29997	550	54540	17998	72538	274028
2008	43444	0.775	33659	550	61198	20195	81394	192634
2009	44313	0.590	10575	550	19227	6345	25572	167062

[1] - Based on actual production rate for 1997 through to 2008.

[2] - Based on landfill volume survey completed by Earth Tech.

Production rate for 2009 is an average of 1997-2008 rates

Population increase of approximately 3% and compaction density of 550 kg/m^3 assumed for 2009.

Remaining volume based on October 2003 survey data completed by CTQ Consultants Ltd.

TABLE 3:
CLOSURE AND OPERATIONAL COST BUDGET
WESTSIDE LANDFILL
WEST KELOWNA, BC

1.0 Previously Estimated Closure and Post Closure Capital Costs					
Item	**Quantity**	**Unit**	**Unit Cost**	**Cost**	**Comments**
Cover material	60000	m^3	10	$600,000	Assume that 1/2 of cover material is mined on-site
Hydroseeding	120000	m^2	1	$120,000	As per TRUE Engineering
Top soil/compost mix	9000	m^3	10	$90,000	Assume that only top soil is purchased
Fencing		m	30	$0	
Signage	1000		1	$1,000	Nominal fee
Settlement hub installation	4		1000	$4,000	
Subtotal				$815,000	
Contingencies	15	%		$122,250	
Total				$937,250	
1.1 Collection/Disposal Systems					
Landfill Gas*	1		100000	$100,000	Collection and flaring system
Extraction Well and Pump*	4		25000	$100,000	
Leachate Piping*	100		300	$30,000	100m of 100mm gravity sewer, connect to municipal sewer
Perimeter/On-site ditching	2500	m	10	$25,000	
Subtotal				$255,000	
Contingencies	15	%		$38,250	
Subtotal				$293,250	
TOTAL Closure Costs				$1,230,500	Assuming no final cover material is mined on-site
2008 Closure Budget				$350,000	Amount provided by RDCO
2.0 Yearly Operational Costs					
Item	**Number**	**Unit**	**Unit Cost**	**Cost**	**Comments**
Quarterly Site Inspections	4		500	$2,000	
Annual Report	1		2500	$2,500	
Yearly Monitoring Costs	4		1500	$6,000	Twice per year
Landfill gas monitoring	3		250	$750	Twice per year
Groundwater sampling	32		500	$16,000	Quarterly
Survey of settlement hubs	1		500	$500	Once per year
Sub-total				$27,750	
Contingencies	15	%		$4,163	
Total Yearly Costs				$31,913	Approximate cost, closure through to 25 year post closure

* optional systems

TABLE 4:
SUMMARY OF GROUNDWATER MONITORING REQUIREMENTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Requirement	Frequency	Monitoring Wells
Measurement of groundwater elevations	Quarterly	BH1, BH2, BH4, BH5, BH6, BH7, BH8 and SLMHP
Measurement of groundwater elevations	Yearly	BH3, Dobbins Well
Analysis of groundwater samples for Group 1 parameters	Quarterly	BH1, BH2, BH4, BH5, and SLMHP
Analysis of groundwater samples for Group 1 parameters	Yearly	Dobbins Well
Analysis of groundwater samples for conductivity and chloride	Yearly	Any other domestic well, besides SLMHP, being used for drinking water within 1,000m of landfill
Analysis of groundwater for Group 2 parameters	Every 2 years (2007, 2009 etc.)	BH1, and BH4
Conduct landfill gas monitoring program for Group 3 parameters	Semi-annual	All monitoring wells in area of landfill

Group 1 Parameters: pH, conductivity, total alkalinity, chloride, sulphate, ammonia nitrogen, nitrate nitrogen, aluminum, antimony, arsenic, barium, beryllium, bismuth, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, phosphorus, potassium, selenium, strontium, thallium, tin, titanium, tungsten, vanadium and zinc.

Group 2 Parameters: total dissolved solids (TDS), boron, light hydrocarbons, extractable petroleum hydrocarbons, volatile organic compounds and acid and base/neutral extractables, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD).

Group 3 Parameters: methane, hydrogen sulphide gas, carbon dioxide and oxygen.

TABLE 5:
MONITORING WELL AND GROUNDWATER ELEVATIONS
WESTSIDE LANDFILL,
WEST KELOWNA, BC

Borehole	BH1		BH2		BH3		BH4		BH5		BH7		BH8		MW99-1		MW99-2		MW99-3		MW99-4	
Ground Elevation (m)	519.06		526.64		471.82		495.62		488.58		500.96		471.89		544.90		545.86		537.63		535.61	
Pipe Elevation (m)	519.41		527.41		471.97		496.45		489.24		501.75		472.75		545.78		546.70		538.30		536.38	
Pipe Elevation (m) (Dec.2005)			527.56		472.62																	
Water Level	Depth (m)	Elevation (m)	Depth (m)	Elevation (m)	Depth (m)	Elevation (m)	Depth (m)	Elevation (m)	Depth (m)	Elevation (m)	Depth (m)	Elevation (m)	Depth (m)	Elevation (m)	Depth (m)	Elevation (m)	Depth (m)	Elevation (m)	Depth (m)	Elevation (m)	Depth (m)	Elevation (m)
Date																						
12-Jan-94	3.32	516.09	3.34	524.07	14.22	457.75	2.33	494.12	11.80	477.44	4.69	497.06	5.17	467.58	nm		nm		nm		nm	
17-Jul-97	3.14	516.27	3.28	524.13	12.90	459.07	2.40	494.05	11.46	477.78	3.55	498.20	5.29	467.46	nm		nm		nm		nm	
24-Sep-98	3.24	516.17	nm		13.70	458.27	nm		nm		nm		nm		nm		nm		nm		nm	
7-Dec-98	3.23	516.18	nm		13.60	458.37	nm		nm		nm		nm		nm		nm		nm		nm	
3-Mar-99	2.72	516.69	nm		14.00	457.97	nm		nm		nm		nm		nm		nm		nm		nm	
26-Apr-99	nm		nm		nm		nm		nm		nm		nm		5.16	540.62	5.07	541.63	dry		5.50	530.88
1-Jun-99	3.09	516.32	3.29	524.12	13.52	458.45	2.67	493.78	11.72	477.52	4.75	497.00	5.39	467.36	nm		nm		nm		nm	
8-Jul-99	nm		dry		13.89	458.08	nm		11.67	477.57	nm		nm		nm		nm		nm		nm	
1-Sep-99	3.07	516.34	3.31	524.10	nm		2.43	494.02	11.70	477.54	nm		nm		nm		nm		nm		nm	
1-Dec-99	nm		3.29	524.12	nm		3.00	493.45	11.65	477.59	4.76	496.99	5.52	467.23	nm		nm		nm		nm	
28-Mar-00	2.70	516.71	3.20	524.21	nm		2.00	494.45	11.68	477.56	nm		nm		nm		nm		nm		nm	
13-Jul-00	3.09	516.32	3.29	524.12	13.52	458.45	2.67	493.78	11.72	477.52	4.75	497.00	5.39	467.36	nm		nm		nm		nm	
27-Jul-00	3.19	516.22	3.27	524.15	nm		3.13	493.32	11.68	477.56	nm		5.40	467.36	6.02	539.76	5.49	541.21	5.00	533.30	5.87	530.51
6-Sep-00	3.17	516.24	3.29	524.12	nm		3.16	493.29	11.71	477.53	5.10	496.66	5.70	467.05	nm		nm		nm		nm	
18-Dec-00	3.41	516.00	3.31	524.10	nm		3.33	493.12	11.87	477.38	5.23	496.53	5.80	466.95	nm		nm		nm		nm	
21-Dec-00	3.40	516.01	3.30	524.11	nm		3.38	493.07	11.87	477.38	5.23	496.53	5.80	466.95	6.74	539.04	6.34	540.37	5.00	533.30	5.80	530.59
1-Mar-01	3.14	516.27	3.26	524.15	nm		2.45	494.01	11.89	477.35	5.196	496.55	5.164	467.59	nm		nm		nm		nm	
1-Jun-01	3.360	516.05	3.319	524.09	nm		2.648	493.80	11.849	477.39	4.968	496.78	5.603	467.15	nm		nm		nm		nm	
10-Jul-01	3.375	516.04	3.33	524.08	nm		3.27	493.18	11.783	477.46	nm		5.698	467.05	6.745	539.04	5.853	540.85	5.310	532.99	5.890	530.49
1-Sep-01	3.308	516.10	3.332	524.08	14.282	457.69	2.768	493.68	11.79	477.45	5.553	496.20	5.695	467.06	nm		nm		nm		nm	
1-Dec-01	3.11	516.31	3.29	524.12	nm		2.461	493.99	11.947	477.29	5.546	496.20	5.769	466.98	nm		nm		nm		nm	
7-Jan-02	2.68	516.73	3.32	524.09	nm		1.808	494.64	11.93	477.31	nm		5.104	467.65	6.75	539.04	5.87	540.84	5.44	532.86	5.99	530.39
13-Mar-02	3.09	516.32	3.29	524.12	nm		2.155	494.30	11.932	477.31	5.335	496.42	5.105	467.65	nm		nm		nm		nm	
17-Jun-02	3.24	516.18	3.30	524.11	nm		2.868	493.58	11.785	477.46	4.92	496.83	5.30	467.45	nm		nm		nm		nm	
4-Oct-02	2.88	516.53	3.28	524.13	nm		nm		11.585	477.66	5.33	496.42	5.72	467.03	nm		nm		nm		nm	
18-Dec-02	3.14	516.27	3.32	524.10	nm		2.899	493.55	11.89	477.35	5.245	496.51	5.858	466.89	nm		nm		nm		nm	
10-Apr-03	3.18	516.23	3.33	524.08	nm		2.568	493.88	11.852	477.39	5.115	496.64	5.235	467.52	nm		nm		nm		nm	
9-Jun-03	3.30	516.11	3.35	524.07	nm		3.25	493.20	11.86	477.38	5.255	496.50	5.545	467.21	nm		nm		nm		nm	
26-Jul-03	3.27	516.14	3.08	524.33	nm		3.46	492.99	11.84	477.40	nm		5.92	466.83	6.87	538.91	6.4	540.30	5.24	533.06	7.1	529.28
11-Sep-03	3.31	516.10	2.88	524.53	nm		3.64	492.81	12.1	477.14	6.17	495.58	5.88	466.87	nm		nm		nm		nm	
17-Dec-03	3.02	516.39	3.34	524.07	nm		2.08	494.37	Dry		nm		5.275	467.48	6.75	539.03	6.97	539.73	Dry		7.075	529.31
17-Mar-04	2.81	516.23	3.23	524.18	15.09	456.89	2.073	494.38	Dry		nm		nm		nm		nm		nm		nm	
27-May-04	2.83	516.58	3.30	524.11	14.92	457.06	1.995	494.46	11.75	477.49	4.623	497.127	5.273	467.48	nm		nm		nm		nm	
1-Sep-04	2.78	516.64	3.27	524.14	nm		2.12	494.33	11.595	477.65	nm		5.60	467.15	6.74	539.04	5.78	540.92	5	533.30	7.07	529.31
23-Sep-04	2.76	516.65	3.25	524.17	nm		2.02	494.43	11.595	477.65	4.508	497.24	5.31	467.44	nm		nm		nm		nm	
17-Dec-04	2.70	516.71	3.23	524.19	nm		1.73	494.72	11.615	477.63	nm		4.99	467.76	5.7	540.08	5.24	541.46	5.12	533.18	7.075	529.31
24-Mar-05	2.89	516.53	3.20	524.21	14.36	458.26	2.333	494.12	11.535	477.71	4.115	497.24	5.25	467.50	5.227	540.55	5.013	541.69	4.395	533.905	5.417	530.96
30-May-05	3.08	516.33	3.22	524.19	14.11	458.51	2.865	493.59	11.47	477.77	3.91	497.24	5.30	467.45	nm		nm		nm		nm	
23-Sep-05	3.16	516.25	3.30	524.12	14.32	458.30	3.45	493.00	11.6	477.64	4.575	497.24	5.79	466.96	6.735	539.05	5.685	541.02	4.575	533.725	6.753	529.63
13-Dec-05	3.27	516.15	3.62	523.94	nm		3.443	493.01	11.663	477.58	nm		nm		nm		nm		nm		nm	
15-Dec-05	3.27	516.15	3.49	524.08	14.48	458.15	3.535	492.92	11.66	477.58	4.680	497.07	5.58	467.17	6.745	539.04	5.955	540.75	4.778	533.52	6.598	529.78
26-Mar-06	3.00	516.41	3.44	524.12	14.65	457.97	2.22	494.23	11.65	477.59	4.633	497.12	5.61	467.14	5.165	540.62	5.1555	541.54	4.67	533.63	5.888	530.49
31-May-06	3.08	516.33	3.45	524.11	14.50	458.12	2.501	493.95	11.56	477.68	4.365	497.39	5.20	467.55	5.14	540.64	5.255	541.45	4.746	533.55	5.832	530.55
26-Jul-06	2.97	516.44	3.49	524.07	14.37	458.26	2.67	493.78	11.5	477.74	4.613	497.14	5.26	467.49	5.163	540.62	5.483	541.22	4.415	533.89	6.143	530.24
3-Oct-06	3.17	516.25	3.51	524.05	14.60	458.02	3.067	493.38	11.645	477.60	5.187	496.56	5.28	467.47	nm		nm		nm		nm	
5-Dec-06	3.05	516.36	3.49	524.08	14.73	457.89	3.031	493.419	11.663	477.58	4.870	496.88	5.24	467.52	nm		nm		nm		nm	
11-Dec-06	3.04	516.37	3.48	524.08	14.73	457.89	2.915	493.535	11.643	477.60	4.868	496.88	5.23	467.53	5.17	540.61	5.43	541.27	4.84	533.46	6.23	530.15
3-Apr-07	2.93	516.485	3.43	524.13	nm		2.323	494.127	11.59	477.65	4.703	497.05	5.23	467.52	nm		nm		nm		nm	
1-Jun-07	3.11	516.297	3.46	524.10	nm		2.912	493.538	11.583	477.66	4.560	497.19	5.28	467.47	nm		nm		nm		nm	
25-Sep-07	3.21	516.205	3.52	524.05	nm		2.94	493.51	11.57	477.67	4.710	497.04	5.26	467.49	5.15	540.64	5.24	541.47	4.58	533.72	6.35	530.03
20-Dec-07	3.05	516.36	3.50	524.06	nm		2.85	493.6	11.615	477.63	4.60	497.15	5.23	467.53	nm		nm		nm		nm	
14-Apr-08	3.12	516.29	3.50	524.06	nm		2.9	493.55	11.6	477.64	4.62	497.13	5.25	467.51	nm		nm		nm		nm	
23-Jun-08	3.08	516.33	3.55	524.01	nm		3.29	493.16	11.59	477.65	nm		5.24	467.51	nm		nm		nm		nm	
30-Sep-08	3.29	516.12	3.575	523.99	nm		3.41	493.04	11.71	477.53	5.157	496.59	5.297	467.45	nm		nm		nm		nm	
2-Dec-08	3.39	516.02	3.58	523.98	14.99	457.63	3.553	492.897	11.795	477.45	5.17	496.58	5.28	467.47	nm		nm		nm		nm	
27-Mar-09	3.103	516.307	3.55	524.01	15.13	457.49	2.51	493.94	11.725	477.52	5.012	496.74	5.243	467.51	nm		nm		nm		nm	
25-Jun-09	nm		nm		nm		nm		nm		nm		nm		nm		nm		nm		nm	
25-Sep-09	3.12	516.29	3.623	523.94	15.283	457.34	2.525	493.925	11.72	477.52	5.303	496.45	5.303	467.45	nm		nm		nm		nm	
17-Dec-09	3.10	516.31	3.58	523.98	15.12	457.50	2.69	493.76	11.73	477.51	5.19	496.56	5.27	467.48	nm		nm		nm		nm	

Notes:
1) All elevations in metres above sea level.
2) nm - not measured.
3) na - not available

TABLE 6:
GENERAL GROUNDWATER CHEMISTRY
WESTSIDE LANDFILL
WEST KELOWNA, BC

BH1

PARAMETER	GCDWQ	Notes	CSR - AW	Notes	CSR - DW	Notes	Jun-94	Jul-97	Sep-98	Dec-98
Physical										
pH		AO	-		-				6.7	7.2
Conductivity (uS/cm)	-		-		-		3,900	3,870	3,880	4,060
TDS	500	AO	-		-				3,130	3,880
Calculated TDS[14]	500	AO	-		-		2,601	2,648	2,588	2,708
Hardness	-		-		-					
Dissolved Anions										
Total Alkalinity	-		-		-		1,560	1,930	1,690	1,690
Chloride	250	AO	-		250		388	538	515	498
Sulphate	500	AO	1,000		500		<10.0	2	<2	<2
Nutrients										
Ammonia (as N)	-		1.31-18.4	pH	-		0.337	1.25	0.71	0.68
Nitrate (as N)	45	MAC	400		10		<0.060	<0.005		
Nitrate & Nitrite (as N)	10		400		10				0.07	0.03
Total Nitrogen					10					
Total Kjeldahl Nitrogen	-		-		-					
Organic Nitrogen	-		-		-					
Total Phosphorus	-		-		-		<0.30	0.3	0.39	0.35
Oxygen Demand										
BOD[5]	-		-		-			12	26	29
COD[6]	-		-		-			418	390	380
BOD:COD	-		-		-			0.03	0.07	0.08
Total Organic Carbon	-		-		-					
Dissolved Metals										
Aluminum	0.1		-		0.2		<0.02	0.03	<0.2	<0.2
Antimony	0.006	IMAC	0.2		0.006		<0.02	0.0002		
Arsenic	0.010	IMAC	0.05		0.025		<0.07	0.0159	0.012	0.011
Barium	1	MAC	10		1		0.056	0.08	0.07	0.08
Beryllium	-		0.053		-		<0.005	<0.008	<0.005	<0.005
Bismuth	-		-		-		0.52	0.1	0.1	0.1
Boron	5	IMAC	50		5			1.3	1.3	1.2
Cadmium	0.005	MAC	0.0001-0.0006	H	0.005		<0.010	<0.0002	<0.0002	<0.0002
Calcium	-		-		-		336	407	409	408
Chromium	0.05	MAC	0.01-0.09	V	0.05		<0.015	0.016	<0.01	<0.01
Cobalt	-		0.04		-		<0.015	<0.01	<0.01	<0.01
Copper	1	AO	0.02-0.09	H	1	AO	<0.010	0.027	0.02	<0.01
Iron	0.3	AO	-		0.3	AO	18.2	17.8	13.9	18.4
Lead	0.01	MAC	0.04-0.16	H	0.01		<0.050	<0.001	<0.001	<0.001
Lithium	-		-		-		<0.015	0.01	-	-
Magnesium	-		-		100	AO	217	240	241	238
Manganese	0.05	AO	-		0.05	AO	11.08	19.1	10.3	10.8
Mercury	0.001	MAC	0.001		0.001				0.00008	0.00004
Molybdenum	-		10		0.25		<0.030	<0.03	<0.03	<0.03
Nickel	-		0.25-1.5	H	-		0.038	0.05	0.06	<0.05
Phosphorus	-		-		-					
Potassium	-		-		-		3.7	8	6	3
Selenium	0.01	MAC	0.01		0.01		<0.20	0.001	<0.003	0.0007
Silicon	-		-		-					
Silver	-		.0005-.015	H	-					
Sodium	200	AO	-		200		111	172	186	178
Strontium	-		-		-		2.38	3.19	3.32	3.26
Tellurium										
Thallium	-		0.003		-		<0.10	<0.001		
Thorium										
Tin	-		-		-		<0.30	<0.03		
Titanium	-		1.0		-		0.020	<0.01	0.03	<0.01
Tungsten	-		-		-		<0.10			
Uranium	0.02	IMAC	3		0.2					
Vanadium	-		-		-		0.040	<0.03	<0.03	<0.03
Zinc	5	AO	0.075-2.4	H	5	AO	<0.005	<0.008	0.005	0.006
Zirconium										
Other										
Phenol	-		0.01		-					0.09
LEPH[7]	-		0.5		-					
HEPH[8]	-		-		-					
EPH(10-19)	-		0.5		-					
EPH(19-32)	-		-		-					

Notes
1. All concentrations in mg/L, unless otherwise noted.
2. GCDWQ - Guidelines for Canadian Drinking Water Quality (sixth edition, 2008)
   MAC = Maximum Acceptable Concentration
   IMAC = Interim Maximum Acceptable Concentration
   AO = Aesthetic Objective
3. CSR - DW - BC Contaminated Sites Regulation, Standard for Drinking Water
4. CSR - AW - BC Contaminated Sites Regulation, Standard for Aquatic Life
   pH - pH dependent standard
   H - hardness dependent standard
   V - valence dependent standard
5. BOD - Biological Oxygen Demand (5-day)
6. COD - Chemical Oxygen Demand
7. LEPH - Light Extractable Petroleum Hydrocarbons
8. HEPH - Heavy Extractable Petroleum Hydrocarbons
9. - no standard
10. Blank indicates not measured.
11. Underlined and shaded - indicates concentration exceeds GCDWQ
12. Bold and shaded - indicates that concentration exceeds CSR - DW or AW.
13. Underlined, bold and shaded - indicates that concentration exceeds GCDWQ and CSR - DW
14. Assumed TDS, calculated from conductivity value multiplied by 0.667.

TABLE 6:
GENERAL GROUNDWATER CHEMISTRY
WESTSIDE LANDFILL
WEST KELOWNA, BC

BH2 sampling dates: Jun-94, Jul-97, Jun-99, Sep-99, Dec-99, Mar-00, Jul-00, Sep-00, Dec-00, Mar-01, Jun-01, Sep-01, Dec-01, Mar-02, Jun-02, Oct-02, Dec-02, Apr-03, Jun-03, Sep-03, Dec-03, Mar-04, May-04, Sep-04, Mar-05, May-05, Sep-05, Dec-05, Mar-06, May-06, Oct-06, Dec-06, Apr-07, Jun-07, Sep-07, Dec-07, Apr-08, Jun-08, Sep-08, Dec-08, Mar-09, Jun-09, Sep-09, Dec-09

PARAMETER	GCDWQ	Notes	CSR - AW	Notes	CSR - DW	BH2
Physical						
pH		AO	-		-	[illegible]
Conductivity (uS/cm)	-		-		-	[illegible]
TDS	500	AO	-		-	[illegible]
Calculated TDS [14]	500	AO	-		-	[illegible]
Hardness	-		-		-	[illegible]
Dissolved Anions						
Total Alkalinity	-		-		-	[illegible]
Chloride	250	AO	-		250	[illegible]
Sulphate	500	AO	1,000		500	[illegible]
Nutrients						
Ammonia (as N)	-		1.31-18.4	pH	-	[illegible]
Nitrate (as N)	45	MAC	400		10	[illegible]
Nitrate & Nitrite (as N)	10		400		10	[illegible]
Total Nitrogen					10	[illegible]
Total Kjeldahl Nitrogen	-		-		-	[illegible]
Organic Nitrogen	-		-		-	[illegible]
Total Phosphorus	-		-		-	[illegible]
Oxygen Demand						
BOD[5]	-		-		-	[illegible]
COD[6]	-		-		-	[illegible]
BOD:COD	-		-		-	[illegible]
Total Organic Carbon	-		-		-	[illegible]
Dissolved Metals						
Aluminum	0.1		-		0.2	[illegible]
Antimony	0.006	IMAC	0.2		0.006	[illegible]
Arsenic	0.010	IMAC	0.05		0.025	[illegible]
Barium	1	MAC	10		1	[illegible]
Beryllium	-		0.053		-	[illegible]
Bismuth	-		-		-	[illegible]
Boron	5	IMAC	50		5	[illegible]
Cadmium	0.005	MAC	0.0001-0.0006	H	0.005	[illegible]
Calcium	-		-		-	[illegible]
Chromium	0.05	MAC	0.01-0.09	V	0.05	[illegible]
Cobalt	-		0.04		-	[illegible]
Copper	1	AO	0.02-0.09	H	1	[illegible]
Iron	0.3	AO	-		0.3	[illegible]
Lead	0.01	MAC	0.04-0.16	H	0.01	[illegible]
Lithium	-		-		-	[illegible]
Magnesium	-		-		100	[illegible]
Manganese	0.05	AO	-		0.05	[illegible]
Mercury	0.001	MAC	0.001		0.001	[illegible]
Molybdenum	-		10		0.25	[illegible]
Nickel	-		0.25-1.5	H	-	[illegible]
Phosphorus	-		-		-	[illegible]
Potassium	-		-		-	[illegible]
Selenium	0.01	MAC	0.01		0.01	[illegible]
Silicon	-		-		-	[illegible]
Silver	-		.0005-.015	H	-	[illegible]
Sodium	200	AO	-		200	[illegible]
Strontium	-		-		-	[illegible]
Tellurium						[illegible]
Thallium	-		0.003		-	[illegible]
Thorium						[illegible]
Tin	-		-		-	[illegible]
Titanium	-		1.0		-	[illegible]
Tungsten	-		-		-	[illegible]
Uranium	0.02	IMAC	3		0.2	[illegible]
Vanadium	-		-		-	[illegible]
Zinc	5	AO	0.075-2.4	H	5	[illegible]
Zirconium						[illegible]
Other						
Phenol	-		0.05		-	
LEPH[7]	-		0.5		-	
HEPH[8]	-		-		-	
EPH$_{C10-19}$	-		0.5		-	
EPH$_{C19-32}$	-		-		-	

Notes:
1. All concentrations in mg/L, unless otherwise noted.
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3. CSR - DW - BC Contaminated Sites Regulation, Standard for Drinking Water
4. CSR - AW - BC Contaminated Sites Regulation, Standard for Aquatic Life
   pH - pH dependent standard
   H - hardness dependent standard
   V - valence dependent standard
5. BOD - Biological Oxygen Demand (5-day)
6. COD - Chemical Oxygen Demand
7. LEPH - Light Extractable Petroleum Hydrocarbons
8. HEPH - Heavy Extractable Petroleum Hydrocarbons
9. - no standard.
10. Blank indicates not measured.
11. Underlined and shaded - indicates concentration exceeds GCDWQ
12. Bold and shaded - indicates that concentration exceeds CSR - DW or AW.
13. Underlined, bold and shaded - indicates that concentration exceeds GCDWQ and CSR - DW
14. Assumed TDS, calculated from conductivity value multiplied by 0.667

TABLE 6:
GENERAL GROUNDWATER CHEMISTRY
WESTSIDE LANDFILL
WEST KELOWNA, BC

PARAMETER	GCDWQ	Notes	CSR - AW	Notes	CSR - DW	BH3 Sep-98	BH3 Dec-98	BH3 Mar-99	BH3 Jun-99	BH3 Oct-04
Physical										
pH		AO	-		-	7.2	7.5	8.2		7.8
Conductivity (uS/cm)	-		-		-	804	989	1,040		934
TDS	500	AO	-		-	718	332	738	765	780
Calculated TDS[14]	500	AO	-		-	538	657	694		625
Hardness	-		-		-					
Dissolved Anions										
Total Alkalinity	-		-		-	386	417	435		388
Chloride	250	AO	-		250	40.3	50.5	63		55
Sulphate	500	AO	1,000		500	33	40	45		41
Nutrients										
Ammonia (as N)	-		1.31-18.4	pH	-	<0.02	<0.02	<0.02		<0.02
Nitrate (as N)	45	MAC	400		10					
Nitrate & Nitrite (as N)	10		400		10	1.6	1.9			2.55
Total Nitrogen					10					
Total Kjeldahl Nitrogen	-		-		-					0.30
Organic Nitrogen	-		-		-					0.30
Total Phosphorus	-		-		-	13.5	4.25			
Oxygen Demand										
BOD[5]	-		-		-	<10	<10	<10	31	<10
COD[6]	-		-		-	66	32	29	<10	25
BOD/COD	-		-		-	0.15	0.31	0.34	5.10	0.40
Total Organic Carbon	-		-		-					4.3
Dissolved Metals										
Aluminum	0.1		-		0.2	<0.2	<0.2	<0.2	<0.2	<0.02
Antimony	0.006	IMAC	0.2		0.006					<0.005
Arsenic	0.010	IMAC	0.05		0.025	0.0018	0.0018	0.0019		<0.002
Barium	1	MAC	10		1	<0.01	0.01	0.01		<0.02
Beryllium	-		0.053		-	<0.005	<0.005	<0.005		<0.005
Bismuth	-		-		-	<0.1	<0.1	<0.1		
Boron	5	IMAC	50		5	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	0.005	MAC	0.0001-0.0006	H	0.005	<0.0002	<0.0002	<0.0002		<0.0001
Calcium	-		-		-	103	119	-		116
Chromium	0.05	MAC	0.01-0.09	V	0.05	<0.01	<0.01	<0.01		<0.001
Cobalt	-		0.04		-	<0.01	<0.01	<0.01		<0.001
Copper	1	AO	0.02-0.09	H	1	<0.01	<0.01	0.02		0.002
Iron	0.3	AO	-		0.3	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	0.01	MAC	0.04-0.16	H	0.01	<0.001	<0.001	<0.001		<0.002
Lithium	-		-		-					<0.05
Magnesium	-		-		100	30.7	35.0	35.5		37
Manganese	0.05	AO	-		0.05	0.014	0.013	0.001	0.156	<0.01
Mercury	0.001	MAC	0.001		0.001	<0.00005	<0.00005			<0.0002
Molybdenum	-		10		0.25	<0.03	<0.03	<0.03		0.008
Nickel	-		0.25-1.5	H	-	<0.05	<0.05	<0.05		<0.05
Phosphorus	-		-		-					
Potassium	-		-		-	4	3	3		
Selenium	0.01	MAC	0.01		0.01	0.0009	0.0008	0.0012		<0.002
Silicon	-		-		-					
Silver	-		0005-.015	H	-					<0.0001
Sodium	200	AO	-		200	40	43			47
Strontium	-		-		-	0.654	0.768	0.768		
Tellurium										
Thallium	-		0.003		-					<0.0004
Thorium										
Tin	-		-		-					
Titanium	-		1.0		-	<0.01	<0.01	<0.01		<0.05
Tungsten	-		-		-					
Uranium	0.02	IMAC	3		0.2					0.0078
Vanadium	-		-		-	<0.03	<0.03	<0.03		<0.01
Zinc	5	AO	0.075-2.4	H	5	0.008	0.007	0.008		<0.005
Zirconium										
Other										
Phenol	-		0.01		-	0.03	0.05		0.09	
LEPH[7]	-		0.5		-					
HEPH[8]	-		-		-					
EPH C10-19	-		0.5		-					
EPH C19-32	-		-		-					

Notes:
1. All concentrations in mg/L, unless otherwise noted.
2. GCDWQ - Guidelines for Canadian Drinking Water Quality (sixth edition, 2006)
   MAC = Maximum Acceptable Concentration
   IMAC = Interim Maximum Acceptable Concentration
   AO = Aesthetic Objective
3. CSR - DW - BC Contaminated Sites Regulation, Standard for Drinking Water
4. CSR - AW - BC Contaminated Sites Regulation, Standard for Aquatic Life
   pH - pH dependant standard
   H - hardness dependant standard
   V - valence dependant standard
5. BOD - Biological Oxygen Demand (5-day)
6. COD - Chemical Oxygen Demand
7. LEPH - Light Extractable Petroleum Hydrocarbons
8. HEPH - Heavy Extractable Petroleum Hydrocarbons
9. - no standard
10. Blank indicates not measured.
11. Underlined and shaded - indicates concentration exceeds GCDWQ.
12. Bold and shaded - indicates that concentration exceeds CSR - DW or AW.
13. Underlined, bold and shaded - indicates that concentration exceeds GCDWQ and CSR - DW
14. Assumed TDS, calculated from conductivity value multiplied by 0.667.

TABLE 6: GENERAL GROUNDWATER CHEMISTRY WESTSIDE LANDFILL WEST KELOWNA, BC

PARAMETER	GCDWQ	Notes	CSR - AW	Notes	CSR - DW	BH5 Jun-99	Sep-99	Dec-99	Mar-00	Jul-00	Sep-00	Dec-00
Physical												
pH	-	AO	-		-	8.0	7.6	7.3	7.7	7.3	7.4	7.4
Conductivity (uS/cm)	-		-		-	608	617	632	522	608	657	649
TDS	500	AO	-		-							
Calculated TDS[14]	500	AO	-		-	408	412	422	348	408	438	433
Hardness	-		-		-							
Dissolved Anions												
Total Alkalinity	-		-		-	260	258	338	248	259	288	304
Chloride	250	AO	-		250	30	17.5	14.5	22.0	19.2	18.0	23.0
Sulphate	500	AO	1,000		500	21	18	18	21	18.6	18.5	23
Nutrients												
Ammonia (as N)	-		1.31-18.4	pH	-	<0.01	0.01	0.02	<0.02	0.03	<0.02	<0.02
Nitrate (as N)	45	MAC	400		10	2	1.7	1.6				
Nitrate & Nitrite (as N)	10		400		10				0.65	1.18	1.70	1.63
Total Nitrogen					10							
Total Kjeldahl Nitrogen	-		-		-							
Organic Nitrogen	-		-		-							
Total Phosphorus	-		-		-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.8
Oxygen Demand												
BOD[5]	-		-		-							
COD[6]	-		-		-							
BOD:COD	-		-		-							
Total Organic Carbon	-		-		-							
Dissolved Metals												
Aluminum	0.1		-		0.2	<0.2	<0.2	<0.02	<0.2	<0.2	<0.2	1.2
Antimony	0.006	IMAC	0.2		0.006	<0.2	<0.2	<0.02	<0.2	<0.2	<0.2	<0.2
Arsenic	0.010	IMAC	0.05		0.025	0.0004	0.0013	0.0012	0.0011	0.0011	0.0011	0.0018
Barium	1	MAC	10		1	0.02	0.1	<0.01	0.02	<0.01	0.01	0.07
Beryllium	-		0.053		-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth	-		-		-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron	5	IMAC	50		5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	0.005	MAC	0.0001-0.0006	H	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0003
Calcium	-		-		-	-	-	74	63.6	73.3	69.5	74.2
Chromium	0.05	MAC	0.01-0.09	V	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt	-		0.04		-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	1	AO	0.02-0.09	H	1	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.01
Iron	0.3	AO	-		0.3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	1.84
Lead	0.01	MAC	0.04-0.16	H	0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.006
Lithium	-		-		-	0.02	<0.01	0.01	0.01	0.01	0.05	0.01
Magnesium	-		-		100	18.1	19.6	19.0	17.0	17.9	18.8	18.4
Manganese	0.05	AO	-		0.05	0.238	0.075	0.024	0.397	0.071	0.071	0.323
Mercury	0.001	MAC	0.001		0.001	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum	-		10		0.25	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Nickel	-		0.25-1.5	H	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus	-		-		-							
Potassium	-		-		-	4	<2	3	2	3	3	3
Selenium	0.01	MAC	0.01		0.01	0.0006	0.0006	0.0006	0.0008	0.0006	0.0007	<0.0005
Silicon	-		-		-							
Silver	-		0.0005-0.015	H	-							
Sodium	200	AO	-		200				31	42	38	32
Strontium	-		-		-	0.38	0.305	8.95	0.357	0.342	0.350	0.410
Tellurium												
Thallium	-		0.003		-	<0.2	<0.2	0.378	<0.2	<0.2	<0.2	<0.2
Thorium												
Tin	-		-		-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Titanium	-		1.0		-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03
Tungsten	-		-		-							
Uranium	0.02	IMAC	3		0.2							
Vanadium	-		-		-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc	5	AO	0.075-2.4	H	5	0.005	0.007	<0.005	<0.005	<0.005	<0.005	0.024
Zirconium												
Other												
Phenol	-		0.01		-							
LEPH[7]	-		0.5		-							
HEPH[8]	-		-		-							
EPH_{10-19}	-		0.5		-							
EPH_{19-32}	-		-		-							

Notes
1. All concentrations in mg/L, unless otherwise noted.
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TABLE 6:
GENERAL GROUNDWATER CHEMISTRY
WESTSIDE LANDFILL
WEST KELOWNA, BC

PARAMETER	GCDWQ	Notes	CSR - AW	Notes	CSR - DW	Notes	Dobbin's Well										
							Jan-94	Jul-97	Sep-99	Jul-00	Sep-00	Aug-01	Oct-02	Sep-03	Dec-03	Sep-04	Sep-05	Dec-06
Physical																		
pH	6.5-8.5	AO	-		-				8.2	8.1	8.0	8.0	8.1	8.2	8.1	8.0	7.8	Well has been disconnected until further notice
Conductivity (uS/cm)	-		-		-		526	529	548	546	574	536	520	524	511	527	491	
TDS	500	AO	-		-													
Calculated TDS[14]	500	AO	-		-		351	353	368	354	383	356	347	359	341	352	327	
Hardness	-		-		-													
Dissolved Anions																		
Total Alkalinity	-		-		-		266	273	245	245	243	238	224	222	226	231	230	
Chloride	250	AO	-		**250**		4.0	5.3	6.0	5.8	5.3	6.1	6.0	6.6	6.2	6.3	5.5	
Sulphate	500	AO	**1,000**		**500**		28.2	37	40	43	41	45.0	53.0	42.0	45.0	41.8	36	
Nutrients																		
Ammonia (as N)	-		**1.31-18.4**	pH	-		<0.005	0.07	<0.01	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	<0.02	
Nitrate (as N)	45	MAC	**400**		**10**		<0.005	<0.005	0.03									
Nitrate & Nitrite (as N)	10		**400**		**10**					<0.01	0.01	<0.01	0.08	<0.01	<0.01	0.33	0.01	
Total Nitrogen					**10**													
Total Kjeldahl Nitrogen	-		-		-													
Organic Nitrogen	-		-		-													
Total Phosphorus	-		-		-		<0.30	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.30		
Oxygen Demand																		
BOD[5]	-		-		-													
COD[6]	-		-		-													
BOD:COD	-		-		-													
Total Organic Carbon	-		-		-													
Dissolved Metals																		
Aluminum	0.1		-		**0.2**		<0.20	<0.005	<0.2	<0.2	<0.2	<0.2	<0.2	<0.01	<0.1	<0.01	<0.01	
Antimony	0.006	IMAC	**0.2**		**0.006**		<0.20	<0.0001	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0008	<0.0005	<0.0005	
Arsenic	0.010	IMAC	**0.05**		**0.025**		<0.20	0.0013	0.0012	0.0012	0.0012	0.0013	0.0013	0.001	0.001	0.0012	0.001	
Barium	1	MAC	**10**		**1**		<0.010	0.01	<0.1	0.01	0.01	0.01	<0.01	<0.02	<0.02	<0.02	<0.02	
Beryllium	-		**0.053**		-		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Bismuth	-		-		-		<0.10	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20	
Boron	5	IMAC	**50**		**5**			<0.1	<0.1	0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.10	0.1	
Cadmium	0.005	MAC	**0.0001-0.0006**	H	**0.005**		<0.010	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	
Calcium	-		-		-		17	19.7	18.2	19.2	19.7		16.6	17.9	17.9	19.0	20	
Chromium	0.05	MAC	**0.01-0.09**	V	**0.05**		<0.015	<0.005	<0.1	<0.01	<0.01	<0.01	<0.01	<0.0005	<0.0005	<0.00050	<0.004	
Cobalt	-		**0.04**		-		<0.015	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.0005	<0.0005	<0.00050	<0.0005	
Copper	1	AO	**0.02-0.09**	H	**1**	AO	<0.010	0.004	0.01	<0.01	<0.01	<0.01	<0.01	0.003	0.004	0.0030	0.003	
Iron	0.3	AO	-		**0.3**	AO	<0.030	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Lead	0.01	MAC	**0.04-0.16**	H	**0.01**		<0.050	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	
Lithium	-		-		-		0.033	0.04	0.03	0.03	0.04	0.03	0.03	<0.05	<0.5	<0.050	<0.05	
Magnesium	-		-		**100**	AO	13.6	14.0	13.4	14.4	14.4	12.9	13.6	13.2	12.4	14.1	15	
Manganese	0.05	AO	-		**0.05**	AO	0.007	0.01	0.01	0.009	0.009	0.01	0.009	<0.01	0.01	0.012	<0.01	
Mercury	0.001	MAC	**0.001**		**0.001**				<0.00005	<0.00005	<0.00005		<0.00005	<0.0002	<0.0002	<0.0002	<0.0002	
Molybdenum	-		**10**		**0.25**		<0.030	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.019	0.019	0.0178	0.015	
Nickel	-		**0.25-1.5**	H	-		<0.020	<0.02	0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.0050	<0.005	
Phosphorus	-		-		-												<0.3	
Potassium	-		-		-		<2.0	<2	<2	<2	<2	<2	<2	<2	<2	<2.0	<2	
Selenium	0.01	MAC	**0.01**		**0.01**		<0.20	<0.0005	<0.0005	<0.0005	<0.0005	0.0007	<0.0005	<0.001	<0.001	<0.0010	<0.001	
Silicon	-		-		-											15.3	13	
Silver	-		**0.0005-0.015**	H	-											<0.000050	<0.00005	
Sodium	200	AO	-		**200**		88.1	84	86	84	91		88	84	15.4	88.1	83	
Strontium	-		-		-		0.91	0.916	0.923	0.930	0.934	0.949	0.91	0.918	0.87	0.937	0.88	
Tellurium																		
Thallium	-		**0.003**		-		<0.10	<0.0001	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.0002	<0.0002	
Thorium																		
Tin	-		-		-		<0.30	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Titanium	-		**1.0**		-		<0.010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	
Tungsten	-		-		-		<0.10											
Uranium	0.02	IMAC	**3**		**0.2**											<0.0002	0.0004	
Vanadium	-		-		-		<0.030	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Zinc	5	AO	**0.075-2.4**	H	**5**	AO	0.059	0.010	0.019	0.011	0.011	<0.005	0.008	0.009	0.005	0.0101	0.04	
Zirconium																		
Other																		
Phenol	-		**0.01**		-													
LEPH[7]	-		**0.5**		-													
HEPH[8]	-		-		-													
EPH_{C10-19}	-		**0.5**		-													
EPH_{C19-32}	-		-		-													

Notes:
1. All concentrations in mg/L, unless otherwise noted
2. GCDWQ - Guidelines for Canadian Drinking Water Quality (sixth edition, 2006)
   MAC = Maximum Acceptable Concentration
   IMAC = Interim Maximum Acceptable Concentration
   AO = Aesthetic Objective
3. CSR - DW - BC Contaminated Sites Regulation, Standard for Drinking Water
4. CSR - AW - BC Contaminated Sites Regulation, Standard for Aquatic Life
   pH - pH dependant standard
   H - hardness dependant standard
   V - valence dependent standard
5. BOD - Biological Oxygen Demand (5-day)
6. COD - Chemical Oxygen Demand
7. LEPH - Light Extractable Petroleum Hydrocarbons
8. HEPH - Heavy Extractable Petroleum Hydrocarbons
9. - no standard
10. Blank indicates not measured
11. Underlined and shaded - indicates concentration exceeds GCDWQ
12. Bold and shaded - indicates that concentration exceeds CSR - DW or AW
13. Underlined, bold and shaded - indicates that concentration exceeds GCDWQ and CSR - DW
14. Assumed TDS, calculated from conductivity value multiplied by 0.667

TABLE 6:
GENERAL GROUNDWATER CHEMISTRY
WESTSIDE LANDFILL
WEST KELOWNA, BC

PARAMETER	GCDWQ	Notes	CSR - AW	Notes	CSR - DW	SLMHP																																	
						Oct-98	Sep-99	Jul-00	Sep-00	Mar-01	Jun-01	Sep-01	Dec-01	Mar-02	Jun-02	Oct-02	Dec-02	Apr-03	Jun-03	Sep-03	Dec-03	Mar-04	May-04	Sep-04	Oct-04	Mar-05	May-05	Sep-05	Dec-05	Apr-06	May-06	Oct-06	Oct-06	Apr-07	Jun-07	Sep-07	Dec-07	Apr-08	Jun-08	Sep-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
Physical																																								
pH	6.5-8.5	AO	-		-	8.0	7.9			7	7.1		7.2	7.4	8.1	7.2	7.2	7.6	7.2	7.2	7.6	7.0	6.9	7.2		7.6	7.4	7.2	7	7	7.1	7.1	7	7.2	7.8	8.8	8.8	8.9	8.9	7	7.1	6.8	7.59	7.6	7.59
Conductivity (uS/cm)	-		-		-	256	541	903	925	902	972	978	955	820	834	990	771	1110	1020	999	1060	1070	1030	899		835	740	830	802	740	708	760	747	840	900	788	776	805	881	829	802	831	918	869	873
TDS	500	AO	-		-	169				601		652						658	655	616													452	498	515	466	440	507	527	478	475	504	538	524	502
Calculated TDS[13]	500	AO	-		-	177	361	602	617	602	648	652	637	547	556	660	514	740	680	660	720	738	687	950		557	494	540	535	520	512	507	535	560	600	526	518	554	586	553	535	554	612	595	582
Hardness	-		-		-																											334		338	259	350	274	365	344	315	360	356	306	356	410	354	339
Dissolved Anions																																								
Total Alkalinity	-		-		-	108	376			363	396		394	366	394	402	384	404	406	406	436	440	450	364		370	378	290	332	339	348	364	364	355	450	350	347	358	365	351	354	358	368	357	364
Chloride	250	AO	-		250	5.15	43.0	31.0	40.0	51	68.8	66.3	62.5	61.3	65.0	69.0	65.0	67.5	118.0	77.5	85.0	91.3	73.8	50		44	50	37.5	41	36.3	39.5	40	41	52	46.3	42.9	37.4	53.7	63.5	60.8	59.2	55.5	64.4	48.3	51.4
Sulphate	500	AO	1,000		500	27	26			41	39		38	38	36	48	37	46	43	37	44	41	41.2	35.6		27	34	29	33	15	30	27	29	29	31.5	30.8	24.7	27.6	29.5	27.4	29.8	27.5	29.1	29.1	22.5
Variance																																								
Ammonia (as N)	-		1.31-18.4	pH	-		0.01			<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	0.02	0.09	<0.02	<0.02	<0.02	0.03	<0.02
Nitrate (as N)	45	MAC	400		10	<0.10																								24.7	2.51	1.93						2.03	1.81	3.23	1.42	1.6	1.46	0.47	1.48
Nitrate & Nitrite (as N)	10		400		10	<0.10	1.30			2.3	2.68		2.43	2.00	0.9	2.8	2.75	3.35	3.2	2.65	3.3	3.4	3.1	2.75		2.6	2.45	2.2	2.4	0.83				1.89				2.03	1.81	3.23	1.42	1.66	1.46	0.47	
Total Nitrogen					10																																				1.78	1.58	0.7	
Total Kjehldl Nitrogen	-		-		-																				0.18																0.17	0.12	0.23	
Organic Nitrogen	-		-		-																																						
Total Phosphorus	-		-		-		0.3			<0.3	<0.3		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.30																				
Oxygen Demand																																								
BOD[5]	-		-		-																				<10																			
COD[9]	-		-		-																				20																			
BOD/COD	-		-		-																				0.50																			
Total Organic Carbon	-		-		-																				2.8																			
Dissolved Metals																																								
Aluminum	0.1		-		0.2		<0.2			<0.2	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.02	<0.02	<0.02	<0.02	<0.02		<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.05	<0.05	<0.025	<0.050	<0.050	<0.005	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Antimony	0.006	IMAC	0.2		0.006		<0.2			<0.2	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001		<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic	0.010	IMAC	0.05		0.025		0.0005			0.0028	0.0028		0.0028	0.0027	0.0028	0.0025	0.0025	0.0024	0.0022	0.003	0.003	<0.003	0.0032	0.0032		0.003	0.003	0.0032	<0.005	0.004	0.003	0.0032	<0.005	<0.005	<0.005	0.0031	<0.005	<0.0050	<0.0005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Barium	1	MAC	10		1		<0.1			<0.01	<0.01		0.01	0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.02	<0.02	<0.020	<0.020	<0.020		<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	0.0041	0.0078	0.0228	0.0185	0.011	0.008	0.007	0.011	0.0104	0.0096	0.0094	0.0058	0.0092
Beryllium	-		0.053		-		<0.005			<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05		<0.005	<0.005	<0.05	<0.05	<0.005	<0.005	<0.05	<0.0028	<0.005	<0.005	<0.05	<0.0028	<0.0020	<0.002	<0.0020	<0.0020	<0.0020	<0.0018	<0.0018	<0.0018
Bismuth	-		-		-		<0.1			<0.1	<0.1		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20		<0.20	<0.2	<0.20	<1	<0.2	<0.2	<0.2	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0018	<0.0018	<0.0018	<0.0018
Boron	5	IMAC	50		5		<0.1			<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10		<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.02	0.043	<0.02	0.056	0.041	0.03	0.042	0.047	0.052	<0.020	0.055	0.022	0.04
Cadmium	0.005	MAC	0.0001-0.0006	H	0.005		<0.0002			<0.0002	<0.0002		<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.00017	<0.0001	<0.0001	<0.0001		<0.00005	<0.0001	<0.00005	<0.00005	<0.0002	<0.00005	<0.00005	<0.00001	<0.00005	<0.0001	<0.00005	<0.00018	<0.00010	<0.00001	<0.00018	<0.00018	<0.00018	<0.00010	<0.00010	<0.00010
Calcium	-		-		-	33.7	39.5			120	118		108	106	110	113	112	123	115	111	128	128	125	103		100	95	96	100	91	93	91.5	89.1	94.1	73.7	99.2	86.4	82.9	101	86.8	77.5	95.7	109	92.7	89.9
Chromium	0.05	MAC	0.01-0.05	V	0.05		<0.1			<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.001	0.0035	<0.001	<0.002	<0.002		<0.002	<0.001	<0.004	<0.001	0.003	<0.001	<0.0005	<0.005	<0.005	<0.005	0.004	<0.005	<0.005	<0.005	0.007	<0.0050	<0.005	<0.0050	<0.0050	<0.0050
Cobalt	-		0.04		-		<0.1			<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005		<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	1	AO	0.02-0.09	H	1		<0.01			<0.01	0.01		0.01	<0.01	0.01	<0.01	0.01	<0.02	<0.01	0.023	0.01	0.009	0.0143	0.0125		0.014	0.005	0.008	0.01	0.012	0.007	0.0077	0.0054	0.008	<0.005	0.0117	0.0068	0.0046	0.005	0.0114	0.0135	0.0063	0.0121	0.013	0.0159
Iron	0.3	AO	-		0.3	<0.02	<0.03			<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.2	<0.03	<0.03	<0.03	0.124	0.272	0.311	0.273	0.203	0.382	0.213	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100
Lead	0.01	MAC	0.04-0.16	H	0.01		<0.001			<0.001	0.002		0.002	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002		<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.0010	<0.0010	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium	-		-		-		0.02			0.02	0.02		0.02	0.02	0.02	0.02	0.01	0.01	0.01	<0.05	<0.05	<0.05	<0.050	<0.050		<0.05	<0.05	<0.05	<0.3	<0.05	<0.05	<0.05	0.0069	0.0174	0.0129	0.0164	0.0151	0.0102	0.0094	0.0135	0.0117	0.0139	0.0151	0.0151	0.015
Magnesium	-		-		100	9.6	25			29.3	30		29.3	24.9	28.6	32.4	30.7	34.3	31.6	32.1	36.7	34.8	34.4	30.4		31	27	27	30	26	27	26.5	20.9	28	20.6	28.5	31.2	26.3	31.4	28.8	27.3	28.4	33.3	29.8	27.9
Manganese	0.05	AO	-		0.05	<0.01	5.64			<0.005	<0.005		0.011	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.05	<0.01		<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.005	<0.005	0.938	<0.0025	<0.005	<0.0050	<0.005	<0.0050	0.0044	0.0043	<0.0020	<0.0050	<0.0020
Mercury	0.001	MAC	0.001		0.001		<0.00005			<0.00005			<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	0.0018	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.00039	<0.0003	<0.00030	<0.00058	<0.00050	<0.00050	<0.00050	<0.00050
Molybdenum	-		10		0.25		<0.03			<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.005	0.004	0.007	0.0244	0.0039		0.004	0.005	0.004	0.004	0.004	0.004	0.005	0.0034	0.0032	0.0064	0.0037	0.0038	0.0031	0.0038	0.0039	0.0025	0.0031	0.0034	0.0038	0.0031
Nickel	-		0.25-1.5	H	-		<0.05			<0.05	0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01		<0.005	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0022	0.0022	0.0026	0.0026	0.0024
Phosphorus	-		-		-		-			-			-													<0.3	<0.3	<0.3	<2	<0.3	<0.3	<0.3	<0.5	<0.5	<0.5	<0.25	<0.2	<0.200	<0.2	<0.200	<0.100	<0.200	<0.200	<0.200	<0.200
Potassium	-		-		-	2.4	<0.3			4	4		4	4	4	4	4	3	4	4	5	5	4.1	4.8		4	3	3	<10	3	3	3.8	2.99	3.61	2.35	3.84	3.89	3.37	4.21	3.78	3.19	3.43	3.94	3.69	3.35
Selenium	0.01	MAC	0.01		0.01		<0.009			0.0019	0.0017		0.0015	0.0018	0.002	<0.0008	0.0038	0.0017	<0.002	0.003	<0.002	<0.003	0.0022	0.0024		0.002	<0.002	0.002	<0.002	<0.002	0.001	0.0034	<0.01	<0.01	<0.002	0.005	<0.005	<0.0050	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Silicon	-		-		-																			13.3		14	11	12	13	12	12	13	10.1	13.3	7.78	14.3	15.4	13.5	14.4	10.5	10.4	11.5	12.1	13.5	11.2
Silver	-		0.0005-0.015	H	-																			<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.0001	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.00040	<0.0004	<0.00040	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Sodium	200	AO	-		200		110						55	53	61	61	56	59	63	58	63	64	69.2	59.4		56	52	48	50	42	46	43.6	33.7	40.8	43.6	46.4	40.1	37.9	52.2	45.6	36.7	38.9	51.8	47.1	37
Strontium	-		-		-		0.223			32.5	0.834		0.772	0.798	0.778	0.817	0.901	0.917	0.837	0.838	0.82	0.93	0.911	0.743		0.73	0.63	0.63	0.72	0.58	0.59	0.627	0.603	0.699	0.401	0.652	0.634	0.678	0.86	0.671	0.639	0.694	0.733	0.705	0.671
Tellurium	-		-		-																											<0.005	<0.005	<0.005	<0.0025	<0.005	<0.0050	<0.003	<0.0030	<0.0020	<0.0050	<0.0020	<0.0020	<0.0020	<0.0020
Thallium	-		0.003		-		<0.2			<0.5	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.004	<0.004	<0.01	<0.0004	<0.0004		<0.0002	<0.0004	<0.0002	<0.0004	<0.004	<0.0002	<0.0002	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0025	<0.005	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.00020	<0.00020
Thorium	-		-		-																											<0.005	<0.005	<0.005	<0.0025	<0.005	<0.0050	<0.003	<0.0030	<0.0020	<0.0050	<0.0020	<0.0020	<0.0020	<0.0020
Tin	-		-		-		<0.03			<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.2	<0.03	<0.03	<0.03	<0.001	<0.001	<0.001	<0.0025	<0.002	<0.0020	<0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Titanium	-		1.0		-		<0.01			<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.3	<0.05	<0.05	<0.05	<0.07	<0.02	<0.02	<0.05	<0.1	<0.100	<0.1	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050
Tungsten	-		-		-																																							
Uranium	0.02	IMAC	3		0.2																			0.00783		0.0167	0.0074	0.0065	0.007	0.0081	0.0064	0.0062	0.0037	0.0066	0.0073	0.0083	0.0052	0.005	0.007	0.0068	0.00665	0.00575	0.00742	0.0077	0.00652
Vanadium	-		-		-		<0.03			<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.2	<0.03	<0.03	<0.03	<0.005	0.007	<0.005	<0.01	<0.01	<0.010	<0.01	<0.010	<0.01	<0.0100	<0.0100	<0.0100	<0.0100
Zinc	5	AO	0.075-2.4	H	5		0.01			0.028	0.017		0.022	0.019	<0.005	0.016	0.044	0.039	0.005	0.018	0.021	0.025	0.0235	0.0167		0.013	0.012	0.013	0.039	0.014	<0.005	0.007	<0.03	<0.04	<0.04	<0.02	<0.03	<0.050	<0.03	<0.050	<0.050	<0.050	<0.0100	0.0145	0.0134	0.0233
Zirconium	-		-		-																											<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.003	<0.005	<0.005	<0.005	<0.005	<0.0010	<0.0010	<0.0010	<0.0010
Other																																								
Phenol	-		0.01		-																																							
LEPH[7]	-		0.5		-																																							
HEPH[8]	-		-		-																																							
LPH_{C6-10}	-		0.5		-																																							
LPH_{C10-21}	-		-		-																																							

Notes:
1. All concentrations in mg/L, unless otherwise noted.
2. GCDWQ - Guidelines for Canadian Drinking Water Quality (sixth edition, 2006)
   MAC = Maximum Acceptable Concentration
   IMAC = Interim Maximum Acceptable Concentration
   AO = Aesthetic Objective
3. CSR - DW - BC Contaminated Sites Regulation, Standard for Drinking Water
4. CSR - AW - BC Contaminated Sites Regulation, Standard for Aquatic Life
   pH - pH dependent standard
   H - hardness dependent standard
   V - valence dependent standard.
5. BOD - Biological Oxygen Demand (5-day)
6. COD - Chemical Oxygen Demand
7. LEPH - Light Extractable Petroleum Hydrocarbons.
8. HEPH - Heavy Extractable Petroleum Hydrocarbons
9. - - no standard.
10. Blank indicates not measured.
11. Underlined and shaded - indicates concentration exceeds GCDWQ.
12. Bold and shaded - indicates that concentration exceeds CSR - DW or AW.
13. Underlined, bold and shaded - indicates that concentration exceeds GCDWQ and CSR - DW
14. Assumed TDS, calculated from conductivity value multiplied by 0.667.

TABLE 7:
ORGANIC GROUNDWATER CHEMISTRY
WESTSIDE LANDFILL
WEST KELOWNA, BC

PARAMETER	GCDWQ	Notes	CSR - AW	Notes	CSR - DW	BH1							BH4						
						Sep-99	Sep-01	Sep-03	Sep-05	Sep-07	Oct-07	Sep-09	Jul-97	Sep-99	Sep-01	Sep-03	Sep-05	Sep-07	Sep-09
Halogenated Volatiles																			
Carbon tetrachloride	0.005		0.13		0.005	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chlorobenzene	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.0019	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloroethane	-		-		-	0.002	0.002	<0.003	0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	-
Chloromethane	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichlorobenzene	0.2		0.007		0.003	<0.001	<0.001	<0.001	<0.0005	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-Dichlorobenzene	-		1.5		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-Dichlorobenzene	0.005		0.26		0.001	<0.001	0.004	0.004	0.003	<0.001	-	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloroethane	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichloroethane	0.005		1		0.005	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
cis-1,2-Dichloroethylene	-		-		-	0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,2-Dichloroethylene	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloroethylene	0.014		-		0.014	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dichloromethane	0.05		0.98		0.05	<0.01	<0.005	<0.005	<0.005	-	-	-	<0.005	0.007	<0.005	<0.005	<0.005	-	-
1,2-Dichloropropane	-		-		-	<0.001	<0.001	<0001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
cis-1,3-Dichloropropylene	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,3-Dichloropropylene	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,1,2-Tetrachloroethane	-		-		-	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	-
1,1,2,2-Tetrachloroethane	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Tetrachloroethylene	0.03		1.10		0.03	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,1-Trichloroethane	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,2-Trichloroethane	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Trichloroethylene	0.005		0.2		0.05	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Trichlorofluoromethane	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vinyl chloride	0.002		-		0.002	<0.001	0.001	0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Trihalomethanes																			
Bromodichloromethane	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromoform	-		-		-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloroform	-		0.02		0.1	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dibromochloromethane	-		-		0.1	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Non-Halogenated Volatiles																			
Benzene	0.005		4		0.005	0.0014	0.0023	0.0019	0.001	1.3	-	0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Ethylbenzene	0.0024	AO	2		0.0024	0.0006	0.0012	<0.0005	<0.0005	<0.001	-	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Styrene	-		0.72		-	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	-	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Toluene	0.024	AO	0.39		0.024	0.0016	0.0009	<0.0005	<0.001	<0.001	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.005
meta & para-Xylene	-		-		-	<0.0005	0.0008	<0.0005	<0.0005	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-
ortho-Xylene	-		-		-	<0.0005	0.0006	<0.0005	<0.0005	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-
Total Xylenes	0.3	AO	-		0.3	-	-	-	<0.001	<0.002	-	<0.002	-	-	-	-	<0.001	<0.002	<0.002
Light Hydrocarbons (C5-9)	-		-		-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-
VPH	-		-		-	-	-	-	-	<0.1	-	-	<0.1	-	-	-	-	<0.1	-
Chlorinated Hydrocarbons																			
Hexachlorobenzene	-		-		-	<0.0001	<0.0001	-	<0.0001	-	<0.0006	<0.006	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0006	-
Hexachlorobutadiene	-		0.001		-	<0.0001	<0.0001	-	<0.0001	-	<0.001	<0.001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.001	<0.001
Hexachloroethane	-		-		-	<0.0001	<0.0001	-	<0.0001	-	<0.003	<0.003	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.003	<0.003
1,2,4-Trichlorobenzene	-		0.24		-	<0.0001	<0.0001	-	<0.0001	-	<0.003	0.003	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.003	<0.003
Phthalate Esters																			
Benzyl butyl phthalate	-		-		-	<0.001	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
Bis(2-ethylhexyl)phthalate	-		-		-	<0.001	<0.005	<0.005	<0.005	-	<0.001	<0.001	<0.001	0.004	<0.005	<0.005	<0.005	0.003	<0.001
di-n-butyl phthalate	-		-		-	0.0003	<0.005	<0.005	<0.005	-	<0.001	<0.001	0.0004	0.0005	<0.005	<0.005	<0.005	0.001	<0.001
di-n-octyl phthalate	-		-		-	<0.0001	<0.005	<0.005	<0.005	-	<0.001	<0.001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.001	<0.001
Diethyl phthalate	-		-		-	0.0076	-	<0.05	<0.05	-	<0.003	<0.003	0.0001	0.0004	-	<0.05	<0.05	<0.003	<0.003
Dimethyl phthalate	-		-		-	<0.0001	<0.05	<0.05	<0.05	-	<0.003	<0.003	<0.0001	<0.0001	<0.05	<0.05	<0.05	<0.003	<0.003
Base-Neutral Extractables																			
Bis(2-chloroethoxy)methane	-		-		-	<0.0003	<0.0001	-	<0.0004	-	<0.0008	<0.008	<0.0001	<0.001	<0.0001	-	<0.0001	<0.0008	<0.0008
Bis(2-chloroethyl)ether	-		-		-	<0.0002	<0.0001	-	<0.0001	-	<0.0006	<0.0006	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0006	<0.0006
Bis(2-chloroisopropyl)ether	-		-		-	<0.0001	<0.0001	-	<0.0001	-	<0.002	<0.002	<0.0001	<0.0002	<0.0001	-	<0.0001	<0.002	<0.002
4-Bromophenyl phenyl ether	-		-		-	<0.0001	<0.0001	-	<0.0001	-	<0.006	<0.0006	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0006	<0.0006
2-Chloronaphthalene	-		-		-	<0.0001	<0.0001	-	<0.0001	-	<0.0008	<0.0008	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0008	<0.0008
4-Chlorophenyl phenyl ether	-		-		-	<0.0001	<0.0001	-	<0.0001	-	<0.0007	<0.0007	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0007	<0.0007
2,4-Dinitrotolune (2,4-DNT)	-		-		-	<0.0004	0.0004	<0.0006	<0.0003	-	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005
2,6-Dinitrotoluene (2,6-DNT)	-		-		-	<0.0008	<0.0001	<0.002	<0.0004	-	<0.0005	<0.0005	0.0002	<0.002	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005
Isophorone	-		-		-	<0.0001	<0.0001	<0.0002	<0.0001	-	<0.0006	<0.0006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0006	<0.0006
Nitrobenzene (NB)	-		-		-	<0.0005	<0.0001	<0.002	<0.0005	-	<0.0007	<0.0007	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0007	<0.0007
n-Nitrosodi-n-propylamine	-		-		-	<0.0001	<0.0001	<0.002	<0.0005	-	<0.0006	<0.0006	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0006	<0.0006
n-Nitrosodiphenylamine	-		-		-	<0.0001	<0.0001	<0.0003	<0.0002	-	<0.0008	<0.0008	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0008	<0.0008

Notes:
1. All concentrations in mg/L, unless otherwise noted.
2. GCDWQ - Guidelines for Canadian Drinking Water Quality (Fifth edition, 2004)
   MAC = Maximum Acceptable Concentration
   IMAC = Interim Maximum Acceptable Concentration
   AO = Aesthetic Objective
3. CSR - DW - BC Contaminated Sites Regulation, Standard for Drinking Water
4. CSR - AW - BC Contaminated Sites Regulation, Standard for Aquatic Life.
   pH - pH dependant standard
   H - hardness dependant standard
   V - valence dependent standard.
5. BOD - Biological Oxygen Demand (5-day)
6. COD - Chemical Oxygen Demand
7. LEPH - Light Extractable Petroleum Hydrocarbons.
8. HEPH - Heavy Extractable Petroleum Hydrocarbons.
9. - no standard.
10. - not measured.
11. Underlined and shaded - indicates concentration exceeds GCDWQ.
12. Bold and shaded - indicates that concentration exceeds CSR - DW or AW.
13. Underlined, bold and shaded - indicates that concentration exceeds GCDWQ and CSR - DW
14. Assumed TDS, calculated from conductivity value multiplied by 0.667.

TABLE 8:
SUMMARY OF SOIL GAS MONITORING RESULTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
17-Dec-09	BH 1	nm	3.3	0	0	120	20.1
17-Dec-09	BH 2	nm	1.00	0	0	900	20.8
17-Dec-09	BH 4	nm	4.35	0	0	0	20.9
17-Dec-09	BH 5	nm	0	0	0	0	20.9
17-Dec-09	BH 8	nm	0	0	0	140	20.9
17-Dec-09	MW 99-1	nm	2.00	0	0	1,820	20.1
17-Dec-09	MW 99-2	nm	2.80	0	0	1,820	20.1
17-Dec-09	MW 99-3	nm	0.80	0	0	1,120	20.6
17-Dec-09	MW 99-4	nm	>5.00	0	0	1,900	18.6
17-Dec-09	BH 101 (deep)	nm	4.00	0	0	2,040	20.2
17-Dec-09	BH 101 (shallow)	nm	2.20	0	0	1,620	20.3
17-Dec-09	BH 102	nm	>5.00	0	0	>10,000	20.9
17-Dec-09	BH 103	nm	0.75	0	0	760	20.2
17-Dec-09	VP07-1S	nm	0.25	0	0	240	20.9
17-Dec-09	VP07-1D	nm	2.20	0	0	1,620	19.8
17-Dec-09	VP07-2	nm	1.20	0	0	1,200	20.8
17-Dec-09	VP07-3	nm	0.80	0	0	1,020	20.8
17-Dec-09	VP07-14	nm	0.55	0	0	120	20.2
17-Dec-09	VP07-15	nm	4.15	0	0	2,440	19.9
17-Dec-09	VP07-16	nm	>5.00	0	0	2,300	19.8

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
24-Jul-09	BH 1	nm	4.80	0	0	240	18.7
24-Jul-09	BH 2	nm	>5.00	0	0	220	20.3
24-Jul-09	BH 4	nm	0	0	0	60	20.9
24-Jul-09	BH 5	nm	0.60	0	0	140	20.3
24-Jul-09	BH 8	nm	>5.00	0	0	180	14.7
24-Jul-09	MW 99-1	nm	2.55	0	0	160	18.6
24-Jul-09	MW 99-2	nm	4.65	0	0	180	17.5
24-Jul-09	MW 99-3	nm	1.35	0	0	140	19.8
24-Jul-09	MW 99-4	nm	1.60	0	0	140	19.8
24-Jul-09	BH 101 (deep)	nm	>5.00	0	0	160	12.9
24-Jul-09	BH 101 (shallow)	nm	1.90	0	0	100	19.0
24-Jul-09	BH 102	nm	0.90	0	0	360	20.1
24-Jul-09	BH 103	nm	0.85	0	0	200	18.9
24-Jul-09	VP07-1S	nm	0.20	0	0	40	20.7
24-Jul-09	VP07-1D	nm	0.85	0	0	120	19.6
24-Jul-09	VP07-2	nm	0	0	0	0	20.9
24-Jul-09	VP07-3	nm	0.55	0	0	100	20.5
24-Jul-09	VP07-14	nm	0	0	0	0	20.9
24-Jul-09	VP07-15	nm	0.55	0	0	280	20.5
24-Jul-09	VP07-16	nm	4.41	0	0	200	17.5

Notes:
1) Gastech - Gastech GT02 combustible gas monitor calibrated to $C0_2$.
2) Gastech - Gastech GT402 combustible gas monitor calibrated to methane.
3) ppm - parts per million
4) LEL - Lower Explosive Limit (1 % LEL is equal to approximely 500 ppm)
5) % - percentage of gas by total volume.
6) nm - not measured

TABLE 8:
SUMMARY OF SOIL GAS MONITORING RESULTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
31-Dec-08	BH 1	nm	2.35	0	0	1,670	19.2
31-Dec-08	BH 2	nm	1.1	0	0	960	20.4
31-Dec-08	BH 4	nm	0	0	0	580	20.6
31-Dec-08	BH 5	nm	0	0	0	180	20.9
31-Dec-08	BH 8	nm	0	0	0	0	20.9
31-Dec-08	MW 99-1	nm	1.4	3	0	1,310	20
31-Dec-08	MW 99-2	nm	1.05	4	0	60	20.9
31-Dec-08	MW 99-3	nm	0.55	0	0	720	20.6
31-Dec-08	MW 99-4	nm	3.05	0	0	1,670	18.4
31-Dec-08	BH 101 (deep)	nm	>5	0	0	1,310	18.6
31-Dec-08	BH 101 (shallow)	nm	2.05	0	0	1,300	19.7
31-Dec-08	BH 102	nm	3.15	0	0	8,460	17.7
31-Dec-08	BH 103	nm	1.85	0	0	5,160	18.7
31-Dec-08	VP07-1S	nm	0.4	0	0	420	20.8
31-Dec-08	VP07-1D	nm	0.75	0	0	700	20.9
31-Dec-08	VP07-2	nm	0	0	0	80	20.9
31-Dec-08	VP07-3	nm	2	0	0	1,400	19.8
31-Dec-08	VP07-14	nm	3.9	0	0	2,120	18.1
31-Dec-08	VP07-15	nm	0.4	0	0	420	20.8
31-Dec-08	VP07-16	nm	0.05	0	0	840	20.8

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
17-Jul-08	BH 1	nm	0.4	0	0	1,900	18
17-Jul-08	BH 2	nm	>5	0	0	2,360	15.9
17-Jul-08	BH 4	nm	0	0	0	800	20.9
17-Jul-08	BH 5	nm	0.95	0	0	2,140	19.9
17-Jul-08	BH 8	nm	>5	0	0	2,480	14.7
17-Jul-08	MW 99-1	nm	2.8	0	0	1,420	20.5
17-Jul-08	MW 99-2	nm	>5	0	0	1,160	17.5
17-Jul-08	MW 99-3	nm	1.75	0	0	2,140	19.5
17-Jul-08	MW 99-4	nm	2.15	0	0	1,860	19.6
17-Jul-08	BH 101 (deep)	nm	>5	0	0	1,700	20.6
17-Jul-08	BH 101 (shallow)	nm	4.15	0	0	2,200	18.6
17-Jul-08	BH 102	nm	2.5	0	0	320	19.2
17-Jul-08	BH 103	nm	2.6	0	0	2,480	19.3
17-Jul-08	VP07-1S	nm	0.9	0	0	440	20.3
17-Jul-08	VP07-1D	nm	0.85	0	0	1,500	20.4
17-Jul-08	VP07-2	nm	0.7	0	0	1,560	20.7
17-Jul-08	VP07-3	nm	0.6	0	0	2,300	19.2
17-Jul-08	VP07-14	nm	>5	0	0	520	15.3
17-Jul-08	VP07-15	nm	3.15	0	0	3,560	19.1
17-Jul-08	VP07-16	nm	4.55	0	0	2,560	15.9

Notes:
1) Gastech - Gastech GT02 combustible gas monitor calibrated to CO_2.
2) Gastech - Gastech GT402 combustible gas monitor calibrated to methane.
3) ppm - parts per million
4) LEL - Lower Explosive Limit (1 % LEL is equal to approximely 500 ppm)
5) % - percentage of gas by total volume.
6) nm - not measured

TABLE 8:
SUMMARY OF SOIL GAS MONITORING RESULTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
20-Dec-07	BH 1	nm	0	0	0	0	20.9
20-Dec-07	BH 2	nm	2.9	0	0	540	19.4
20-Dec-07	BH 4	nm	0	0	0	0	20.9
20-Dec-07	BH 5	nm	0	0	0	0	20.9
20-Dec-07	BH 8	nm	0	0	0	0	20.9
19-Dec-07	MW 99-1	nm	0.05	0	0	280	20.9
19-Dec-07	MW 99-2	nm	0.05	0	0	80	20.9
19-Dec-07	MW 99-3	nm	0.7	0	0	260	20.4
19-Dec-07	MW 99-4	nm	4.5	0	0	660	18.4
19-Dec-07	BH 101 (deep)	nm	0	0	0	0	20.9
19-Dec-07	BH 101 (shallow)	nm	1.6	0	0	400	19
19-Dec-07	BH 102	nm	0	0	0	80	20.9
19-Dec-07	BH 103	nm	0.3	0	0	120	19.5

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
26-Jul-07	BH 1	nm	0.15	0	0	120	20.5
26-Jul-07	BH 2	nm	>5	0	0	260	17.3
26-Jul-07	BH 4	nm	0	0	0	0	20.9
26-Jul-07	BH 5	nm	1.05	0	0	160	19.6
26-Jul-07	BH 8	nm	0.4	0	0	260	17.3
26-Jul-07	MW 99-1	nm	4.25	0	0	340	14.8
26-Jul-07	MW 99-2	nm	3.2	0	0	360	16.3
26-Jul-07	MW 99-3	nm	3.45	0	0	340	17.3
26-Jul-07	MW 99-4	nm	2.95	0	0	300	18.5
26-Jul-07	BH 101 (deep)	nm	>5	0	0	280	7.4
26-Jul-07	BH 101 (shallow)	nm	>5	0	0	320	9.3
26-Jul-07	BH 102	nm	0.1	0	0	440	16.5
26-Jul-07	BH 103	nm	>5	0	0	340	11.6

Notes:
1) Gastech - Gastech GT02 combustible gas monitor calibrated to $C0_2$.
2) Gastech - Gastech GT402 combustible gas monitor calibrated to methane.
3) ppm - parts per million
4) LEL - Lower Explosive Limit (1 % LEL is equal to approximely 500 ppm)
5) % - percentage of gas by total volume.
6) nm - not measured

TABLE 8:
SUMMARY OF SOIL GAS MONITORING RESULTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
11-Dec-06	BH 1	3.040	>5	0	0	2,500	19.3
11-Dec-06	BH 2	3.483	2.15	0	0	1,400	19.9
11-Dec-06	BH 4	2.915	>5	0	0	2,840	19.8
11-Dec-06	BH 5	11.64	0.15	0	0	240	20.9
11-Dec-06	BH 8	5.225	0.85	0	0	620	20.9
11-Dec-06	MW 99-1	5.167	2.5	0	0	1,740	18.9
11-Dec-06	MW 99-2	5.430	4.45	0	0	2,140	18.3
11-Dec-06	MW 99-3	4.843	1.15	0	0	1,280	20.2
11-Dec-06	MW 99-4	6.234	>5	0	0	2,300	16.2
11-Dec-06	BH 101 (deep)	dry	>5	0	0	2,080	17.3
11-Dec-06	BH 101 (shallow)	dry	3.1	0	0	1,760	18.7
11-Dec-06	BH 102	dry	2.35	0	0	1,960	18.6
11-Dec-06	BH 103	dry	2.75	0	0	9,860	17.4

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT401			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
26-Jul-06	BH 1	2.973	1.25	0	0	1,300	20.8
26-Jul-06	BH 2	3.49	>5	0	0	1,980	16.8
26-Jul-06	BH 4	2.67	0.2	0	0	340	20.9
26-Jul-06	BH 5	11.50	0.8	0	0	780	19.5
26-Jul-06	BH 8	5.26	>5	0	0	1,920	15.4
26-Jul-06	MW 99-1	5.163	>5	0	0	1,780	15.1
26-Jul-06	MW 99-2	5.483	>5	0	0	1,960	16.9
26-Jul-06	MW 99-3	4.415	3.65	0	0	1,960	17.7
26-Jul-06	MW 99-4	6.143	1.8	0	0	1,220	19.8
26-Jul-06	BH 101 (deep)	dry	>5	0	0	1,600	17.3
26-Jul-06	BH 101 (shallow)	dry	>5	0	0	2,500	16.6
26-Jul-06	BH 102	dry	2.75	0	0	1,480	18.7
26-Jul-06	BH 103	dry	2.4	0	0	1,620	18.6

Notes:
1) Gastech - Gastech GT02 combustible gas monitor calibrated to CO_2.
2) Gastech - Gastech GT402 combustible gas monitor calibrated to methane.
3) ppm - parts per million
4) LEL - Lower Explosive Limit (1 % LEL is equal to approximely 500 ppm)
5) % - percentage of gas by total volume.
6) nm - not measured

TABLE 8:
SUMMARY OF SOIL GAS MONITORING RESULTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
15-Dec-05	BH 1	3.265	3.95	0	0	940	19.5
15-Dec-05	BH 2	3.485	1.55	0	0	540	20.5
15-Dec-05	BH 4	3.535	2.25	0	0	500	20.9
15-Dec-05	BH 5	11.66	0	0	0	40	20.9
15-Dec-05	BH 8	5.583	0	0	0	0	20.9
15-Dec-05	MW 99-1	6.745	2	0	0	700	19.6
15-Dec-05	MW 99-2	5.955	3.65	0	0	840	19.9
15-Dec-05	MW 99-3	4.778	0.55	0	0	300	20.9
15-Dec-05	MW 99-4	6.598	>5	0	0	1060	16.8
15-Dec-05	BH 101 (deep)	dry	>5	0	0	1020	18.7
15-Dec-05	BH 101 (shallow)	dry	1.9	0	0	680	20.2
15-Dec-05	BH 102	dry	1	0	0	480	20.5
15-Dec-05	BH 103	dry	1.6	0	0	600	20.1

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT401			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (% LEL)	O_2 (%)
19-Aug-05	BH 1	nm	>5	0	0	<1%	20.9
19-Aug-05	BH 2	nm	>5	0	0	<1%	20.9
19-Aug-05	BH 4	nm	0.3	0	0	<1%	20.9
19-Aug-05	BH 5	nm	1.4	0	0	<1%	19.6
19-Aug-05	BH 8	nm	>5	0	0	<1%	20.7
19-Aug-05	MW 99-1	nm	0.35	0	0	<1%	20.9
19-Aug-05	MW 99-2	nm	>5	0	0	<1%	17.2
19-Aug-05	MW 99-3	nm	2.35	0	0	<1%	19.8
19-Aug-05	MW 99-4	nm	1.7	0	0	<1%	19.6
19-Aug-05	BH 101 (deep)	nm	nm	nm	nm	nm	nm
19-Aug-05	BH 101 (shallow)	nm	>5	0	0	<1%	20.9
19-Aug-05	BH 102	nm	2.6	0	0	<1%	20.9
19-Aug-05	BH 103	nm	3.15	0	0	<1%	21

Notes:
1) Gastech - Gastech GT02 combustible gas monitor calibrated to CO_2.
2) Gastech - Gastech GT402 combustible gas monitor calibrated to methane.
3) ppm - parts per million
4) LEL - Lower Explosive Limit (1 % LEL is equal to approximely 500 ppm)
5) % - percentage of gas by total volume.
6) nm - not measured

TABLE 8:
SUMMARY OF SOIL GAS MONITORING RESULTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
17-Dec-04	BH 1	2.698	0.5	0	0	>100 % LEL	13
17-Dec-04	BH 2	3.225	3.7	0	0	500	18.7
17-Dec-04	BH 4	1.730	>5	0	0	500	19.5
17-Dec-04	BH 5	11.615	0	0	0	0	20.9
17-Dec-04	BH 8	4.990	0	0	0	0	20.9
17-Dec-04	MW 99-1	5.700	2.1	0	0	500	18.7
17-Dec-04	MW 99-2	5.240	3.35	0	0	500	18.1
17-Dec-04	MW 99-3	5.120	0.75	0	0	0	20.3
17-Dec-04	MW 99-4	7.075	>5	0	0	1000	13.9
17-Dec-04	BH 101 (deep)	Dry	>5	0	0	500	17.2
17-Dec-04	BH 101 (shallow)	Dry	4.1	0	0	500	18.1
17-Dec-04	BH 102	Dry	2.35	0	0	500	19.5
17-Dec-04	BH 103	Dry	4	0	0	500	18.5

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
1-Sep-04	BH 1	2.775	>5	0	0	1,560	18.6
1-Sep-04	BH 2	3.270	>5	0	0	680	14.9
1-Sep-04	BH 4	2.120	2.45	0	0	280	20.9
1-Sep-04	BH 5	11.595	0.5	0	0	0	20.9
1-Sep-04	BH 8	5.600	0.7	0	0	260	20.8
1-Sep-04	MW 99-1	6.740	>5	0	0	460	17.8
1-Sep-04	MW 99-2	5.780	>5	0	0	580	17.2
1-Sep-04	MW 99-3	5.000	4.65	0	0	460	19.4
1-Sep-04	MW 99-4	7.070	>5	0	0	460	19
1-Sep-04	BH 101 (deep)	Dry	>5	0	0	840	12
1-Sep-04	BH 101 (shallow)	Dry	>5	0	0	540	16.7
1-Sep-04	BH 102	Dry	>5	0	0	560	17.9
1-Sep-04	BH 103	2.840	>5	0	0	660	16.9

Notes:
1) Gastech - Gastech GT02 combustible gas monitor calibrated to $C0_2$.
2) Gastech - Gastech GT402 combustible gas monitor calibrated to methane.
3) ppm - parts per million
4) LEL - Lower Explosive Limit
5) % - percentage of gas by total volume.
6) nm - not measured

TABLE 8:
SUMMARY OF SOIL GAS MONITORING RESULTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
16-Dec-03	BH 1	3.020	4.5	0	0	1500	18.5
16-Dec-03	BH 2	3.340	1.25	0	0	500	19.4
16-Dec-03	BH 4	2.080	4.1	0	0	760	19
16-Dec-03	BH 5	Dry	0	0	0	40	20.9
16-Dec-03	BH 8	5.275	Instrument Problems				20.9
16-Dec-03	MW 99-1	6.750	0.65	0	0	240	20
16-Dec-03	MW 99-2	6.970	1.25	0	0	460	19.3
16-Dec-03	MW 99-3	Dry	0.45	0	0	260	20.5
16-Dec-03	MW 99-4	7.075	2.5	0	0	660	14.8
16-Dec-03	BH 101 (deep)	Dry	2.75	0	0	640	16.3
16-Dec-03	BH 101 (shallow)	Dry	1.8	0	0	560	18.3
16-Dec-03	BH 102	Dry	0.95	0	0	380	19.7
16-Dec-03	BH 103	Dry	1.2	0	0	700	18.7

Date	Probe/Well	Depth to Water (m)	Gastech GT02	Gastech GT402			
			CO_2 (%)	CO (ppm)	H_2S (ppm)	Methane (CH_4) (ppm)	O_2 (%)
26-Jul-03	BH 1	3.270	>5	0	0	680	17.5
26-Jul-03	BH 2	3.080	>5	0	0	760	14.1
26-Jul-03	BH 4	11.840	1.2	0	0	240	19.7
26-Jul-03	BH 5	3.460	0	0	0	100	20.7
26-Jul-03	BH 8	5.920	2.9	0	0	360	19.3
26-Jul-03	MW 99-1	6.870	1.9	0	0	800	19.8
26-Jul-03	MW 99-2	6.400	1.5	0	0	780	19.4
26-Jul-03	MW 99-3	5.240	1.6	0	0	1,000	19.8
26-Jul-03	MW 99-4	7.100	2.3	0	0	600	19.6
26-Jul-03	BH 101 (deep)	Dry	>5	0	0	860	12.3
26-Jul-03	BH 101 (shallow)	Dry	4.15	0	0	820	18.1
26-Jul-03	BH 102	Dry	2.15	0	0	780	19.5
26-Jul-03	BH 103	Dry	2.4	0	0	780	19.5

Notes:
1) Gastech - Gastech GT02 combustible gas monitor calibrated to $C0_2$.
2) Gastech - Gastech GT402 combustible gas monitor calibrated to methane.
3) ppm - parts per million
4) LEL - Lower Explosive Limit
5) % - percentage of gas by total volume.
6) nm - not measured

TABLE 8:
SUMMARY OF SOIL GAS MONITORING RESULTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Date	Probe/Well	Depth to Water (m)	Gastech GT201	Gastech GT402		
			O_2 (%)	CO (ppm)	H_2S (ppm)	Combustible (CH_4) (ppm)
18-Dec-02	BH 1	3.142	19	0	0	680
18-Dec-02	BH 2	3.315	19.6	0	0	560
18-Dec-02	MW 99-1	-	20.4	0	0	300
18-Dec-02	MW 99-2	-	20.4	0	0	520
18-Dec-02	MW 99-3	-	20.7	0	0	200
18-Dec-02	MW 99-4	-	17.7	0	0	620
18-Dec-02	BH 101 (deep)	-	17.2	0	0	700
18-Dec-02	BH 101 (shallow)	-	19.7	0	0	500
18-Dec-02	BH 102	-	20.4	0	0	300
18-Dec-02	BH 103	-	19.6	0	0	400

Date	Probe/Well	Depth to Water (m)	Gastech GT402*				Gastech GT02
			O_2 (%)	CO (ppm)	H_2S (ppm)	Combustible (CH_4) (ppm)	CO_2 (%)
18-Jul-02	BH 1	3.290	18.3	0	0	1,140	>5
18-Jul-02	BH 2	3.310	15.7	4	0	1,120	>5
18-Jul-02	BH 4	3.255	20.9	0	0	80	0.1
18-Jul-02	BH 5	11.740	19.3	0	0	360	1.35
18-Jul-02	BH 8	5.370	20.9	0	1	480	0.30
18-Jul-02	MW 99-1	6.195	20.9	0	0	640	0.0
18-Jul-02	MW 99-2	5.425	18.6	0	0	900	3.5
18-Jul-02	MW 99-3	4.760	19.9	0	0	740	1.4
18-Jul-02	MW 99-4	5.615	20.1	0	0	540	1.7
18-Jul-02	BH 101 (deep)	dry	16.3	0	0	1,120	>5
18-Jul-02	BH 101 (shallow)	dry	18.7	0	0	700	3.9
18-Jul-02	BH 102	dry	19.2	0	0	720	2.2
18-Jul-02	BH 103	dry	19.8	0	0	580	2.35

Notes:
1) Gastech - Gastech GT402 combustible gas monitor calibrated to methane.
2) Gastech - Gastech GT02 combustible gas monitor calibrated to CO_2.
3) ppm - parts per million
4) LEL - Lower Explosive Limit
5) % - percentage of gas by total volume.
6) nm - not measured

TABLE 8:
SUMMARY OF SOIL GAS MONITORING RESULTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Date	Probe/Well	Depth to Water (m)	Gastech GT201		Gastech GT402			Gastech GT02
			Combustible (ppm)	O_2 (%)	CO (ppm)	H_2S (ppm)	CH_4 (ppm)	CO_2 (%)
7-Jan-02	BH 1	2.676	260	19.6	0	0	300	+5
7-Jan-02	BH 2	3.316	160	20.1	0	0	100	2.3
7-Jan-02	BH 4	1.808	160	20.9	0	0	100	2.9
7-Jan-02	BH 5	11.930	40	20.7	0	0	20	0.50
7-Jan-02	BH 8	5.104	0	20.9	0	0	0	0.25
7-Jan-02	MW 99-1	6.745	160	18.5	0	0	100	2.2
7-Jan-02	MW 99-2	5.865	160	19.9	0	0	80	1.9
7-Jan-02	MW 99-3	5.440	140	20.1	0	0	80	1.6
7-Jan-02	MW 99-4	5.987	240	15.2	0	0	160	+5
7-Jan-02	BH 101 (deep)	Dry	220	15.3	0	0	140	+5
7-Jan-02	BH 101 (shallow)	Dry	220	16.4	0	0	140	+5
7-Jan-02	BH 102	Dry	160	19.6	0	0	100	2.2
7-Jan-02	BH 103	Dry	140	18.4	0	0	100	3.15

Date	Probe/Well	Depth to Water (m)	Gastech GT303			Gastech GT302		Gastech GT02
			CO (ppm)	Combustible (ppm)	O_2 (%)	H_2S (ppm)	CH_4 (ppm)	CO_2 (%)
10-Jul-01	BH 1	3.38	0	1,980	18.7	0	820	+5
10-Jul-01	BH 2	3.33	0	2,240	15.5	0	840	+5
10-Jul-01	BH 4	3.27	0	240	20.4	0	120	0.0
10-Jul-01	BH 5	11.78	0	840	18.9	0	360	1.1
10-Jul-01	BH 8	5.70	0	1,200	18.8	2	480	4.0
10-Jul-01	MW 99-1	6.75	0	1,760	19.1	0	940	1.3
10-Jul-01	MW 99-2	5.85	0	1,560	19.2	0	860	1.8
10-Jul-01	MW 99-3	5.31	0	1,820	18.6	0	980	1.9
10-Jul-01	MW 99-4	5.89	0	1,120	19.5	0	580	1.1
10-Jul-01	BH 101 (deep)	Dry	0	2,220	10.3	0	840	+5
10-Jul-01	BH 101 (shallow)	Dry	0	1,700	15.9	0	840	+5
10-Jul-01	BH 102	Dry	0	1,420	18.3	0	840	1.7
10-Jul-01	BH 103	Dry	0	1,100	19.2	0	460	0.0

Notes:
1) Gastech - Gastech GT303, GT02 combustible gas monitor calibrated to methane.
2) Gastech - Gastech GT302 combustible gas monitor calibrated to hexane.
3) Gastech - Gastech GT02 combustible gas monitor calibrated to CO_2.
4) ppm - parts per million
5) LEL - Lower Explosive Limit
6) % - percentage of gas by total volume.
7) nm - not measured

TABLE 8:
SUMMARY OF SOIL GAS MONITORING RESULTS
WESTSIDE LANDFILL
WEST KELOWNA, BC

Date	Probe/Well	Depth to Water (m)	Gastech GT303			Gastech GT302		Gastech GT02
			CO (ppm)	Combustible (ppm)	O_2 (%)	H_2S (ppm)	CH_4 (ppm)	CO_2 (%)
21-Dec-00	BH 1	3.403	0	640	18.9	0	600	2.1
21-Dec-00	BH 2	3.304	0	440	19.3	0	500	1.05
21-Dec-00	BH 4	3.378	0	280	20.1	0	720	2.0
21-Dec-00	BH 5	11.865	0	100	20.2	0	120	0
21-Dec-00	BH 8	5.800	0	0	20.9	0	20	0
21-Dec-00	MW 99-1	6.742	0	120	20.5	0	420	1.15
21-Dec-00	MW 99-2	6.335	0	120	20.6	0	360	0.95
21-Dec-00	MW 99-3	4.996	0	120	20.7	0	220	0.2
21-Dec-00	MW 99-4	5.795	0	760	17.4	0	600	4.05
21-Dec-00	BH 101 (deep)	Dry	0	640	18.9	0	660	3.15
21-Dec-00	BH 101 (shallow)	Dry	0	520	19.5	0	520	1.2
21-Dec-00	BH 102	Dry	0	300	19.5	0	400	0.7
21-Dec-00	BH 103	Dry	0	0	20.9	0	360	0.6

Date	Probe/Well	Depth to Water (m)	Gastech GT402			Gastech GT201		Gastech GT02
			Combustible (ppm)	H_2S (ppm)	CO (ppm)	CH_4 (ppm)	O_2 (%)	CO_2 (%)
27-Jul-00	BH 1	3.190	400	0	0	100	16.2	+5.00
27-Jul-00	BH 2	3.265	440	0	0	100	14.7	+5.00
27-Jul-00	BH 4	3.130	160	0	0	40	20.9	1.75
27-Jul-00	BH 5	11.682	20	0	0	0	20.9	0.20
27-Jul-00	BH 8	5.395	40	0	0	0	20.9	0.45
27-Jul-00	MW 99-1	6.023	100	0	0	60	20.9	1.45
27-Jul-00	MW 99-2	5.490	20	0	0	60	20.7	1.40
27-Jul-00	MW 99-3	5.000	220	0	0	80	19.3	2.45
27-Jul-00	MW 99-4	5.870	160	0	0	40	20.4	1.60
27-Jul-00	BH 101 (deep)	Dry to 3.80	260	0	0	80	18.5	+5.00
27-Jul-00	BH 101 (shallow)	Dry to 1.88	380	0	0	100	16.9	+5.00
27-Jul-00	BH 102	DRY	240	0	0	60	19.8	2.20
27-Jul-00	BH 103	DRY	200	0	0	60	20.9	2.25

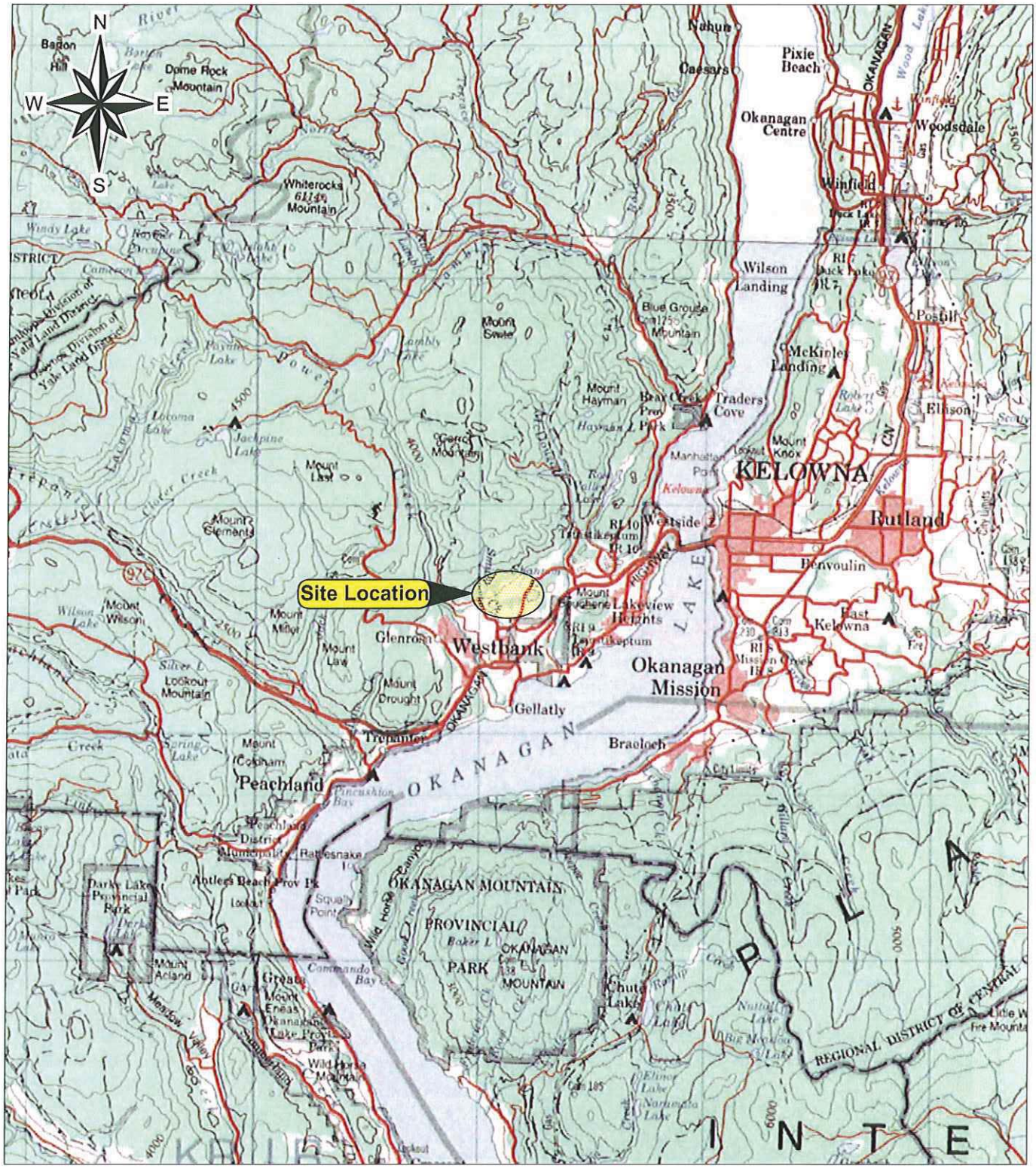
Notes:
1) Gastech - Gastech GT201 combustible gas monitor calibrated to methane.
2) Gastech - Gastech GT402 combustible gas monitor calibrated to hexane.
3) Gastech - Gastech GT02 combustible gas monitor calibrated to CO_2.
4) LEL - Lower Explosive Limit
5) % - percentage of gas by total volume.
6) nm - not measured

TABLE 9
QA / QC BLIND DUPLICATE WATER SAMPLES
WESTSIDE LANDFILL
WEST KELOWNA, BC

PARAMETER	GCDWQ	Notes	CSR - AW	Notes	CSR - DW	Notes	BH1	BH6 Blind Duplicate	Relative Percent Difference	BH1	BH6 Blind Duplicate	Relative Percent Difference	SLMHP	BHA Blind Duplicate	Relative Percent Difference	BH2	BHA Blind Duplicate	Relative Percent Difference
							Mar-09	Mar-09		Jun-09	Jun-09		Sep-09	Sep-09		Dec-09	Dec-09	
Physical																		
pH	6.5-8.5	AO	-		-		6.6	6.6	0.0%	7.14	7.15	0.1%	7.6	7.63	0.4%	7.17	7.23	0.8%
Conductivity (uS/cm)	-		-		-		3440	3340	2.9%	3,760	3,760	0.0%	889	897	0.9%	3,320	3,300	0.6%
TDS	500	AO	-		-		2,310	2,310	0.0%	2,770	2,710	2.2%	524	534	1.9%	2,150	2,270	3.5%
Calculated TDS[13]	500	AO	-		-		2,294	2,228	2.9%	2,508	2,508	0.0%	593	598	0.9%	2,214	2,201	0.6%
Hardness	-		-		-		1,720	1,680	2.4%	1,950	2,000	2.5%	354	357	0.8%	1,660	1,590	4.3%
Dissolved Anions																		
Total Alkalinity	-		-		-		1310	1310	0.0%	1,460	1,460	0.0%	357	357	0.0%	1,570	1,560	0.6%
Chloride	250	AO	-		250		533	517	3.0%	537	516	4.0%	48	48.3	0.4%	268	251	6.6%
Sulphate	500	AO	1,000		500		52.7	51.7	1.9%	7.1	6.6	7.3%	29.1	29.4	1.0%	17	16.3	4.2%
Nutrients																		
Ammonia (as N)	-		1.31-18.4	pH	-		0.87	0.87	0.0%	0.98	0.94	4.2%	0.03	0.02	40.0%	0.48	0.47	2.1%
Nitrate (as N)	45	MAC	400		10		<0.01	0.17	-	0.94	0.89	5.5%	0.47	0.47	0.0%	0.62	0.93	40.0%
Nitrate & Nitrite (as N)	10		400		10		<0.01	0.17	-	0.94	0.89	5.5%	0.47	0.47	0.0%	-	-	-
Total Nitrogen					10		3.70	3.58	3.3%	5.71	5.32	7.1%	0.70	0.66	5.9%	-	-	-
Total Kjeldahl Nitrogen	-		-		-		-	-	-	4.76	4.43	7.2%	0.23	0.19	19.0%	-	-	-
Organic Nitrogen	-		-		-		-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-		-		-		-	-	-	-	-	-	-	-	-	-	-	-
Oxygen Demand																		
BOD[5]	-		-		-		-	-	-	-	-	-	-	-	-	-	-	-
COD[6]	-		-		-		-	-	-	-	-	-	-	-	-	-	-	-
BOD:COD	-		-		-		-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-		-		-		-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Metals																		
Aluminum	0.1		-		0.2		<0.050	<0.050	-	0.881	0.939	7.2%	<0.050	<0.050	-	<0.050	<0.050	-
Antimony	0.006	IMAC	0.2		0.006		<0.0010	<0.0010	-	0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010	<0.0010	-
Arsenic	0.01	IMAC	0.05		0.025		0.0065	0.0069	6.0%	0.0098	0.0101	3.0%	<0.0050	<0.0050	-	<0.0050	<0.0050	-
Barium	1	MAC	10		1		0.0642	0.0653	1.7%	0.0782	0.0795	1.6%	0.0158	0.0151	4.5%	0.0148	0.17	168.0%
Beryllium	-		0.053		-		<0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010	<0.0010	-
Bismuth	-		-		-		<0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010	<0.0010	-
Boron	5	IMAC	50		5		1.26	1.2	4.9%	1.07	1.05	1.9%	0.022	0.021	4.7%	0.44	0.4	9.5%
Cadmium	0.005	MAC	0.0001-0.0006	H	0.005		<0.00010	<0.00010	-	<0.00010	<0.00010	-	<0.00010	<0.00010	-	0.00035	<0.00010	-
Calcium	-		-		-		348	345	0.9%	389	396	1.8%	92.7	93.5	0.9%	356	345	3.1%
Chromium	0.05	MAC	0.01-0.09	V	0.05		<0.0050	<0.0050	-	0.0155	0.0157	1.3%	<0.0050	<0.0050	-	<0.0050	<0.0050	-
Cobalt	-		0.004		-		0.00482	0.00467	3.2%	0.00526	0.00553	5.0%	<0.00050	<0.00050	-	0.00398	0.0036	10.0%
Copper	1	AO	0.02-0.09	H	1	AO	0.0088	0.0066	28.6%	0.0135	0.0145	7.1%	0.013	0.0131	0.8%	0.0068	0.0044	42.9%
Iron	0.3	AO	-		0.3	AO	7.51	6.68	11.7%	15.9	16.1	1.3%	<0.100	<0.100	-	0.403	0.365	9.9%
Lead	0.01	MAC	0.04-0.16	H	0.01		<0.0010	<0.0010	-	0.0011	0.0011	0.0%	<0.0010	<0.0010	-	<0.0010	<0.0010	-
Lithium	-		-		-		0.0168	0.0162	3.6%	0.0143	0.0135	5.8%	0.0151	0.0149	1.3%	0.0209	0.0202	3.4%
Magnesium	-		-		100	AO	206	200	3.0%	238	246	3.3%	29.8	30.1	1.0%	188	177	6.0%
Manganese	0.05	AO	-		0.05	AO	6.34	6.26	1.3%	8.09	8.3	2.6%	<0.0020	<0.0020	-	8.75	8.41	4.0%
Mercury	0.001	MAC	0.001		0.001		<0.00050	<0.00050	-	<0.00050	<0.00050	-	<0.00050	<0.00050	-	<0.00050	<0.00050	-
Molybdenum	-		10		0.25		0.0015	0.0016	6.5%	0.0015	0.0015	0.0%	0.0035	0.0034	2.9%	0.0047	0.0046	2.2%
Nickel	-		0.25-1.5	H	-		0.0394	0.0386	2.1%	0.0454	0.045	0.9%	0.0026	0.0027	3.8%	0.0395	0.0388	1.8%
Phosphorus	-		-		-		<0.200	<0.200	-	0.281	0.275	2.2%	<0.200	<0.200	-	<0.200	<0.200	-
Potassium	-		-		-		5.44	5.45	0.2%	4.87	5	2.6%	3.89	3.88	0.3%	2.28	2.34	2.6%
Selenium	0.01	MAC	0.01		0.01		<0.0030	<0.0030	-	<0.0030	<0.0030	-	<0.0030	<0.0030	-	<0.0030	<0.0030	-
Silicon	-		-		-		20	19.5	2.5%	24.7	25.7	4.0%	13.5	13.6	0.7%	21.5	20.7	3.8%
Silver	-		.0005-.015	H	-		<0.00050	<0.00050	-	<0.00050	<0.00050	-	<0.00050	<0.00050	-	<0.00050	<0.00050	-
Sodium	200	AO	-		200		176	169	4.1%	183	187	2.2%	47.1	47.8	1.5%	116	110	5.3%
Strontium	-		-		-		3.02	3.03	0.3%	3.25	3.31	1.8%	0.705	0.709	0.6%	3.39	3.32	2.1%
Tellurium							<0.0020	<0.0020	-	<0.0020	<0.0020	-	<0.0020	<0.0020	-	<0.0020	<0.0020	-
Thallium	-		0.003		-		<0.00020	<0.00020	-	<0.00020	<0.00020	-	<0.00020	<0.00020	-	<0.00020	<0.00020	-
Thorium							<0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010	<0.0010	-
Tin	-		-		-		<0.0020	<0.0020	-	<0.0020	<0.0020	-	<0.0020	<0.0020	-	<0.0020	<0.0020	-
Titanium	-		1.0		-		<0.050	<0.050	-	<0.050	<0.050	-	<0.050	<0.050	-	<0.050	<0.050	-
Tungsten	-		-		-		-	-	-	-	-	-	-	-	-	-	-	-
Uranium	0.02	IMAC	3		0.2		0.00238	0.00231	3.0%	0.00095	0.00098	3.1%	0.0077	0.00793	2.9%	0.0055	0.00533	3.1%
Vanadium	-		-		-		<0.0100	<0.0100	-	0.0136	0.0141	3.6%	<0.0100	<0.0100	-	<0.0100	<0.0100	-
Zinc	5	AO	0.075-2.4	H	5	AO	<0.0100	<0.0100	-	<0.0100	<0.0100	-	0.0134	0.0135	0.7%	<0.0100	<0.0100	-
Zirconium							0.0053	0.0054	1.9%	0.0089	0.0093	4.4%	<0.0010	<0.0010	-	0.0043	0.0042	2.4%
Other																		
Phenol	-		0.01		-		-	-	-	-	-	-	-	-	-	-	-	-
LEPH[7]	-		0.5		-		-	-	-	-	-	-	-	-	-	-	-	-
HEPH[8]	-		-		-		-	-	-	-	-	-	-	-	-	-	-	-
EPH_{C10-19}	-		0.5		-		-	-	-	-	-	-	-	-	-	-	-	-
EPH_{C19-32}	-		-		-		-	-	-	-	-	-	-	-	-	-	-	-

Notes:

1. All concentrations in mg/L, unless otherwise noted.
2. GCDWQ - Guidelines for Canadian Drinking Water Quality (Fifth edition, 2004)
   MAC = Maximum Acceptable Concentration
   IMAC = Interim Maximum Acceptable Concentration
   AO = Aesthetic Objective
3. CSR - DW - BC Contaminated Sites Regulation, Standard for Drinking Water
4. CSR - AW - BC Contaminated Sites Regulation, Standard for Aquatic Life.
   pH - pH dependant standard
   H - hardness dependant standard
   V - valence dependent standard.
5. BOD - Biological Oxygen Demand (5-day)
6. COD - Chemical Oxygen Demand
7. LEPH - Light Extractable Petroleum Hydrocarbons.
8. HEPH - Heavy Extractable Petroleum Hydrocarbons.
9. - no standard.
10. - not measured.
11. Underlined and shaded - indicates concentration exceeds GCDWQ.
12. Bold and shaded - indicates that concentration exceeds CSR - DW or AW.
13. Underlined, bold and shaded - indicates that concentration exceeds GCDWQ and CSR - DW
14. Assumed TDS, calculated from conductivity value multiplied by 0.667.



0 2,000 4,000 6,000 8,000 10,000

SCALE IN METRES

PROJECT

WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WESTBANK, B.C.

TITLE

KEY PLAN

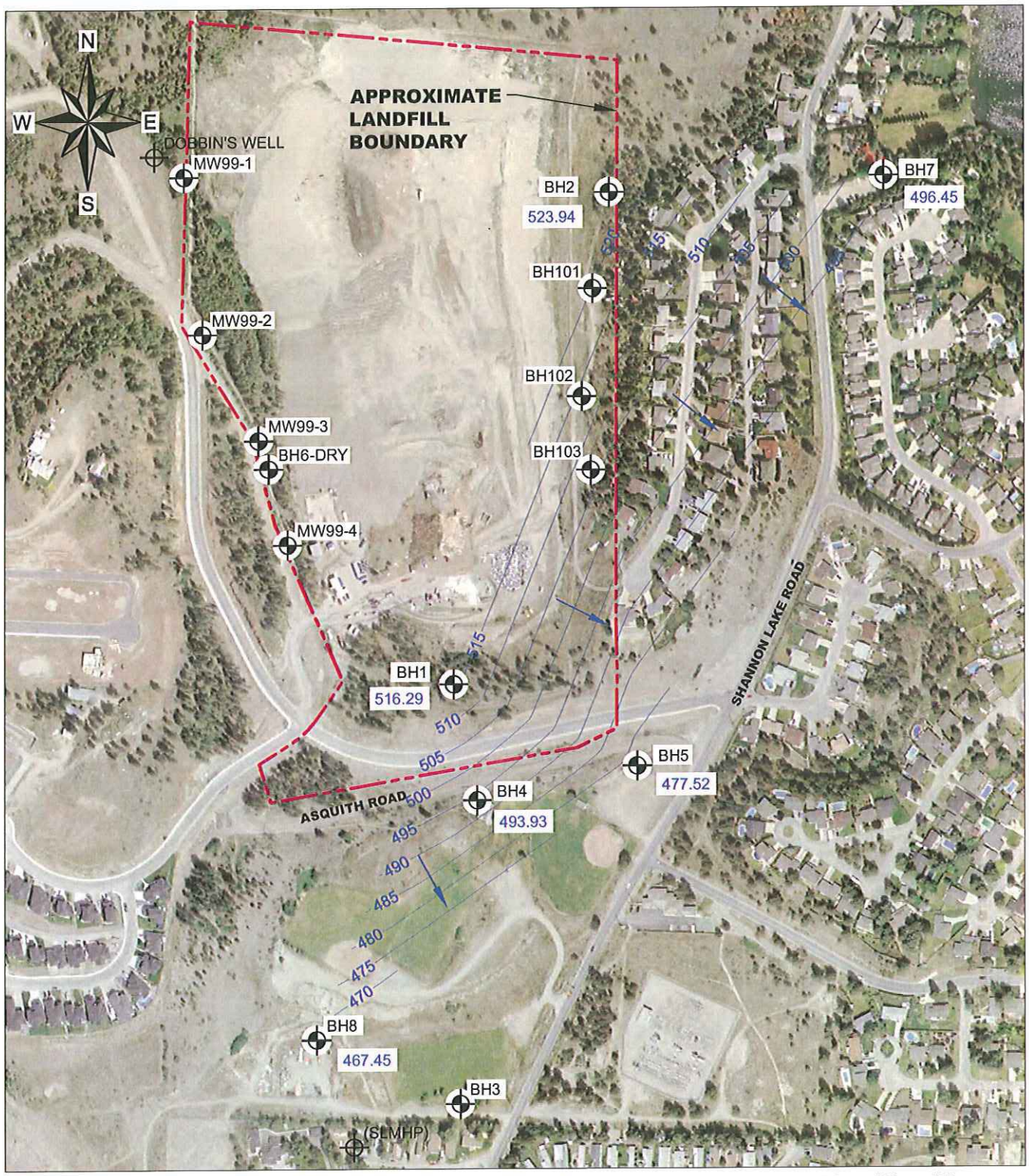
REFERENCES

1. MAP REFERENCE: PRODUCED UNDER LICENSES GRANTED BY HER MAJESTY THE QUEEN IN RIGHT OF CANADA, REPRESENTED BY THE DEPARTMENT OF NATURAL RESOURCES, AND BY SOFTMAP TECHNOLOGIES INC.

Golder Associates
Kelowna, BC

PROJECT No. 04-1440-062(2600)			FILE No. 041440062_2600_1.dwg		
DESIGN	AR	29MAR10	SCALE 1:200,000	REV. 0	
CADD	JG	29MAR10			
CHECK					
REVIEW					

FIGURE: 1



LEGEND

- BH4 / 467.45 / (SLMHP) — MONITORING WELL LOCATION (APPROX.); MONITORING WELL GROUNDWATER ELEVATION (2009)(APPROX.); LOCATION OF DOMESTIC WATER WELLS (APPROX.)
- INFERRED DIRECTION OF GROUNDWATER FLOW
- 470 — GROUNDWATER CONTOUR (5m INTERVAL) (2009)
- LANDFILL SITE BOUNDARY (APPROX.)

REFERENCE

1. ORTHOPHOTOS: RDCO, DATED 2009.
   FILE NAMES: 82E.082.049.JPG,82E.082.050.JPG,82E.082.059.JPG & 82E.082.060.JPG

PROJECT: RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE: **SITE PLAN DEPICTING INFERRED GROUNDWATER FLOW DIRECTION**

Golder Associates Kelowna, BC

PROJECT No. 04-1440-062(2600)			FILE No. 041440062_2600_2.dwg		
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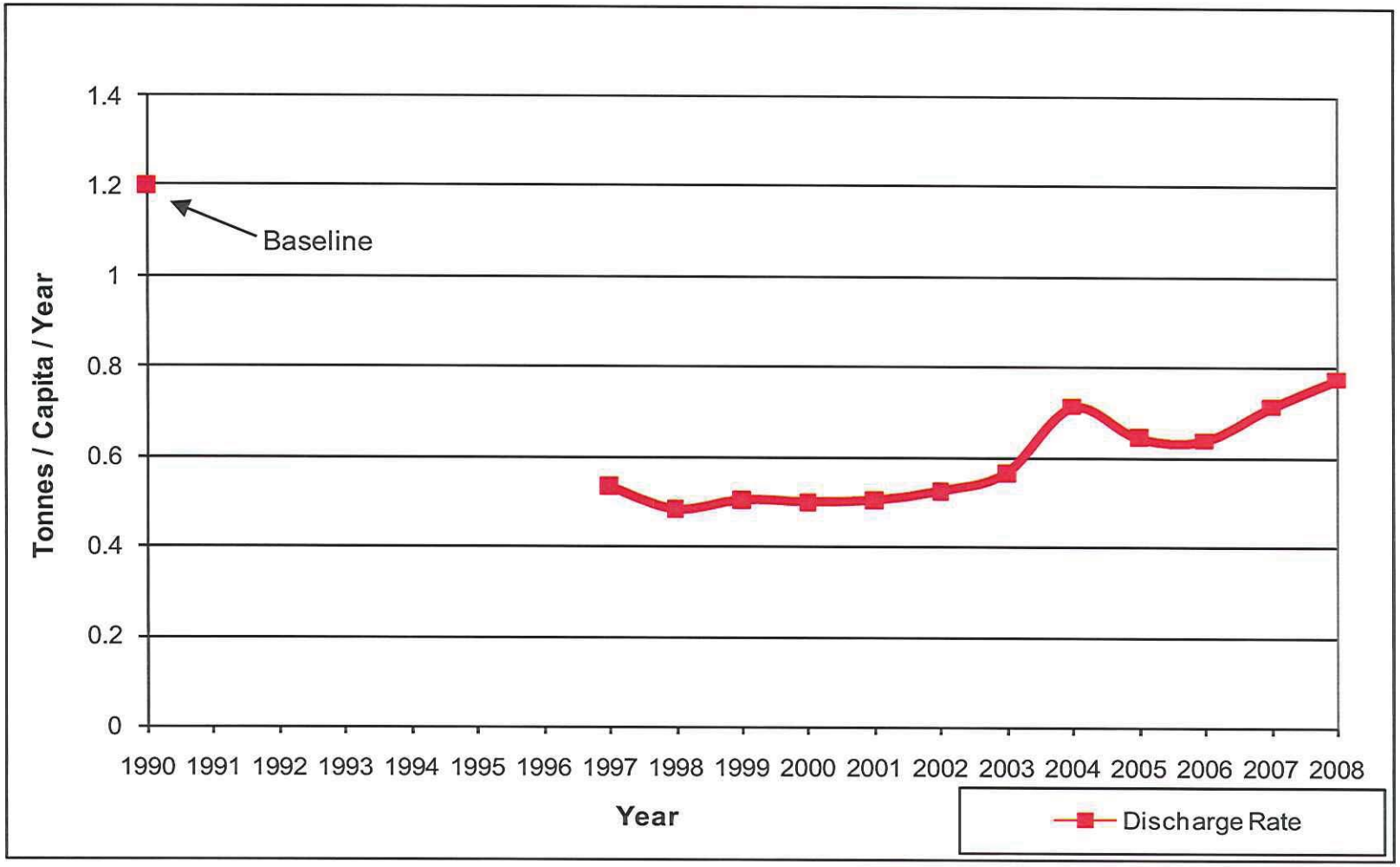
REVIEW					

FIGURE: 2



PROJECT
RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE
PER CAPITA YEARLY
WASTE DISCHARGE RATES

Golder Associates
Kelowna, BC

PROJECT No.		04-1440-062.2600	FILE No.		041440062_2600_3
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
CADD	SWD	28MAR10			
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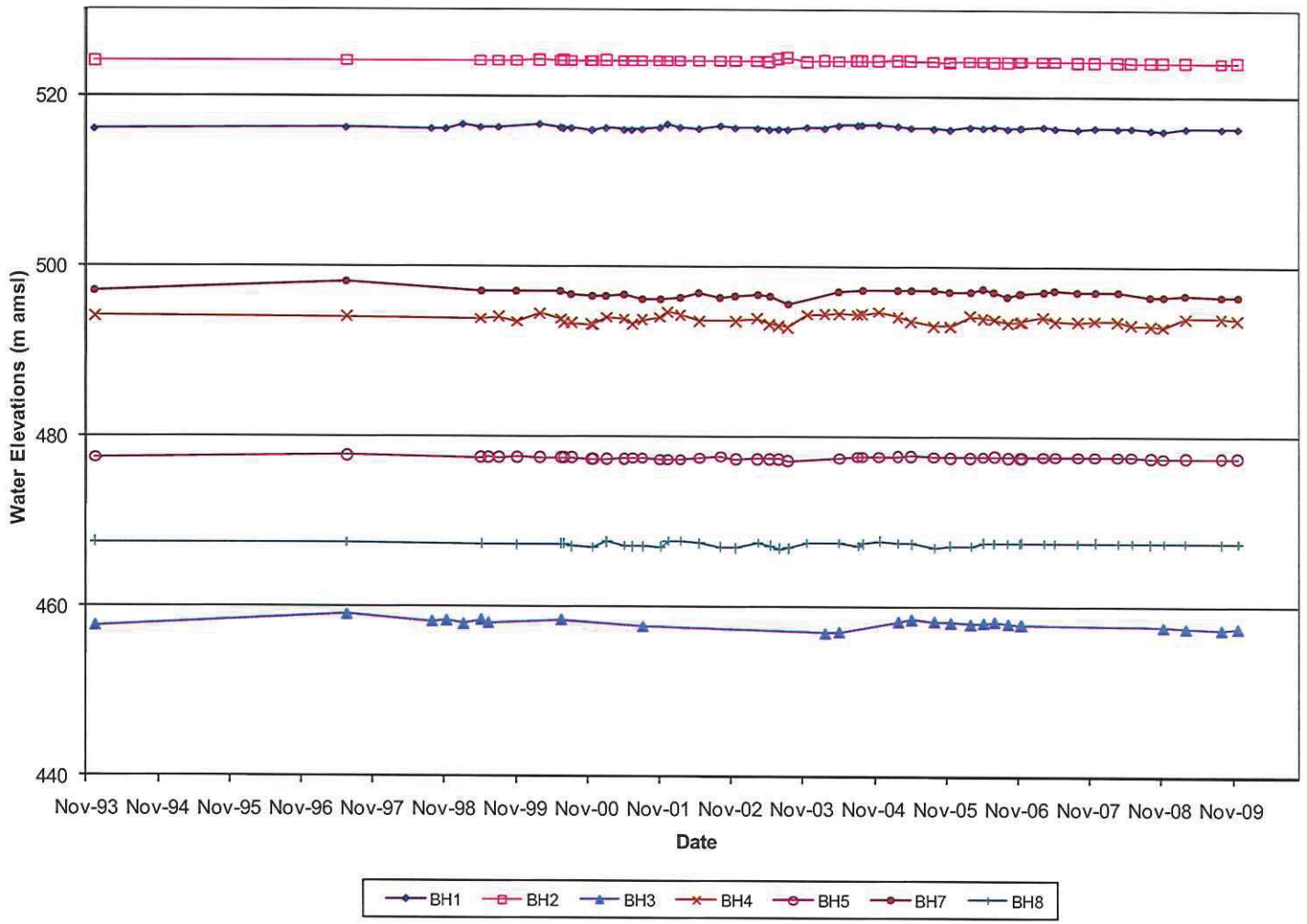
REVIEW	RP	30MAR10			

FIGURE: 3



PROJECT
RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE
GROUNDWATER ELEVATIONS

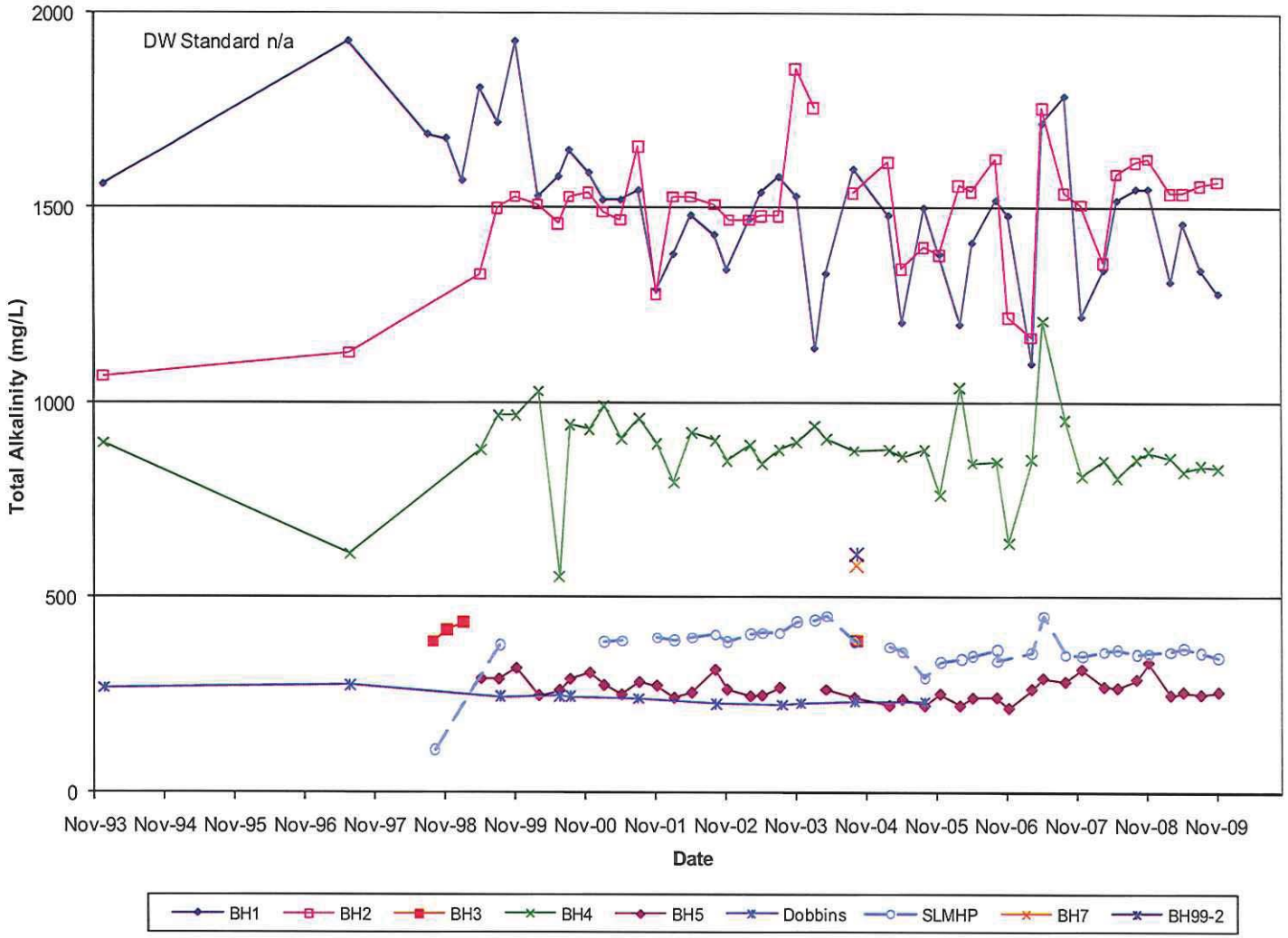
Golder Associates
Kelowna, BC

PROJECT No.	04-1440-062.2600		FILE No.	041440062_2600_4	
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
CADD	SWD	29MAR10			
CHECK	MH	29MAR10			
REVIEW	RP	29MAR10			

FIGURE: 4

APPENDIX A

Trend Analyses Graphing (Various Parameters)



PROJECT

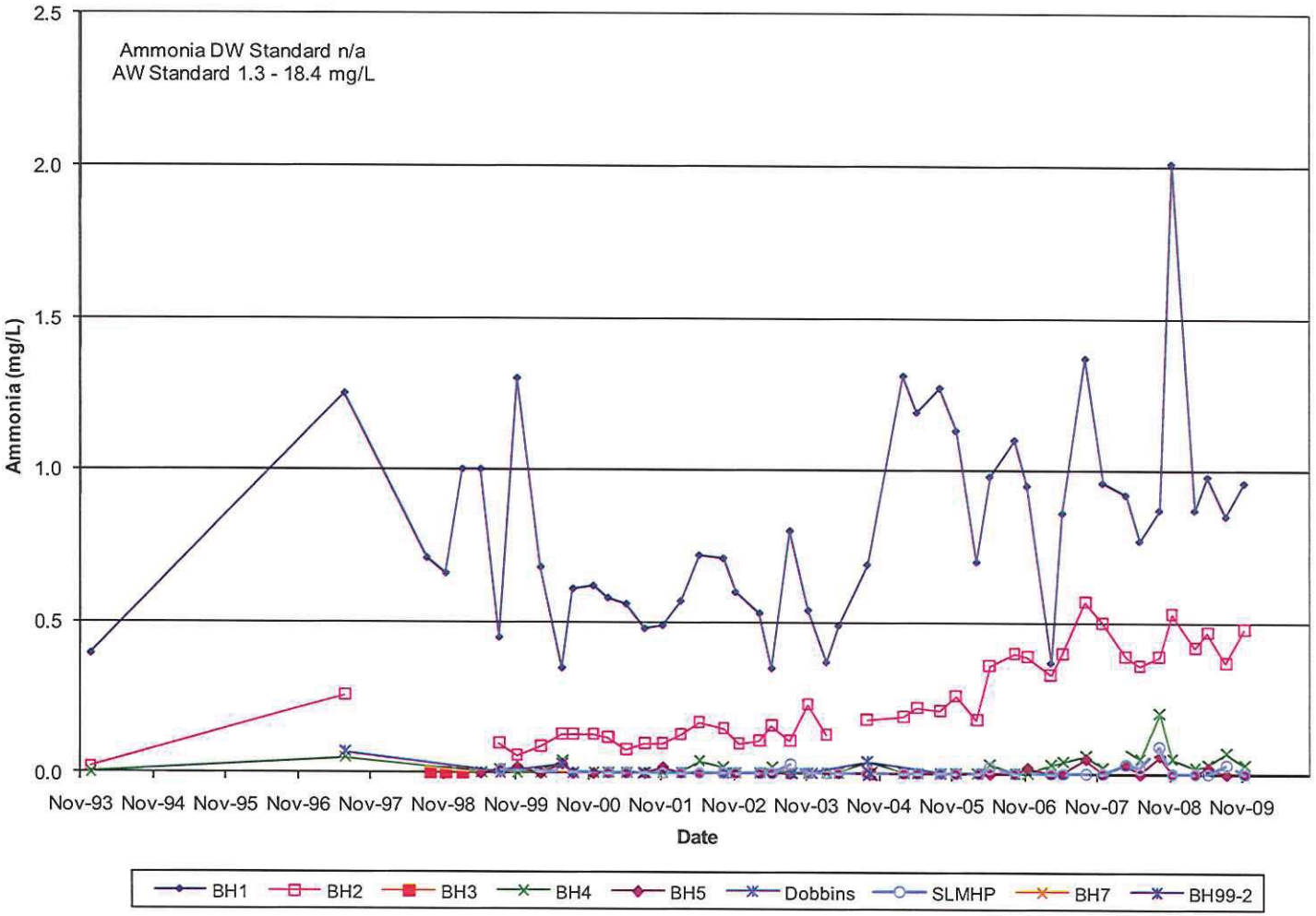
RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE

TOTAL ALKALINITY CONCENTRATIONS

Golder Associates Kelowna, BC

PROJECT No.	04-1440-062.2600		FILE No.	041440062_graphs	
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
CADD	SWD	29MAR10	APPENDIX A		
CHECK	MH	29MAR10			
REVIEW	RP	29MAR10			



PROJECT

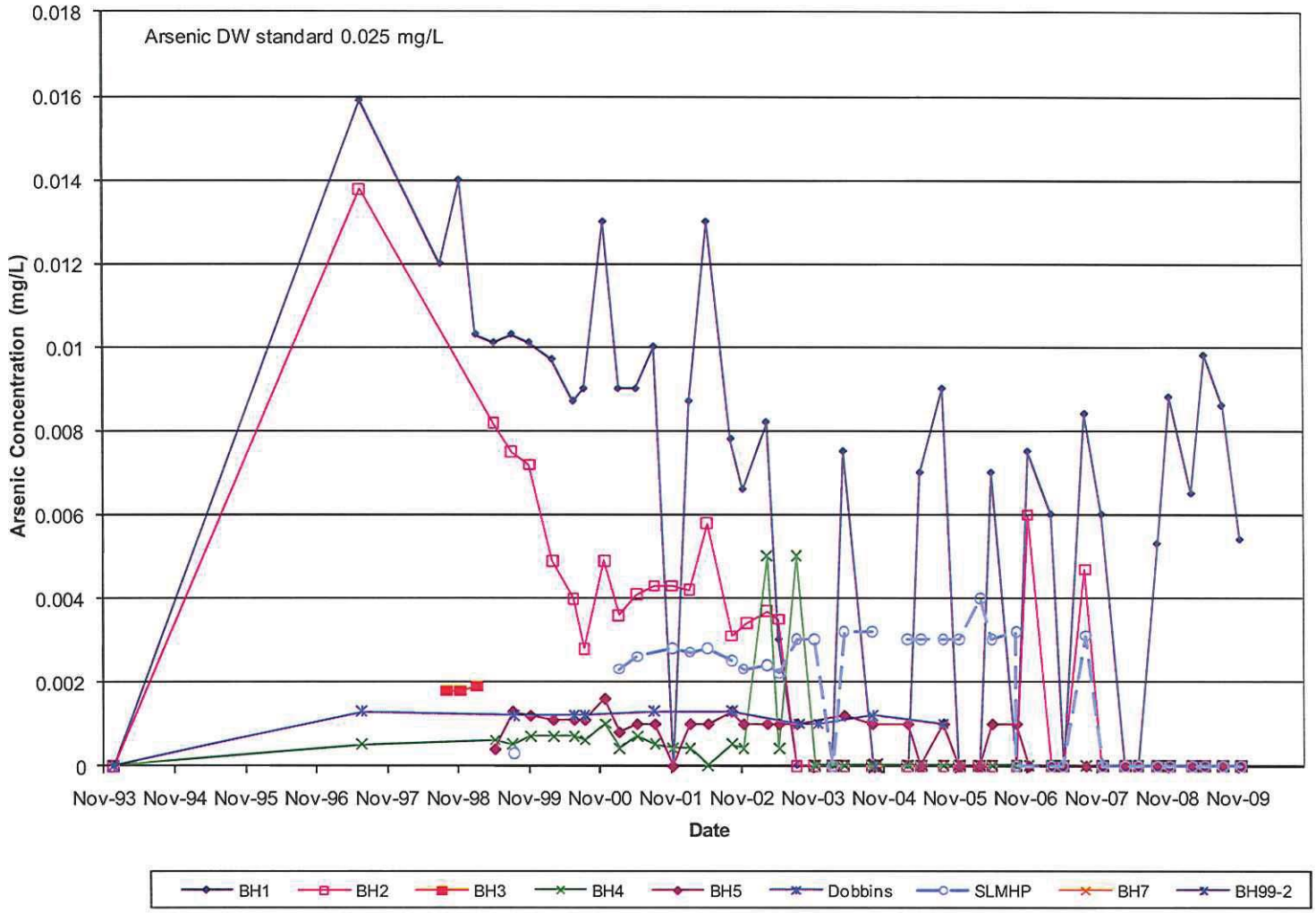
RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE

AMMONIA CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.	04–1440–062.2600		FILE No.	041440062_graphs	
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
CADD	SWD	29MAR10	APPENDIX A		
CHECK	MH	29MAR10			
REVIEW	RP	29MAR10			



PROJECT

RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE

ARSENIC CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.	04-1440-062.2600		FILE No.	041440062_graphs	
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
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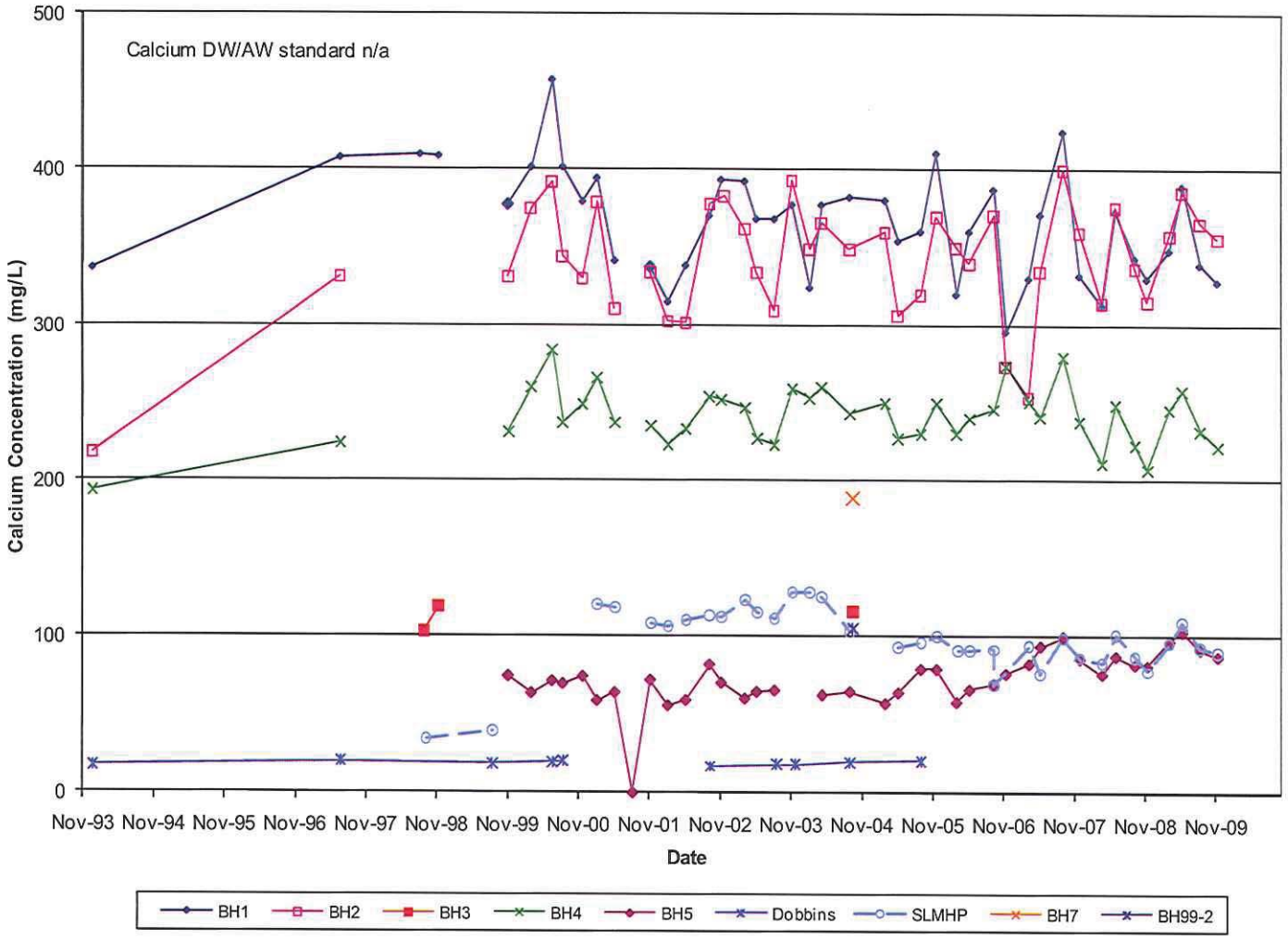
CHECK	MH	29MAR10			
REVIEW	RP	29MAR10			

APPENDIX A



PROJECT

RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE

CALCIUM CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.	04-1440-062.2600		FILE No.	041440062_graphs	
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
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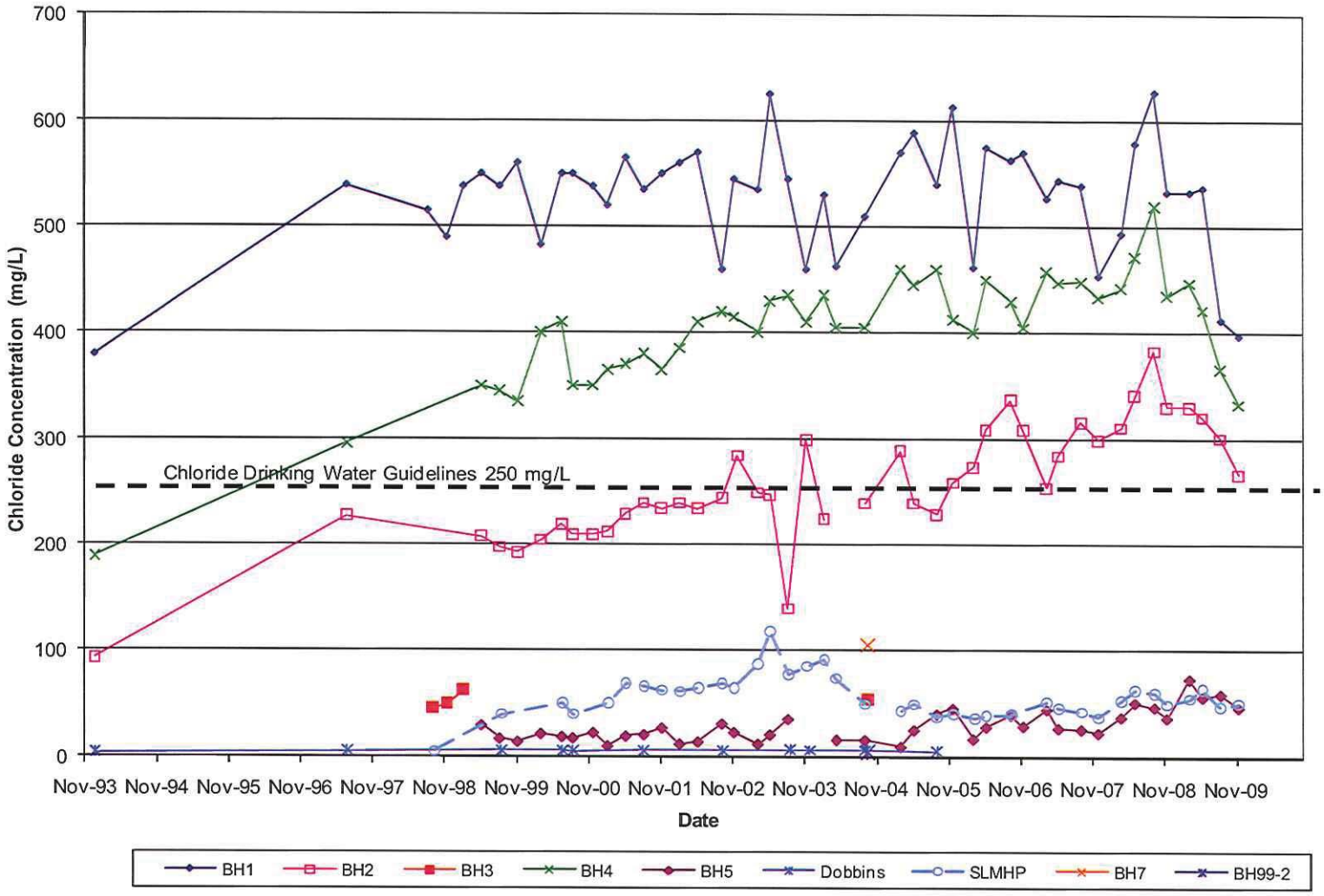
REVIEW	RP	29MAR10			



PROJECT

RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE

CHLORIDE CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.		04-1440-062.2600	FILE No.	041440062_graphs
DESIGN	MH	25MAR10	SCALE	N/A REV. 0
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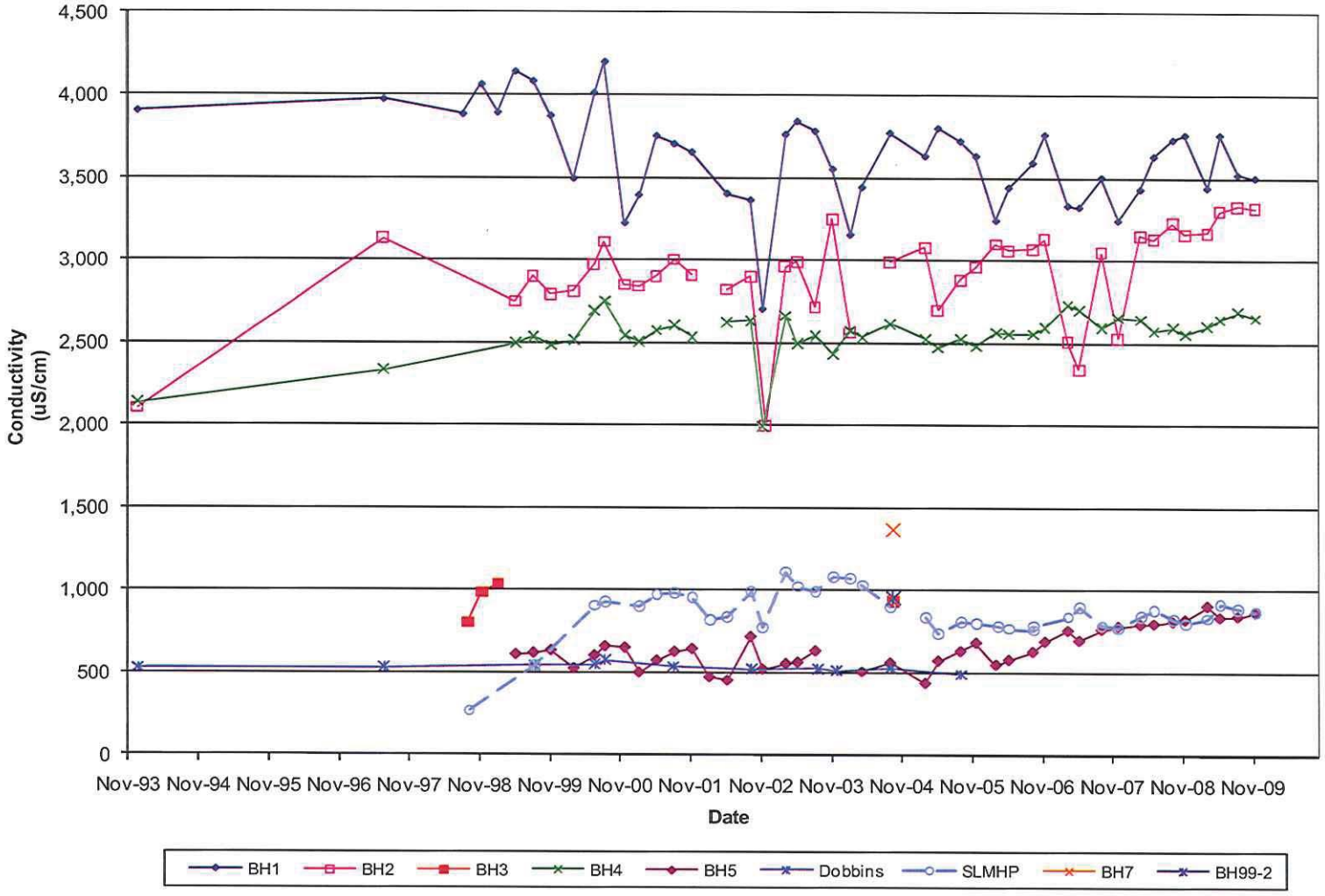
CHECK	MH	29MAR10		
REVIEW	RP	29MAR10		

APPENDIX A



PROJECT
RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE
CONDUCTIVITY CONCENTRATIONS

Golder Associates Kelowna, BC

PROJECT No. 04-1440-062.2600			FILE No. 041440062_graphs	
DESIGN	MH	25MAR10	SCALE N/A	REV. 0
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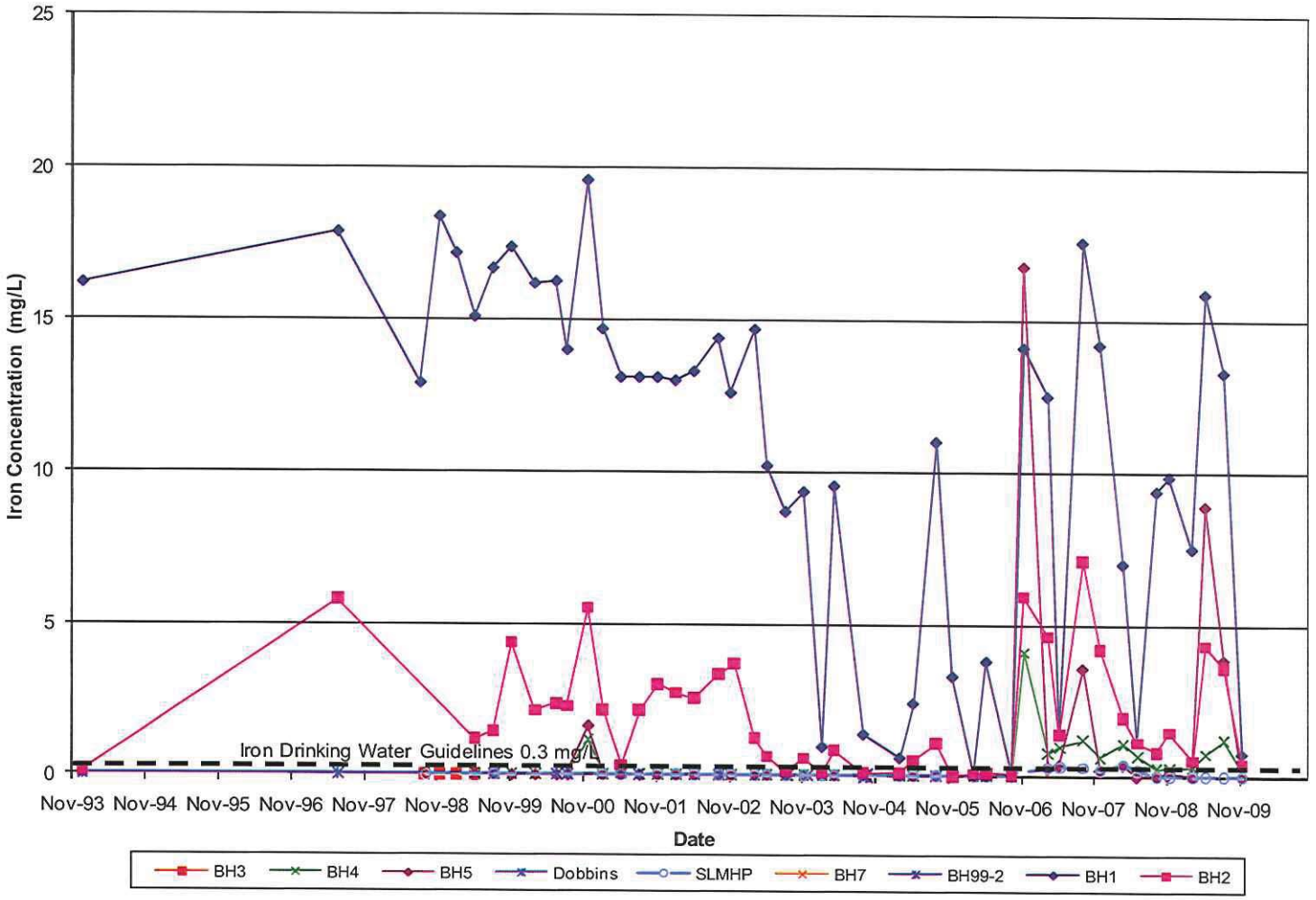
CHECK	MH	29MAR10		
REVIEW	RP	29MAR10		



PROJECT

RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

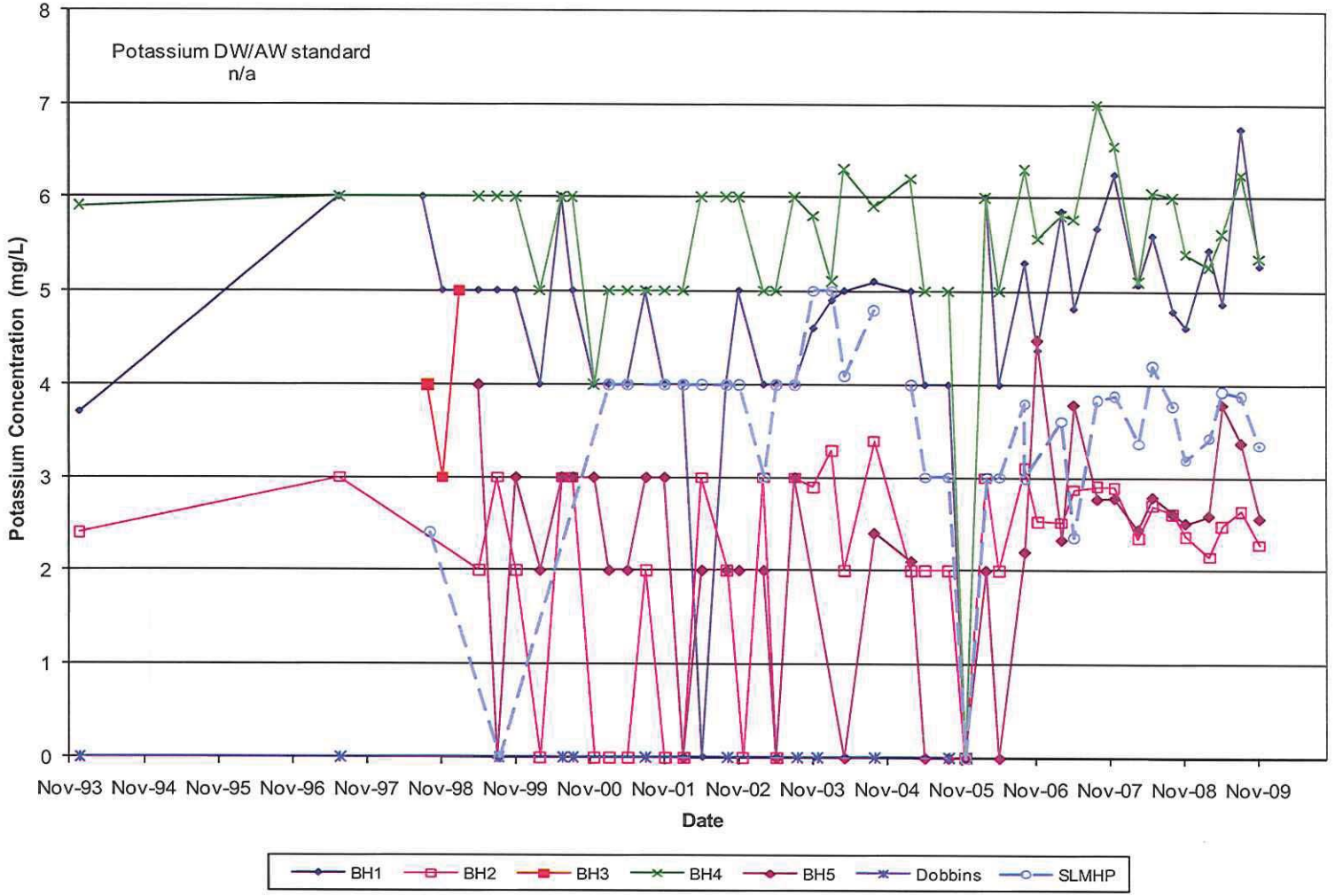
TITLE

IRON CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.		04-1440-062.2600	FILE No.		041440062_graphs
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
CADD	SWD	29MAR10			
CHECK	MH	29MAR10			
REVIEW	RP	29MAR10			

APPENDIX A



PROJECT

RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

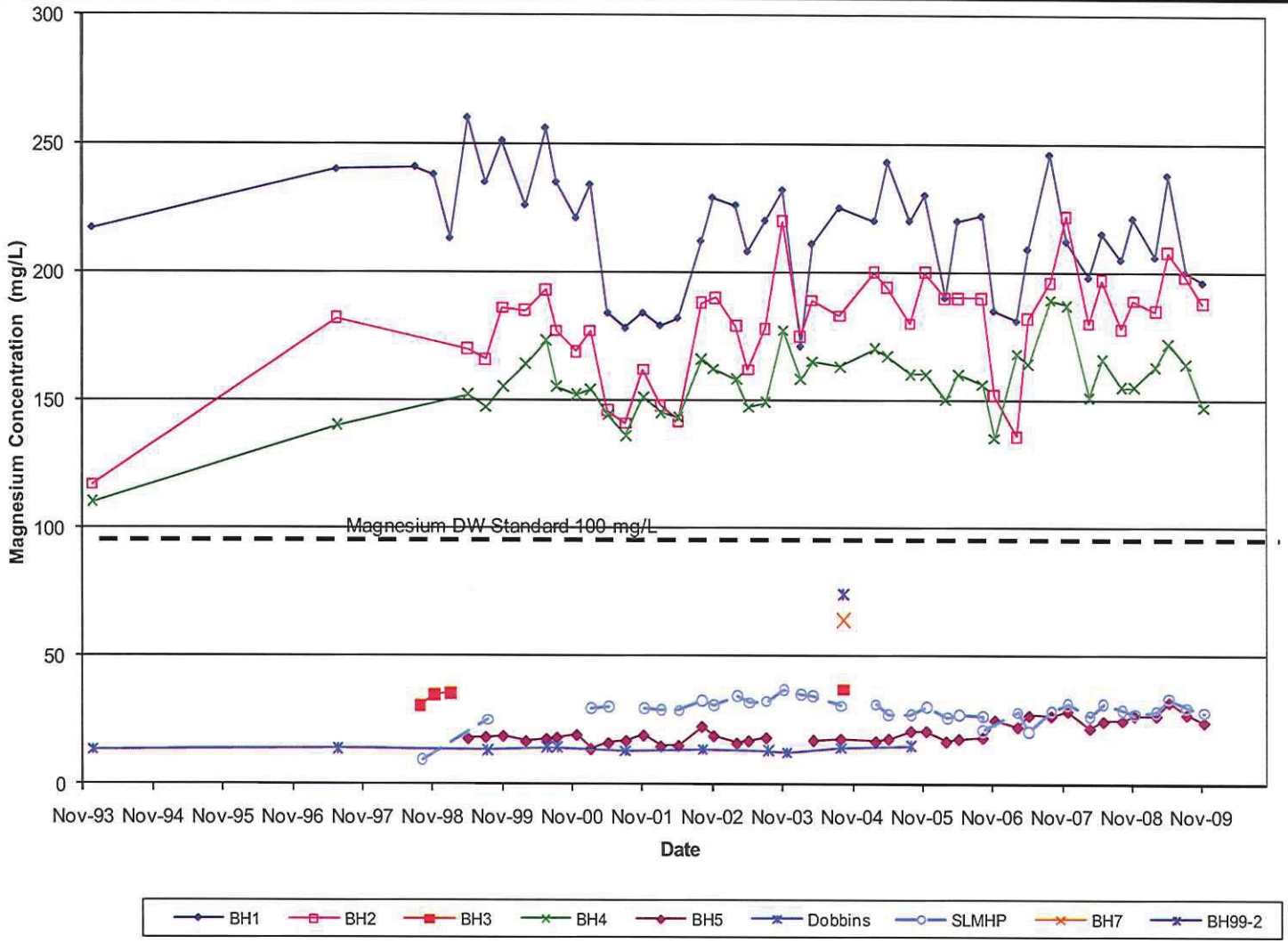
TITLE

POTASSIUM CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.	04–1440–062.2600		FILE No.	041440062_graphs	
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
CADD	SWD	29MAR10			
CHECK	MH	29MAR10			
REVIEW	RP	29MAR10			

APPENDIX A



PROJECT

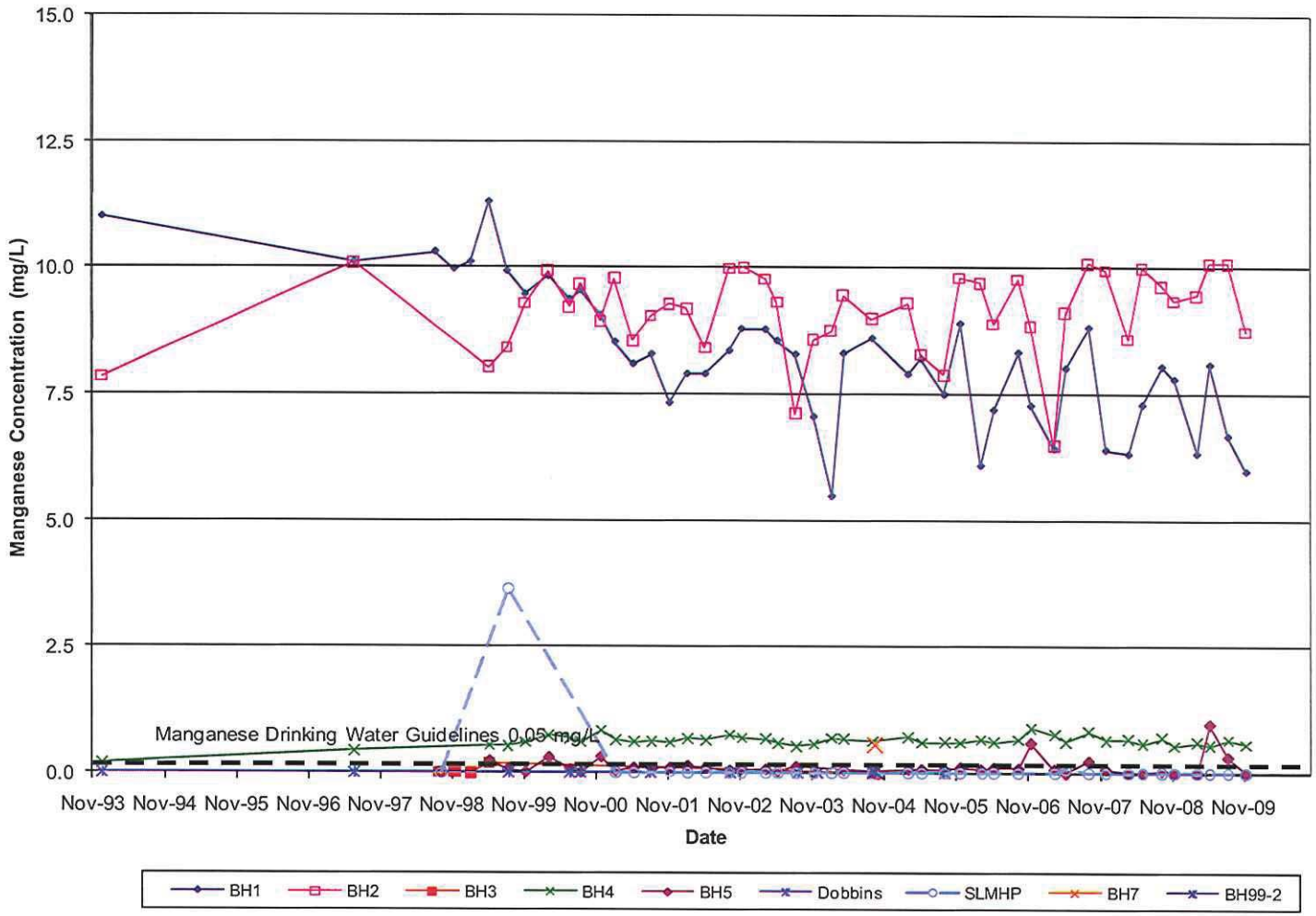
RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE

MAGNESIUM CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.	04-1440-062.2600		FILE No.	041440062_graphs
DESIGN	MH	25MAR10	SCALE	N/A REV. 0
CADD	SWD	29MAR10		
CHECK	MH	29MAR10		APPENDIX A
REVIEW	RP	29MAR10		



PROJECT

RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE

MANGANESE CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.	04-1440-062.2600		FILE No.	041440062_graphs	
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
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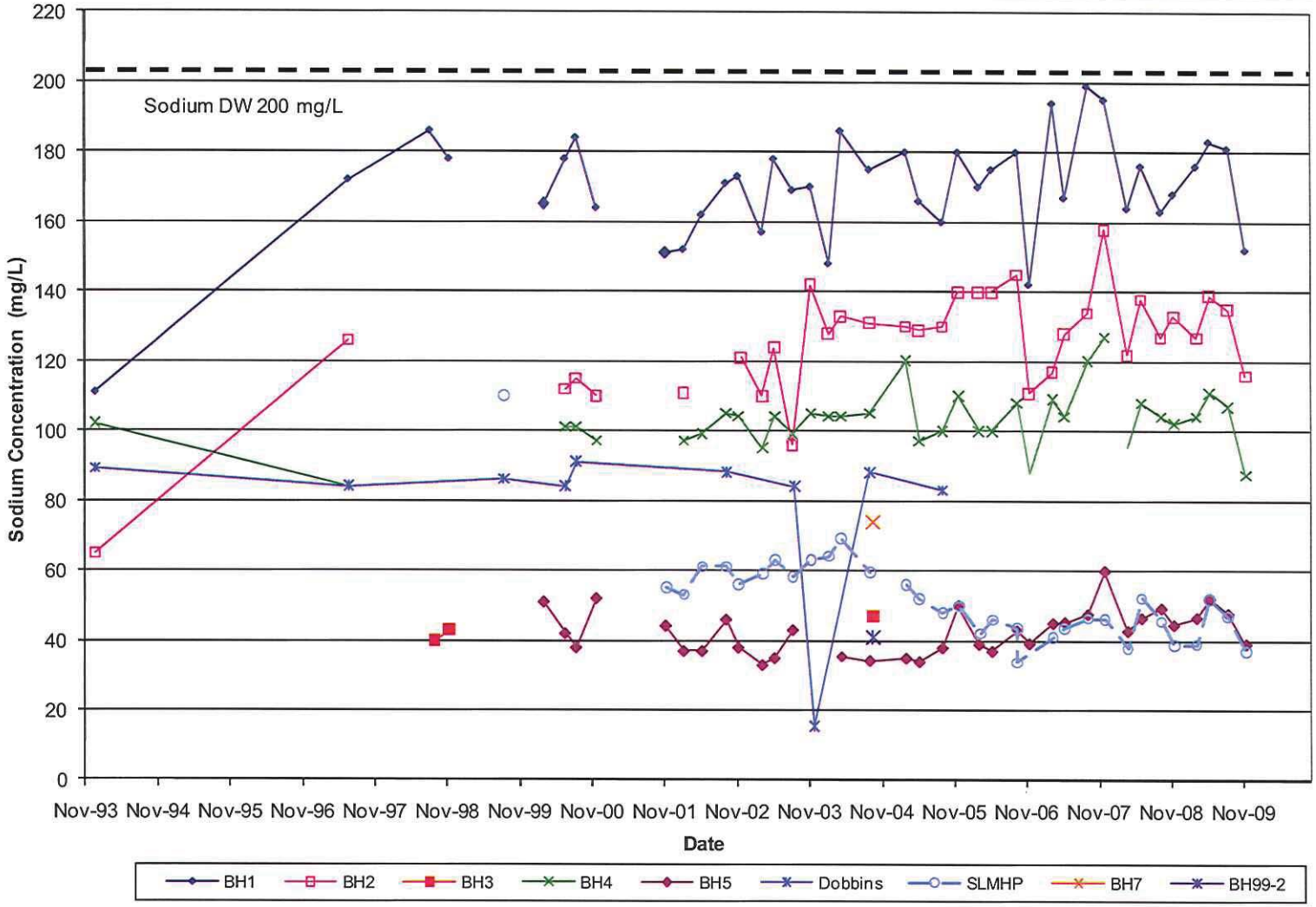
REVIEW	RP	29MAR10			

APPENDIX A



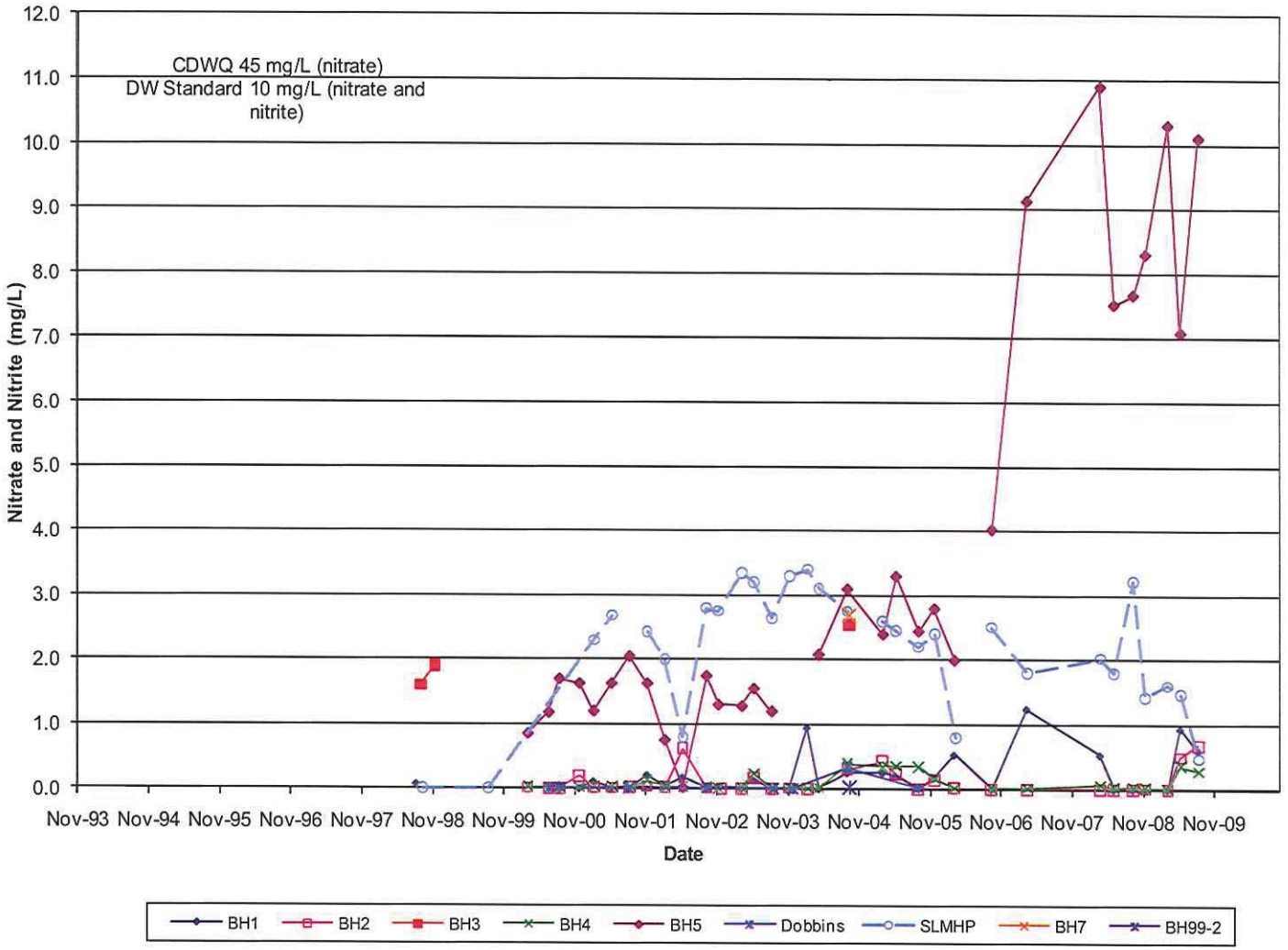
PROJECT
RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE
SODIUM CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.	04-1440-062.2600		FILE No.	041440062_graphs	
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
CADD	SWD	29MAR10			
CHECK	MH	29MAR10			
REVIEW	RP	29MAR10			

APPENDIX A



PROJECT

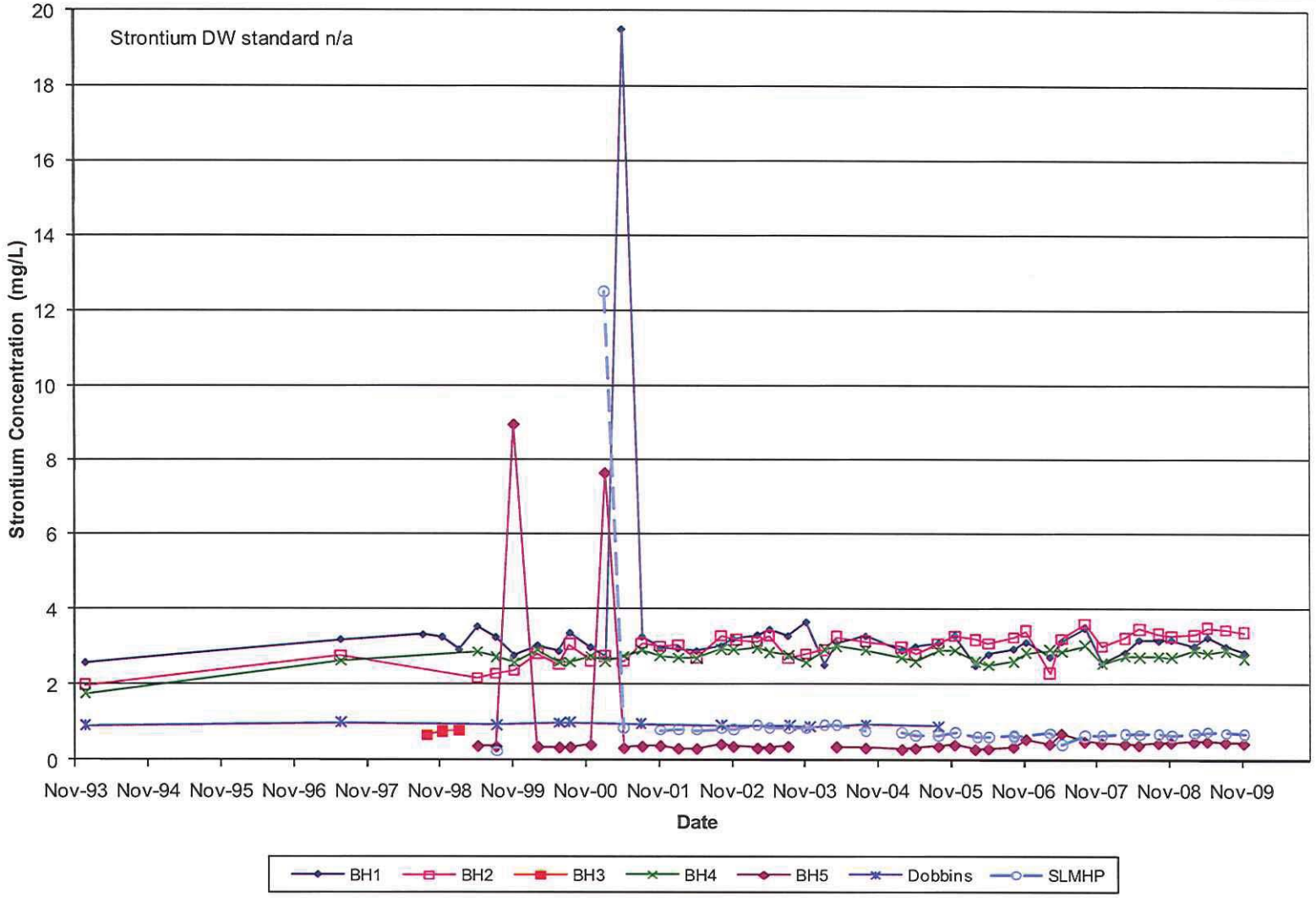
RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE

NITRATE AND NITRITE CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.		04-1440-062.2600	FILE No.		041440062_graphs
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
CADD	SWD	29MAR10	APPENDIX A		
CHECK	MH	29MAR10			
REVIEW	RP	29MAR10			



PROJECT

RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE

STRONTIUM CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.	04-1440-062.2600		FILE No.	041440062_graphs	
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
CADD	SWD	29MAR10			
CHECK	MH	29MAR10			
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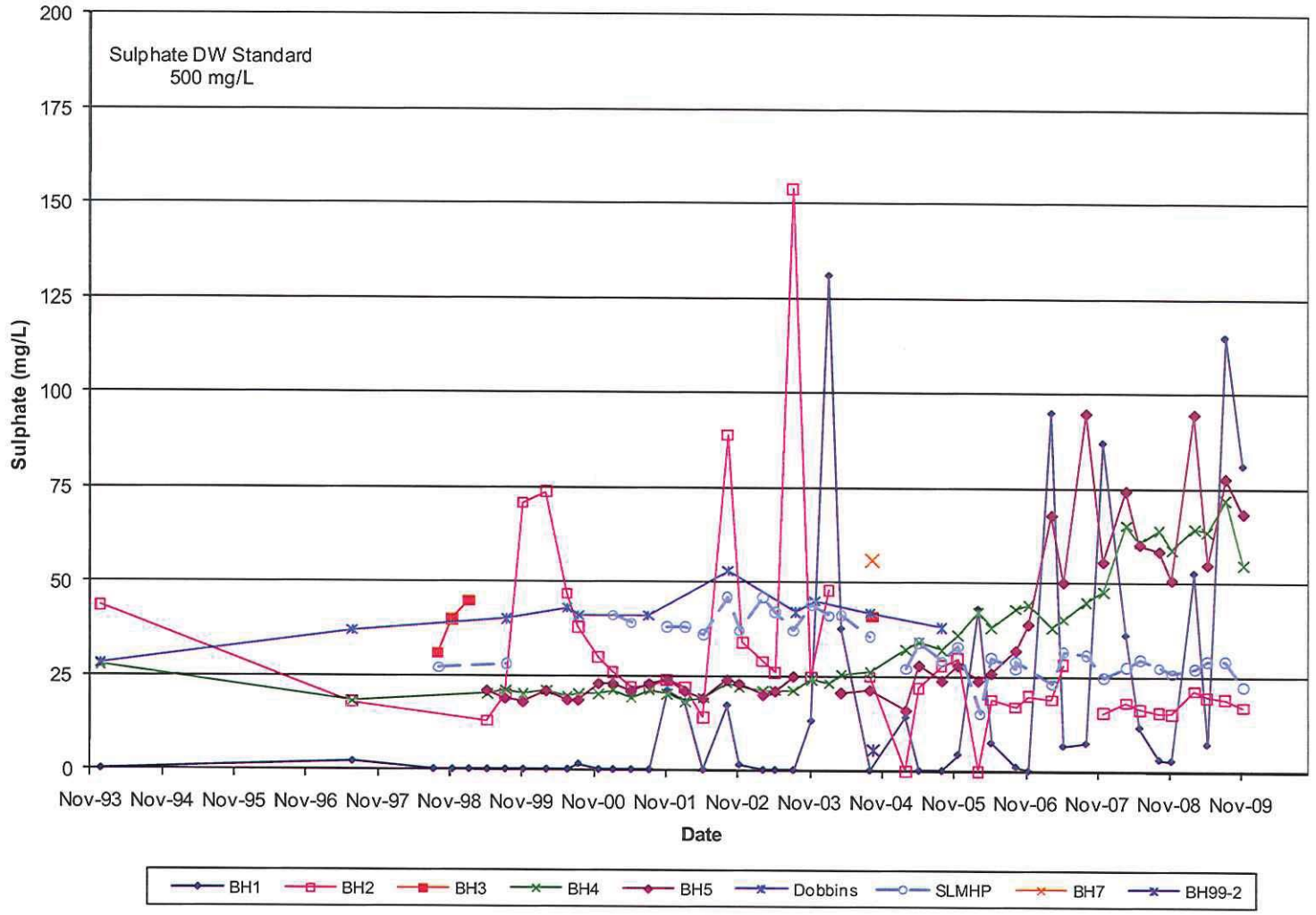
APPENDIX A

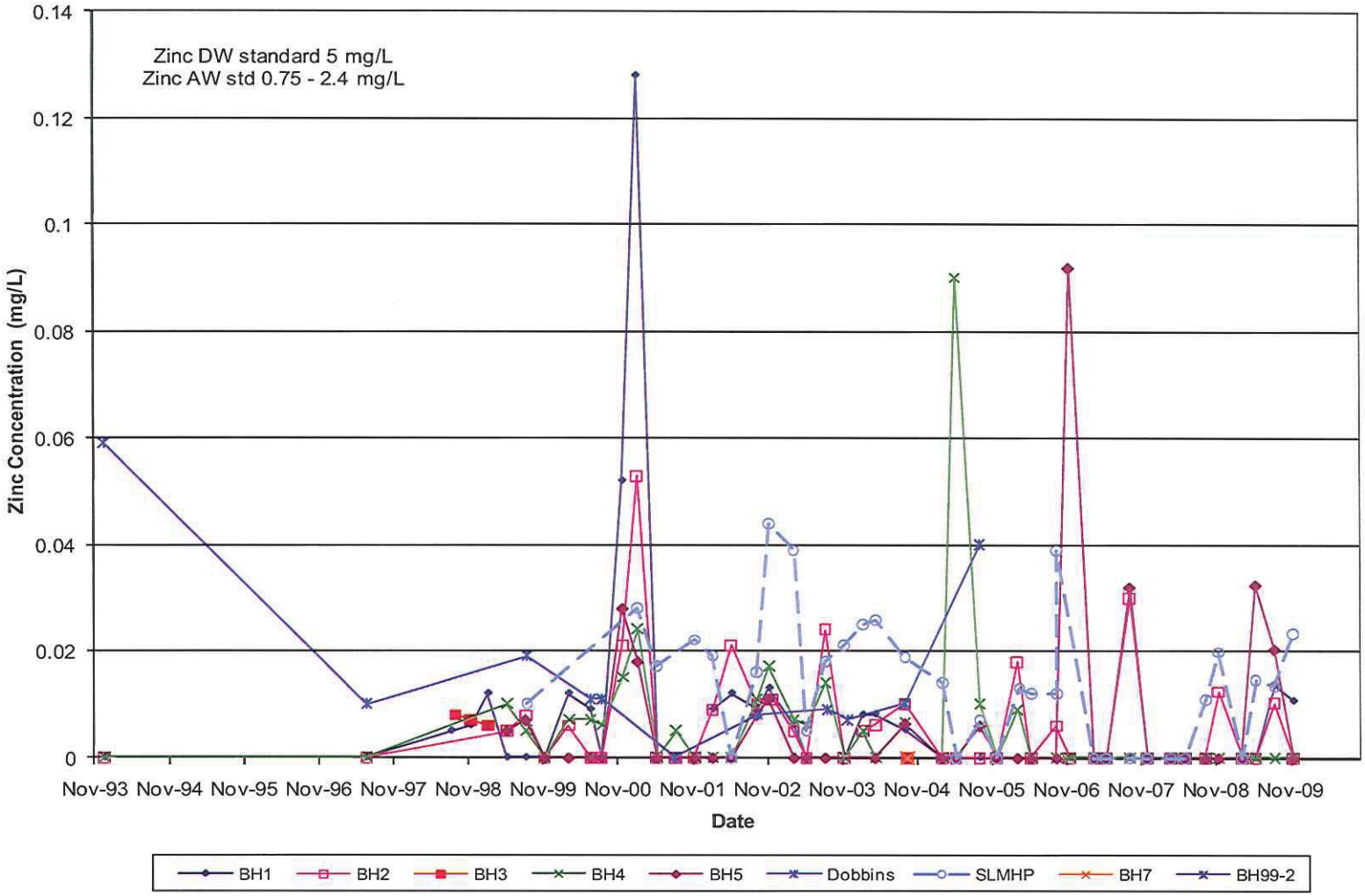


PROJECT
RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE
SULPHATE CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No. 04-1440-062.2600			FILE No.	041440062_graphs
DESIGN	MH	25MAR10	SCALE N/A	REV. 0
CADD	SWD	29MAR10	APPENDIX A	
CHECK	MH	29MAR10		
REVIEW	RP	29MAR10		



PROJECT

RDCO WESTSIDE LANDFILL
2009 GROUNDWATER MONITORING
WEST KELOWNA, B.C.

TITLE

ZINC CONCENTRATIONS

Golder Associates
Kelowna, BC

PROJECT No.	04-1440-062.2600		FILE No.	041440062_graphs	
DESIGN	MH	25MAR10	SCALE	N/A	REV. 0
CADD	SWD	29MAR10	APPENDIX A		
CHECK	MH	29MAR10			
REVIEW	RP	29MAR10			

APPENDIX B

Laboratory Reports

CERTIFICATE OF ANALYSIS

CARO ANALYTICAL SERVICES

CLIENT	**Regional District of Central Okanagan** 1450 KLO Road KELOWNA BC V1W 3Z4	TEL FAX	(250) 763-4918 (250) 768-2260
ATTENTION	**Charlie Cameron**		

RECEIVED / TEMP	Mar-27-09 15:50 / 9 °C	**WORK ORDER #**	K9C0785
REPORTED	Apr-06-09	**PROJECT FILE**	Westside Landfill & Shannon Lake
COC #(s)	3161	**PROJECT NAME**	Sampling Via Golder

General Comments:

CARO Analytical Services employs methods which are based on those found in "Standard Methods for the Examination of Water and Wastewater", 21st Edition, 2005, published by the American Public Health Association (APHA); US EPA protocols found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846", 3rd Edition; and protocols published by the British Columbia Ministry of Environment (BCMOE).

Methods not described in these publications are conducted according to procedures accepted by appropriate regulatory agencies, and/or are done in accordance with recognized professional standards using accepted testing methodologies and quality control efforts except where otherwise agreed to by the client.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirity. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing.

- All solids results are reported on a dry weight basis unless otherwise noted

- Units: mg/kg = milligrams per kilogram, equivalent to parts per million (ppm)
  mg/L = milligrams per litre, equivalent to parts per million (ppm)
  ug/L = micrograms per litre, equivalent to parts per billion (ppb)
  ug/g = micrograms per gram, equivalent to parts per million (ppm)
  ug/m3 Air = micrograms per cubic meter of air

- "RDL" Reported detection limit
- "<" Less than reported detection limit
- "AO" Aesthetic objective
- "MAC" Maximum acceptable concentration (health-related guideline)
- "LAB" RMD = CARO - Richmond location, KEL = CARO - Kelowna location, SUB = Subcontracted

Please contact CARO if more information is needed.

CARO Analytical Services

Final Review Per: **Jennifer Shanko, AScT**
Coordinator, Operations/Admin

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters							
BH1 (K9C0785-01) Matrix: Water Sampled: Mar-27-09							
Alkalinity, Total as CaCO3	**1310**	1.0	mg/L	Mar-31-09	APHA 2320 B	KEL	
Chloride	**533**	2.50	mg/L	Apr-01-09	APHA 4110 B	KEL	
Conductivity (EC)	**3440**	5	uS/cm	Apr-03-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1720**	3	mg/L	Apr-03-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.87**	0.02	mg/L	Mar-27-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	<0.01	0.01	mg/L	Mar-30-09	Calc	KEL	
Nitrogen, Nitrate as N	<0.01	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**3.70**	0.05	mg/L	Apr-03-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**3.70**	0.05	mg/L	Apr-03-09	Calc	KEL	
pH	**6.6**	0.1	pH Units	Mar-30-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**2310**	5	mg/L	Apr-01-09	APHA 2540 C	KEL	
Sulfate	**52.7**	5.0	mg/L	Mar-30-09	APHA 4110 B	KEL	
BH2 (K9C0785-02) Matrix: Water Sampled: Mar-27-09							
Alkalinity, Total as CaCO3	**1540**	1.0	mg/L	Mar-31-09	APHA 2320 B	KEL	
Chloride	**339**	2.50	mg/L	Mar-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**3170**	5	uS/cm	Apr-03-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1660**	3	mg/L	Apr-03-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.42**	0.02	mg/L	Mar-27-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	<0.01	0.01	mg/L	Mar-30-09	Calc	KEL	
Nitrogen, Nitrate as N	<0.01	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**2.98**	0.05	mg/L	Apr-03-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**2.98**	0.05	mg/L	Apr-03-09	Calc	KEL	
pH	**6.8**	0.1	pH Units	Mar-30-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**2230**	5	mg/L	Apr-01-09	APHA 2540 C	KEL	
Sulfate	**21.4**	1.0	mg/L	Mar-30-09	APHA 4110 B	KEL	
BH4 (K9C0785-03) Matrix: Water Sampled: Mar-27-09							
Alkalinity, Total as CaCO3	**859**	1.0	mg/L	Mar-31-09	APHA 2320 B	KEL	
Chloride	**447**	2.50	mg/L	Mar-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**2600**	5	uS/cm	Apr-03-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1290**	3	mg/L	Apr-03-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.02**	0.02	mg/L	Mar-27-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	<0.01	0.01	mg/L	Mar-30-09	Calc	KEL	
Nitrogen, Nitrate as N	<0.01	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**0.60**	0.05	mg/L	Apr-03-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**0.60**	0.05	mg/L	Apr-03-09	Calc	KEL	
pH	**6.7**	0.1	pH Units	Mar-30-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**1630**	5	mg/L	Apr-01-09	APHA 2540 C	KEL	
Sulfate	**64.4**	25.0	mg/L	Mar-30-09	APHA 4110 B	KEL	
BH5 (K9C0785-04) Matrix: Water Sampled: Mar-27-09							
Alkalinity, Total as CaCO3	**247**	1.0	mg/L	Mar-31-09	APHA 2320 B	KEL	

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters, Continued							
BH5 (K9C0785-04) Matrix: Water Sampled: Mar-27-09, Continued							
Chloride	**74.0**	0.50	mg/L	Mar-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**906**	5	uS/cm	Apr-03-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**354**	3	mg/L	Apr-03-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	<0.02	0.02	mg/L	Mar-27-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**10.3**	0.05	mg/L	Mar-30-09	Calc	KEL	
Nitrogen, Nitrate as N	**10.3**	0.05	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**0.33**	0.05	mg/L	Apr-03-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**10.6**	0.05	mg/L	Apr-03-09	Calc	KEL	
pH	**7.1**	0.1	pH Units	Mar-30-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**566**	5	mg/L	Apr-01-09	APHA 2540 C	KEL	
Sulfate	**94.6**	5.0	mg/L	Mar-30-09	APHA 4110 B	KEL	
BH6 (K9C0785-05) Matrix: Water Sampled: Mar-27-09							
Alkalinity, Total as CaCO3	**1310**	1.0	mg/L	Mar-31-09	APHA 2320 B	KEL	
Chloride	**517**	2.50	mg/L	Mar-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**3340**	5	uS/cm	Apr-03-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1680**	3	mg/L	Apr-03-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.87**	0.02	mg/L	Mar-27-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**0.17**	0.01	mg/L	Mar-30-09	Calc	KEL	
Nitrogen, Nitrate as N	**0.17**	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**3.41**	0.05	mg/L	Apr-03-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**3.58**	0.05	mg/L	Apr-03-09	Calc	KEL	
pH	**6.6**	0.1	pH Units	Mar-30-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**2310**	5	mg/L	Apr-01-09	APHA 2540 C	KEL	
Sulfate	**51.7**	25.0	mg/L	Mar-30-09	APHA 4110 B	KEL	
SLMHP (K9C0785-06) Matrix: Water Sampled: Mar-27-09							
Alkalinity, Total as CaCO3	**358**	1.0	mg/L	Mar-31-09	APHA 2320 B	KEL	
Chloride	**55.5**	0.50	mg/L	Mar-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**831**	5	uS/cm	Apr-03-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**356**	3	mg/L	Apr-03-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	<0.02	0.02	mg/L	Mar-27-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**1.60**	0.01	mg/L	Mar-30-09	Calc	KEL	
Nitrogen, Nitrate as N	**1.60**	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Mar-30-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**0.17**	0.05	mg/L	Apr-03-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**1.78**	0.05	mg/L	Apr-03-09	Calc	KEL	
pH	**6.8**	0.1	pH Units	Mar-30-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**504**	5	mg/L	Apr-01-09	APHA 2540 C	KEL	
Sulfate	**27.1**	1.0	mg/L	Mar-30-09	APHA 4110 B	KEL	

Dissolved Metals by ICPMS

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Dissolved Metals by ICPMS, Continued

BH1 (K9C0785-01) Matrix: Water Sampled: Mar-27-09

Aluminum	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Arsenic	**0.0065**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Barium	**0.0642**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Boron	**1.26**	0.020	mg/L	Apr-03-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Apr-03-09	EPA 6020A	RMD
Calcium	**348**	1.00	mg/L	Apr-03-09	EPA 6020A	RMD
Chromium	<0.0050	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Cobalt	**0.00482**	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD
Copper	**0.0088**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Iron	**7.51**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD
Lead	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Lithium	**0.0168**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Magnesium	**206**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD
Manganese	**6.34**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD
Mercury	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD
Molybdenum	**0.0015**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Nickel	**0.0394**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD
Phosphorus	<0.200	0.200	mg/L	Apr-03-09	EPA 6020A	RMD
Potassium	**5.44**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Apr-03-09	EPA 6020A	RMD
Silicon	**20.0**	2.00	mg/L	Apr-03-09	EPA 6020A	RMD
Silver	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD
Sodium	**176**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD
Strontium	**3.02**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD
Uranium	**0.00238**	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD
Vanadium	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD
Zinc	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD
Zirconium	**0.0053**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD

BH2 (K9C0785-02) Matrix: Water Sampled: Mar-27-09

Aluminum	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Arsenic	<0.0050	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Barium	**0.0175**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Boron	**0.271**	0.020	mg/L	Apr-03-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Apr-03-09	EPA 6020A	RMD

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Dissolved Metals by ICPMS, Continued

BH2 (K9C0785-02) Matrix: Water Sampled: Mar-27-09, Continued

Calcium	**358**	1.00	mg/L	Apr-03-09	EPA 6020A	RMD
Chromium	<0.0050	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Cobalt	**0.00351**	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD
Copper	**0.0042**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Iron	**0.528**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD
Lead	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Lithium	**0.0179**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Magnesium	**185**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD
Manganese	**9.46**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD
Mercury	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD
Molybdenum	**0.0037**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Nickel	**0.0359**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD
Phosphorus	<0.200	0.200	mg/L	Apr-03-09	EPA 6020A	RMD
Potassium	**2.15**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Apr-03-09	EPA 6020A	RMD
Silicon	**20.7**	2.00	mg/L	Apr-03-09	EPA 6020A	RMD
Silver	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD
Sodium	**127**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD
Strontium	**3.32**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD
Uranium	**0.00429**	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD
Vanadium	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD
Zinc	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD
Zirconium	**0.0041**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD

BH4 (K9C0785-03) Matrix: Water Sampled: Mar-27-09

Aluminum	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Arsenic	<0.0050	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Barium	**0.0619**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Boron	**0.197**	0.020	mg/L	Apr-03-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Apr-03-09	EPA 6020A	RMD
Calcium	**246**	1.00	mg/L	Apr-03-09	EPA 6020A	RMD
Chromium	<0.0050	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD
Cobalt	**0.00199**	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD
Copper	**0.0052**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Iron	**0.286**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD
Lead	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Lithium	**0.0321**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD
Magnesium	**163**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

Dissolved Metals by ICPMS, Continued

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
BH4 (K9C0785-03) Matrix: Water Sampled: Mar-27-09, Continued							
Manganese	**0.598**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Molybdenum	**0.0047**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Nickel	**0.0369**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Phosphorus	<0.200	0.200	mg/L	Apr-03-09	EPA 6020A	RMD	
Potassium	**5.26**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Apr-03-09	EPA 6020A	RMD	
Silicon	**9.70**	2.00	mg/L	Apr-03-09	EPA 6020A	RMD	
Silver	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Sodium	**104**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Strontium	**2.88**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Titanium	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD	
Uranium	**0.0361**	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD	
Zinc	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD	
Zirconium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
BH5 (K9C0785-04) Matrix: Water Sampled: Mar-27-09							
Aluminum	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Arsenic	<0.0050	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Barium	**0.0211**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Beryllium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Bismuth	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Boron	<0.020	0.020	mg/L	Apr-03-09	EPA 6020A	RMD	
Cadmium	<0.00010	0.00010	mg/L	Apr-03-09	EPA 6020A	RMD	
Calcium	**97.1**	1.00	mg/L	Apr-03-09	EPA 6020A	RMD	
Chromium	<0.0050	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Cobalt	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Copper	**0.0021**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Iron	<0.100	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Lead	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Lithium	**0.0130**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Magnesium	**27.0**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Manganese	**0.0033**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Molybdenum	**0.0091**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Nickel	**0.0020**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Phosphorus	<0.200	0.200	mg/L	Apr-03-09	EPA 6020A	RMD	
Potassium	**2.59**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Apr-03-09	EPA 6020A	RMD	
Silicon	**7.15**	2.00	mg/L	Apr-03-09	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
Dissolved Metals by ICPMS, Continued							
BH5 (K9C0785-04) Matrix: Water Sampled: Mar-27-09, Continued							
Silver	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Sodium	**46.6**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Strontium	**0.486**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Titanium	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD	
Uranium	**0.00864**	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD	
Zinc	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD	
Zirconium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
BH6 (K9C0785-05) Matrix: Water Sampled: Mar-27-09							
Aluminum	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Arsenic	**0.0069**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Barium	**0.0653**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Beryllium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Bismuth	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Boron	**1.20**	0.020	mg/L	Apr-03-09	EPA 6020A	RMD	
Cadmium	<0.00010	0.00010	mg/L	Apr-03-09	EPA 6020A	RMD	
Calcium	**345**	1.00	mg/L	Apr-03-09	EPA 6020A	RMD	
Chromium	<0.0050	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Cobalt	**0.00467**	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Copper	**0.0066**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Iron	**6.68**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Lead	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Lithium	**0.0162**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Magnesium	**200**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Manganese	**6.26**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Molybdenum	**0.0016**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Nickel	**0.0386**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Phosphorus	<0.200	0.200	mg/L	Apr-03-09	EPA 6020A	RMD	
Potassium	**5.45**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Apr-03-09	EPA 6020A	RMD	
Silicon	**19.5**	2.00	mg/L	Apr-03-09	EPA 6020A	RMD	
Silver	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Sodium	**169**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Strontium	**3.03**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Titanium	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD	

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

Dissolved Metals by ICPMS, Continued

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
BH6 (K9C0785-05) Matrix: Water Sampled: Mar-27-09, Continued							
Uranium	**0.00231**	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD	
Zinc	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD	
Zirconium	**0.0054**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
SLMHP (K9C0785-06) Matrix: Water Sampled: Mar-27-09							
Aluminum	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Arsenic	<0.0050	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Barium	**0.0096**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Beryllium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Bismuth	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Boron	<0.020	0.020	mg/L	Apr-03-09	EPA 6020A	RMD	
Cadmium	<0.00010	0.00010	mg/L	Apr-03-09	EPA 6020A	RMD	
Calcium	**95.7**	1.00	mg/L	Apr-03-09	EPA 6020A	RMD	
Chromium	<0.0050	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Cobalt	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Copper	**0.0063**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Iron	<0.100	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Lead	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Lithium	**0.0138**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Magnesium	**28.4**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Manganese	**0.0043**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Molybdenum	**0.0031**	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Nickel	**0.0022**	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Phosphorus	<0.200	0.200	mg/L	Apr-03-09	EPA 6020A	RMD	
Potassium	**3.43**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Apr-03-09	EPA 6020A	RMD	
Silicon	**11.5**	2.00	mg/L	Apr-03-09	EPA 6020A	RMD	
Silver	<0.00050	0.00050	mg/L	Apr-03-09	EPA 6020A	RMD	
Sodium	**38.9**	0.100	mg/L	Apr-03-09	EPA 6020A	RMD	
Strontium	**0.694**	0.0050	mg/L	Apr-03-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Apr-03-09	EPA 6020A	RMD	
Titanium	<0.050	0.050	mg/L	Apr-03-09	EPA 6020A	RMD	
Uranium	**0.00575**	0.00020	mg/L	Apr-03-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD	
Zinc	<0.0100	0.0100	mg/L	Apr-03-09	EPA 6020A	RMD	
Zirconium	<0.0010	0.0010	mg/L	Apr-03-09	EPA 6020A	RMD	

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

The following section reports quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with quality control samples that ensure your data is of the highest quality. Common QC types include:

- Method Blank (Blk): Laboratory reagent water is carried through sample preparation and analysis steps. Method Blanks indicate that results are free from contamination, i.e. not biased high from sources such as the sample container or the laboratory environment

- Duplicate (Dup): Preparation and analysis of a replicate aliquot of a sample. Duplicates provide a measure of the analytical method's precision, i.e. how reproducible a result is. Duplicates are only reported if they are associated with your sample data.

- Blank Spike (BS): A known amount of standard is carried through sample preparation and analysis steps. Blank Spikes, also known as laboratory control samples (LCS), are prepared from a different source of standard than used for the calibration. They ensure that the calibration is acceptable (i.e. not biased high or low) and also provide a measure of the analytical method's accuracy (i.e. closeness of the result to a target value).

- Standard Reference Material (SRM): A material of similar matrix to the samples, externally certified for the parameter(s) listed. Standard Reference Materials ensure that the preparation steps in the method are adequate to achieve acceptable recoveries of the parameter(s) tested for.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Dissolved Metals by ICPMS, Batch R900822

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (R900822-BLK1)				Prepared: Apr-01-09 Analyzed: Apr-03-09						
Aluminum	<	0.05	mg/L							
Antimony	<	0.001	mg/L							
Arsenic	<	0.005	mg/L							
Barium	<	0.005	mg/L							
Beryllium	<	0.001	mg/L							
Bismuth	<	0.001	mg/L							
Boron	<	0.02	mg/L							
Cadmium	<	0.0001	mg/L							
Calcium	<	1	mg/L							
Chromium	<	0.005	mg/L							
Cobalt	<	0.0005	mg/L							
Copper	<	0.001	mg/L							
Iron	<	0.1	mg/L							
Lead	<	0.001	mg/L							
Lithium	<	0.001	mg/L							
Magnesium	<	0.1	mg/L							
Manganese	<	0.002	mg/L							
Mercury	<	0.0005	mg/L							
Molybdenum	<	0.001	mg/L							
Nickel	<	0.002	mg/L							
Phosphorus	<	0.2	mg/L							
Potassium	<	0.1	mg/L							
Selenium	<	0.003	mg/L							
Silicon	<	2	mg/L							
Silver	<	0.0005	mg/L							
Sodium	<	0.1	mg/L							
Strontium	<	0.005	mg/L							
Tellurium	<	0.002	mg/L							
Thallium	<	0.0002	mg/L							
Thorium	<	0.001	mg/L							
Tin	<	0.002	mg/L							
Titanium	<	0.05	mg/L							
Uranium	<	0.0002	mg/L							
Vanadium	<	0.01	mg/L							
Zinc	<	0.01	mg/L							
Zirconium	<	0.001	mg/L							
Reference (R900822-SRM1)				Prepared: Apr-01-09 Analyzed: Apr-03-09						
Aluminum	0.2	0.05	mg/L	0.209		99	80-120			
Antimony	0.04	0.001	mg/L	0.0400		108	80-120			
Arsenic	0.4	0.005	mg/L	0.400		101	80-120			
Barium	3.2	0.005	mg/L	3.12		104	80-120			

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dissolved Metals by ICPMS, Batch R900822, Continued										
Reference (R900822-SRM1), Continued				Prepared: Apr-01-09 Analyzed: Apr-03-09						
Beryllium	0.2	0.001	mg/L	0.197		110	80-120			
Boron	1	0.02	mg/L	1.61		92	80-120			
Cadmium	0.20	0.0001	mg/L	0.200		101	80-120			
Calcium	7	1	mg/L	6.50		110	80-120			
Chromium	0.4	0.005	mg/L	0.401		99	80-120			
Cobalt	0.12	0.0005	mg/L	0.119		101	80-120			
Copper	0.8	0.001	mg/L	0.781		106	80-120			
Iron	1	0.1	mg/L	1.17		102	80-120			
Lead	0.1	0.001	mg/L	0.102		100	80-120			
Lithium	0.1	0.001	mg/L	0.0960		103	80-120			
Magnesium	6	0.1	mg/L	6.11		103	80-120			
Manganese	0.3	0.002	mg/L	0.318		102	80-120			
Molybdenum	0.4	0.001	mg/L	0.387		104	80-120			
Nickel	0.8	0.002	mg/L	0.789		103	80-120			
Phosphorus	0.4	0.2	mg/L	0.448		93	70-130			
Potassium	3	0.1	mg/L	2.84		96	80-120			
Selenium	0.03	0.003	mg/L	0.0300		106	80-120			
Sodium	18	0.1	mg/L	17.4		101	80-120			
Strontium	1.0	0.005	mg/L	0.979		103	80-120			
Thallium	0.04	0.0002	mg/L	0.0350		114	80-120			
Uranium	0.20	0.0002	mg/L	0.244		81	80-120			
Vanadium	0.8	0.01	mg/L	0.798		96	80-120			
Zinc	0.9	0.01	mg/L	0.800		107	80-120			
General Parameters, Batch K901052										
Blank (K901052-BLK1)				Prepared & Analyzed: Mar-27-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
Blank (K901052-BLK2)				Prepared & Analyzed: Mar-27-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
Blank (K901052-BLK3)				Prepared & Analyzed: Mar-27-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
LCS (K901052-BS1)				Prepared & Analyzed: Mar-27-09						
Nitrogen, Ammonia as N	9.76	0.20	mg/L	10.0		98	80-120			
LCS (K901052-BS2)				Prepared & Analyzed: Mar-27-09						
Nitrogen, Ammonia as N	9.78	0.20	mg/L	10.0		98	80-120			
LCS (K901052-BS3)				Prepared & Analyzed: Mar-27-09						
Nitrogen, Ammonia as N	9.98	0.20	mg/L	10.0		100	80-120			
General Parameters, Batch K901059										
Duplicate (K901059-DUP1)			**Source: K9C0785-05**	Prepared & Analyzed: Mar-30-09						
pH	6.6	0.1	pH Units		6.6			0.6	5	
Reference (K901059-SRM1)				Prepared & Analyzed: Mar-30-09						
pH	7.1	0.1	pH Units	7.00		101	98-102			
General Parameters, Batch K901061										
Blank (K901061-BLK1)				Prepared: Mar-30-09 Analyzed: Mar-31-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Blank (K901061-BLK2)				Prepared: Mar-30-09 Analyzed: Mar-31-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K901061, Continued										
Blank (K901061-BLK3)				Prepared: Mar-30-09 Analyzed: Mar-31-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
LCS (K901061-BS1)				Prepared: Mar-30-09 Analyzed: Mar-31-09						
Alkalinity, Total as CaCO3	2380	1.0	mg/L	2360		101	85-115			
LCS (K901061-BS2)				Prepared: Mar-30-09 Analyzed: Mar-31-09						
Alkalinity, Total as CaCO3	2420	1.0	mg/L	2360		103	85-115			
LCS (K901061-BS3)				Prepared: Mar-30-09 Analyzed: Mar-31-09						
Alkalinity, Total as CaCO3	2420	1.0	mg/L	2360		103	85-115			
General Parameters, Batch K901067										
Blank (K901067-BLK1)				Prepared & Analyzed: Mar-30-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K901067-BLK2)				Prepared & Analyzed: Mar-30-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K901067-BLK3)				Prepared & Analyzed: Mar-30-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
LCS (K901067-BS1)				Prepared & Analyzed: Mar-30-09						
Chloride	3.99	0.10	mg/L	4.00		100	85-115			
Nitrogen, Nitrate as N	4.09	0.01	mg/L	4.00		102	85-115			
Nitrogen, Nitrite as N	4.00	0.01	mg/L	4.00		100	85-115			
Sulfate	4.0	1.0	mg/L	4.00		100	85-115			
LCS (K901067-BS2)				Prepared & Analyzed: Mar-30-09						
Chloride	4.05	0.10	mg/L	4.00		101	85-115			
Nitrogen, Nitrate as N	4.07	0.01	mg/L	4.00		102	85-115			
Nitrogen, Nitrite as N	4.17	0.01	mg/L	4.00		104	85-115			
Sulfate	4.1	1.0	mg/L	4.00		103	85-115			
LCS (K901067-BS3)				Prepared & Analyzed: Mar-30-09						
Chloride	4.06	0.10	mg/L	4.00		102	85-115			
Nitrogen, Nitrate as N	4.06	0.01	mg/L	4.00		101	85-115			
Nitrogen, Nitrite as N	4.10	0.01	mg/L	4.00		102	85-115			
Sulfate	4.0	1.0	mg/L	4.00		100	85-115			
Duplicate (K901067-DUP2)	**Source: K9C0785-01**			Prepared: Mar-30-09 Analyzed: Apr-01-09						
Chloride	<	0.10	mg/L		533				20	
Nitrogen, Nitrate as N	0.205	0.01	mg/L		<				15	
Nitrogen, Nitrite as N	<	0.01	mg/L		<				15	
Sulfate	52.8	5.0	mg/L		52.7			0.2	20	
Duplicate (K901067-DUP3)	**Source: K9C0785-06**			Prepared & Analyzed: Mar-30-09						
Chloride	55.9	0.50	mg/L		55.5			0.6	20	
Nitrogen, Nitrate as N	1.61	0.01	mg/L		1.60			0.3	15	
Nitrogen, Nitrite as N	<	0.01	mg/L		<				15	
Sulfate	26.8	1.0	mg/L		27.1			1	20	

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9C0785
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Apr-06-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K901080										
Blank (K901080-BLK1)				Prepared: Mar-31-09 Analyzed: Apr-01-09						
Solids, Total Dissolved	<	5	mg/L							
Duplicate (K901080-DUP1)	**Source: K9C0785-05**			Prepared: Mar-31-09 Analyzed: Apr-01-09						
Solids, Total Dissolved	2320	5	mg/L		2310			0.8	20	
Reference (K901080-SRM1)				Prepared: Mar-31-09 Analyzed: Apr-01-09						
Solids, Total Dissolved	245	5	mg/L	240		102	85-115			
General Parameters, Batch K901081										
Blank (K901081-BLK1)				Prepared: Mar-31-09 Analyzed: Apr-03-09						
Nitrogen, Total Kjeldahl	<	0.05	mg/L							
Blank (K901081-BLK2)				Prepared: Mar-31-09 Analyzed: Apr-03-09						
Nitrogen, Total Kjeldahl	<	0.05	mg/L							
LCS (K901081-BS1)				Prepared: Mar-31-09 Analyzed: Apr-03-09						
Nitrogen, Total Kjeldahl	10.8	0.05	mg/L	10.0		108	80-120			
LCS (K901081-BS2)				Prepared: Mar-31-09 Analyzed: Apr-03-09						
Nitrogen, Total Kjeldahl	10.8	0.05	mg/L	10.0		108	80-120			
Duplicate (K901081-DUP2)	**Source: K9C0785-01**			Prepared: Mar-31-09 Analyzed: Apr-03-09						
Nitrogen, Total Kjeldahl	3.74	0.05	mg/L		3.70			0.8	20	
General Parameters, Batch K901088										
Blank (K901088-BLK1)				Prepared: Apr-01-09 Analyzed: Apr-03-09						
Conductivity (EC)	<	5	uS/cm							
Blank (K901088-BLK2)				Prepared: Apr-01-09 Analyzed: Apr-03-09						
Conductivity (EC)	<	5	uS/cm							
LCS (K901088-BS1)				Prepared: Apr-01-09 Analyzed: Apr-03-09						
Conductivity (EC)	1390	5	uS/cm	1410		99	95-105			
LCS (K901088-BS2)				Prepared: Apr-01-09 Analyzed: Apr-03-09						
Conductivity (EC)	1390	5	uS/cm	1410		99	95-105			

CERTIFICATE OF ANALYSIS

CARO ANALYTICAL SERVICES

CLIENT	**Regional District of Central Okanagan** 1450 KLO Road KELOWNA BC V1W 3Z4	TEL FAX	(250) 763-4918 (250) 768-2260
ATTENTION	**Charlie Cameron**		

RECEIVED / TEMP	Jun-25-09 15:10 / 12 °C	**WORK ORDER #**	K9F0981
REPORTED	Jul-02-09	**PROJECT FILE**	Westside Landfill & Shannon Lake
COC #(s)	15321	**PROJECT NAME**	Sampling Via Golder

General Comments:

CARO Analytical Services employs methods which are based on those found in "Standard Methods for the Examination of Water and Wastewater", 21st Edition, 2005, published by the American Public Health Association (APHA); US EPA protocols found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846", 3rd Edition; and protocols published by the British Columbia Ministry of Environment (BCMOE).

Methods not described in these publications are conducted according to procedures accepted by appropriate regulatory agencies, and/or are done in accordance with recognized professional standards using accepted testing methodologies and quality control efforts except where otherwise agreed to by the client.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirity. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing.

- All solids results are reported on a dry weight basis unless otherwise noted

- Units: mg/kg = milligrams per kilogram, equivalent to parts per million (ppm)
  mg/L = milligrams per litre, equivalent to parts per million (ppm)
  ug/L = micrograms per litre, equivalent to parts per billion (ppb)
  ug/g = micrograms per gram, equivalent to parts per million (ppm)
  ug/m3 Air = micrograms per cubic meter of air

- "RDL" Reported detection limit
- "<" Less than reported detection limit
- "AO" Aesthetic objective
- "MAC" Maximum acceptable concentration (health-related guideline)
- "LAB" RMD = CARO - Richmond location, KEL = CARO - Kelowna location, SUB = Subcontracted

Please contact CARO if more information is needed.

CARO Analytical Services

Final Review Per: **Jennifer Shanko, AScT**
Coordinator, Operations/Admin

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters							
BH1 (K9F0981-01) Matrix: Water Sampled: Jun-25-09							
Alkalinity, Total as CaCO3	**1460**	1.0	mg/L	Jun-26-09	APHA 2320 B	KEL	
Chloride	**537**	2.50	mg/L	Jun-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**3760**	5	uS/cm	Jun-26-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1950**	3	mg/L	Jun-29-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.98**	0.02	mg/L	Jun-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**0.94**	0.01	mg/L	Jul-02-09	Calc	KEL	
Nitrogen, Nitrate as N	**0.94**	0.01	mg/L	Jul-02-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Jul-02-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**4.76**	0.25	mg/L	Jul-02-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**5.71**	0.25	mg/L	Jul-02-09	Calc	KEL	
pH	**7.14**	0.10	pH Units	Jun-26-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**2770**	0.05	mg/L	Jun-29-09	APHA 2540 C	KEL	
Sulfate	**7.1**	1.0	mg/L	Jun-30-09	APHA 4110 B	KEL	
BH2 (K9F0981-02) Matrix: Water Sampled: Jun-25-09							
Alkalinity, Total as CaCO3	**1540**	1.0	mg/L	Jun-26-09	APHA 2320 B	KEL	
Chloride	**322**	2.50	mg/L	Jun-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**3300**	5	uS/cm	Jun-26-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1820**	3	mg/L	Jun-29-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.47**	0.02	mg/L	Jun-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**0.49**	0.01	mg/L	Jun-26-09	Calc	KEL	
Nitrogen, Nitrate as N	**0.49**	0.01	mg/L	Jun-26-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Jun-26-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**2.98**	0.25	mg/L	Jul-02-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**3.47**	0.25	mg/L	Jul-02-09	Calc	KEL	
pH	**7.20**	0.10	pH Units	Jun-26-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**2350**	0.05	mg/L	Jun-29-09	APHA 2540 C	KEL	
Sulfate	**19.6**	1.0	mg/L	Jun-26-09	APHA 4110 B	KEL	
BH4 (K9F0981-03) Matrix: Water Sampled: Jun-25-09							
Alkalinity, Total as CaCO3	**825**	1.0	mg/L	Jun-26-09	APHA 2320 B	KEL	
Chloride	**422**	2.50	mg/L	Jun-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**2640**	5	uS/cm	Jun-26-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1350**	3	mg/L	Jun-29-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.03**	0.02	mg/L	Jun-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**0.36**	0.01	mg/L	Jun-26-09	Calc	KEL	
Nitrogen, Nitrate as N	**0.36**	0.01	mg/L	Jun-26-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Jun-26-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**0.59**	0.05	mg/L	Jul-02-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**0.96**	0.05	mg/L	Jul-02-09	Calc	KEL	
pH	**7.42**	0.10	pH Units	Jun-26-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**1840**	0.05	mg/L	Jun-29-09	APHA 2540 C	KEL	
Sulfate	**63.6**	25.0	mg/L	Jun-30-09	APHA 4110 B	KEL	
BH5 (K9F0981-04) Matrix: Water Sampled: Jun-25-09							
Alkalinity, Total as CaCO3	**255**	1.0	mg/L	Jun-26-09	APHA 2320 B	KEL	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters, Continued							
BH5 (K9F0981-04) Matrix: Water Sampled: Jun-25-09, Continued							
Chloride	**57.3**	2.50	mg/L	Jun-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**837**	5	uS/cm	Jun-26-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**389**	3	mg/L	Jun-29-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.02**	0.02	mg/L	Jun-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**7.09**	0.01	mg/L	Jun-26-09	Calc	KEL	
Nitrogen, Nitrate as N	**7.09**	0.01	mg/L	Jun-26-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Jun-26-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**0.27**	0.05	mg/L	Jul-02-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**7.36**	0.05	mg/L	Jul-02-09	Calc	KEL	
pH	**7.76**	0.10	pH Units	Jun-26-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**493**	0.05	mg/L	Jun-29-09	APHA 2540 C	KEL	
Sulfate	**55.0**	25.0	mg/L	Jun-30-09	APHA 4110 B	KEL	
BH6 (K9F0981-05) Matrix: Water Sampled: Jun-25-09							
Alkalinity, Total as CaCO3	**1460**	1.0	mg/L	Jun-26-09	APHA 2320 B	KEL	
Chloride	**516**	2.50	mg/L	Jun-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**3760**	5	uS/cm	Jun-26-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**2000**	3	mg/L	Jun-29-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.94**	0.02	mg/L	Jun-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**0.89**	0.01	mg/L	Jun-26-09	Calc	KEL	
Nitrogen, Nitrate as N	**0.89**	0.01	mg/L	Jun-26-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Jun-26-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**4.43**	0.25	mg/L	Jul-02-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**5.32**	0.25	mg/L	Jul-02-09	Calc	KEL	
pH	**7.15**	0.10	pH Units	Jun-26-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**2710**	0.05	mg/L	Jun-29-09	APHA 2540 C	KEL	
Sulfate	**6.6**	1.0	mg/L	Jun-26-09	APHA 4110 B	KEL	
SLMHP (K9F0981-06) Matrix: Water Sampled: Jun-25-09							
Alkalinity, Total as CaCO3	**369**	1.0	mg/L	Jun-26-09	APHA 2320 B	KEL	
Chloride	**64.4**	2.50	mg/L	Jun-30-09	APHA 4110 B	KEL	
Conductivity (EC)	**918**	5	uS/cm	Jun-26-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**410**	3	mg/L	Jun-29-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	<0.02	0.02	mg/L	Jun-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**1.46**	0.01	mg/L	Jun-26-09	Calc	KEL	
Nitrogen, Nitrate as N	**1.46**	0.01	mg/L	Jun-26-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Jun-26-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**0.12**	0.05	mg/L	Jul-02-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**1.58**	0.05	mg/L	Jul-02-09	Calc	KEL	
pH	**7.59**	0.10	pH Units	Jun-26-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**538**	0.05	mg/L	Jun-29-09	APHA 2540 C	KEL	
Sulfate	**29.1**	1.0	mg/L	Jun-26-09	APHA 4110 B	KEL	

Dissolved Metals by ICPMS

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Dissolved Metals by ICPMS, Continued

BH1 (K9F0981-01) Matrix: Water Sampled: Jun-25-09

Aluminum	**0.881**	0.050	mg/L	Jun-29-09	EPA 6020A	RMD
Antimony	**0.0010**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Arsenic	**0.0098**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Barium	**0.0782**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Boron	**1.07**	0.020	mg/L	Jun-29-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Jun-29-09	EPA 6020A	RMD
Calcium	**389**	1.00	mg/L	Jun-29-09	EPA 6020A	RMD
Chromium	**0.0155**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Cobalt	**0.00526**	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Copper	**0.0135**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Iron	**15.9**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Lead	**0.0011**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Lithium	**0.0143**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Magnesium	**238**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Manganese	**8.09**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Mercury	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Molybdenum	**0.0015**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Nickel	**0.0454**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Phosphorus	**0.281**	0.200	mg/L	Jun-29-09	EPA 6020A	RMD
Potassium	**4.87**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Jun-29-09	EPA 6020A	RMD
Silicon	**24.7**	2.00	mg/L	Jun-29-09	EPA 6020A	RMD
Silver	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Sodium	**183**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Strontium	**3.25**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Jun-29-09	EPA 6020A	RMD
Uranium	**0.00095**	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD
Vanadium	**0.0136**	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD
Zinc	<0.0100	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD
Zirconium	**0.0089**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD

BH2 (K9F0981-02) Matrix: Water Sampled: Jun-25-09

Aluminum	**1.39**	0.050	mg/L	Jun-29-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Arsenic	<0.0050	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Barium	**0.0214**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Boron	**0.398**	0.020	mg/L	Jun-29-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Jun-29-09	EPA 6020A	RMD

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Dissolved Metals by ICPMS, Continued

BH2 (K9F0981-02) Matrix: Water Sampled: Jun-25-09, Continued

Calcium	**386**	1.00	mg/L	Jun-29-09	EPA 6020A	RMD
Chromium	**0.0148**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Cobalt	**0.00388**	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Copper	**0.0027**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Iron	**4.33**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Lead	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Lithium	**0.0198**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Magnesium	**208**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Manganese	**10.1**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Mercury	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Molybdenum	**0.0042**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Nickel	**0.0388**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Phosphorus	**0.256**	0.200	mg/L	Jun-29-09	EPA 6020A	RMD
Potassium	**2.48**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Jun-29-09	EPA 6020A	RMD
Silicon	**25.2**	2.00	mg/L	Jun-29-09	EPA 6020A	RMD
Silver	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Sodium	**139**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Strontium	**3.51**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Jun-29-09	EPA 6020A	RMD
Uranium	**0.00512**	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD
Vanadium	**0.0113**	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD
Zinc	<0.0100	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD
Zirconium	**0.0059**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD

BH4 (K9F0981-03) Matrix: Water Sampled: Jun-25-09

Aluminum	**0.680**	0.050	mg/L	Jun-29-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Arsenic	<0.0050	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Barium	**0.0690**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Boron	**0.323**	0.020	mg/L	Jun-29-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Jun-29-09	EPA 6020A	RMD
Calcium	**258**	1.00	mg/L	Jun-29-09	EPA 6020A	RMD
Chromium	**0.0069**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Cobalt	**0.00220**	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Copper	**0.0044**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Iron	**0.732**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Lead	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Lithium	**0.0328**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Magnesium	**172**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Dissolved Metals by ICPMS, Continued

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
BH4 (K9F0981-03) Matrix: Water Sampled: Jun-25-09, Continued							
Manganese	**0.538**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD	
Molybdenum	**0.0046**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Nickel	**0.0372**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD	
Phosphorus	<0.200	0.200	mg/L	Jun-29-09	EPA 6020A	RMD	
Potassium	**5.62**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Jun-29-09	EPA 6020A	RMD	
Silicon	**11.3**	2.00	mg/L	Jun-29-09	EPA 6020A	RMD	
Silver	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD	
Sodium	**111**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD	
Strontium	**2.81**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD	
Titanium	<0.050	0.050	mg/L	Jun-29-09	EPA 6020A	RMD	
Uranium	**0.0342**	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD	
Zinc	<0.0100	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD	
Zirconium	**0.0015**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
BH5 (K9F0981-04) Matrix: Water Sampled: Jun-25-09							
Aluminum	**6.66**	0.050	mg/L	Jun-29-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Arsenic	<0.0050	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD	
Barium	**0.0881**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD	
Beryllium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Bismuth	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Boron	**0.058**	0.020	mg/L	Jun-29-09	EPA 6020A	RMD	
Cadmium	**0.00021**	0.00010	mg/L	Jun-29-09	EPA 6020A	RMD	
Calcium	**103**	1.00	mg/L	Jun-29-09	EPA 6020A	RMD	
Chromium	**0.0095**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD	
Cobalt	**0.00675**	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD	
Copper	**0.0123**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Iron	**8.90**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD	
Lead	**0.0057**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Lithium	**0.0191**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Magnesium	**32.2**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD	
Manganese	**0.960**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD	
Molybdenum	**0.0063**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Nickel	**0.0128**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD	
Phosphorus	**1.42**	0.200	mg/L	Jun-29-09	EPA 6020A	RMD	
Potassium	**3.79**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Jun-29-09	EPA 6020A	RMD	
Silicon	**17.9**	2.00	mg/L	Jun-29-09	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Dissolved Metals by ICPMS, Continued

BH5 (K9F0981-04) Matrix: Water Sampled: Jun-25-09, Continued

Silver	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Sodium	**52.0**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Strontium	**0.499**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD
Thorium	**0.0018**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Titanium	**0.271**	0.050	mg/L	Jun-29-09	EPA 6020A	RMD
Uranium	**0.00733**	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD
Vanadium	**0.0342**	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD
Zinc	**0.0324**	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD
Zirconium	**0.0107**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD

BH6 (K9F0981-05) Matrix: Water Sampled: Jun-25-09

Aluminum	**0.939**	0.050	mg/L	Jun-29-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Arsenic	**0.0101**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Barium	**0.0795**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Boron	**1.05**	0.020	mg/L	Jun-29-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Jun-29-09	EPA 6020A	RMD
Calcium	**396**	1.00	mg/L	Jun-29-09	EPA 6020A	RMD
Chromium	**0.0157**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Cobalt	**0.00553**	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Copper	**0.0145**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Iron	**16.1**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Lead	**0.0011**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Lithium	**0.0135**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Magnesium	**246**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Manganese	**8.30**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Mercury	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Molybdenum	**0.0015**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Nickel	**0.0450**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Phosphorus	**0.275**	0.200	mg/L	Jun-29-09	EPA 6020A	RMD
Potassium	**5.00**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Jun-29-09	EPA 6020A	RMD
Silicon	**25.7**	2.00	mg/L	Jun-29-09	EPA 6020A	RMD
Silver	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD
Sodium	**187**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD
Strontium	**3.31**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Jun-29-09	EPA 6020A	RMD

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
Dissolved Metals by ICPMS, Continued							
BH6 (K9F0981-05) Matrix: Water Sampled: Jun-25-09, Continued							
Uranium	**0.00098**	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD	
Vanadium	**0.0141**	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD	
Zinc	<0.0100	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD	
Zirconium	**0.0093**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
SLMHP (K9F0981-06) Matrix: Water Sampled: Jun-25-09							
Aluminum	<0.050	0.050	mg/L	Jun-29-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Arsenic	<0.0050	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD	
Barium	**0.0098**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD	
Beryllium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Bismuth	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Boron	**0.055**	0.020	mg/L	Jun-29-09	EPA 6020A	RMD	
Cadmium	<0.00010	0.00010	mg/L	Jun-29-09	EPA 6020A	RMD	
Calcium	**109**	1.00	mg/L	Jun-29-09	EPA 6020A	RMD	
Chromium	<0.0050	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD	
Cobalt	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD	
Copper	**0.0121**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Iron	<0.100	0.100	mg/L	Jun-29-09	EPA 6020A	RMD	
Lead	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Lithium	**0.0151**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Magnesium	**33.3**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD	
Manganese	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD	
Molybdenum	**0.0034**	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Nickel	**0.0026**	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD	
Phosphorus	<0.200	0.200	mg/L	Jun-29-09	EPA 6020A	RMD	
Potassium	**3.94**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Jun-29-09	EPA 6020A	RMD	
Silicon	**12.1**	2.00	mg/L	Jun-29-09	EPA 6020A	RMD	
Silver	<0.00050	0.00050	mg/L	Jun-29-09	EPA 6020A	RMD	
Sodium	**51.8**	0.100	mg/L	Jun-29-09	EPA 6020A	RMD	
Strontium	**0.735**	0.0050	mg/L	Jun-29-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Jun-29-09	EPA 6020A	RMD	
Titanium	<0.050	0.050	mg/L	Jun-29-09	EPA 6020A	RMD	
Uranium	**0.00742**	0.00020	mg/L	Jun-29-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD	
Zinc	**0.0145**	0.0100	mg/L	Jun-29-09	EPA 6020A	RMD	
Zirconium	<0.0010	0.0010	mg/L	Jun-29-09	EPA 6020A	RMD	

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

The following section reports quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with quality control samples that ensure your data is of the highest quality. Common QC types include:

- Method Blank (Blk): Laboratory reagent water is carried through sample preparation and analysis steps. Method Blanks indicate that results are free from contamination, i.e. not biased high from sources such as the sample container or the laboratory environment

- Duplicate (Dup): Preparation and analysis of a replicate aliquot of a sample. Duplicates provide a measure of the analytical method's precision, i.e. how reproducible a result is. Duplicates are only reported if they are associated with your sample data.

- Blank Spike (BS): A known amount of standard is carried through sample preparation and analysis steps. Blank Spikes, also known as laboratory control samples (LCS), are prepared from a different source of standard than used for the calibration. They ensure that the calibration is acceptable (i.e. not biased high or low) and also provide a measure of the analytical method's accuracy (i.e. closeness of the result to a target value).

- Standard Reference Material (SRM): A material of similar matrix to the samples, externally certified for the parameter(s) listed. Standard Reference Materials ensure that the preparation steps in the method are adequate to achieve acceptable recoveries of the parameter(s) tested for.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dissolved Metals by ICPMS, Batch R901721										
Blank (R901721-BLK1)				Prepared & Analyzed: Jun-29-09						
Aluminum	<	0.05	mg/L							
Antimony	<	0.001	mg/L							
Arsenic	<	0.005	mg/L							
Barium	<	0.005	mg/L							
Beryllium	<	0.001	mg/L							
Bismuth	<	0.001	mg/L							
Boron	<	0.02	mg/L							
Cadmium	<	0.0001	mg/L							
Calcium	<	1	mg/L							
Chromium	<	0.005	mg/L							
Cobalt	<	0.0005	mg/L							
Copper	<	0.001	mg/L							
Iron	<	0.1	mg/L							
Lead	<	0.001	mg/L							
Lithium	<	0.001	mg/L							
Magnesium	<	0.1	mg/L							
Manganese	<	0.002	mg/L							
Mercury	<	0.0005	mg/L							
Molybdenum	<	0.001	mg/L							
Nickel	<	0.002	mg/L							
Phosphorus	<	0.2	mg/L							
Potassium	<	0.1	mg/L							
Selenium	<	0.003	mg/L							
Silicon	<	2	mg/L							
Silver	<	0.0005	mg/L							
Sodium	<	0.1	mg/L							
Strontium	<	0.005	mg/L							
Tellurium	<	0.002	mg/L							
Thallium	<	0.0002	mg/L							
Thorium	<	0.001	mg/L							
Tin	<	0.002	mg/L							
Titanium	<	0.05	mg/L							
Uranium	<	0.0002	mg/L							
Vanadium	<	0.01	mg/L							
Zinc	<	0.01	mg/L							
Zirconium	<	0.001	mg/L							
Blank (R901721-BLK2)				Prepared & Analyzed: Jun-29-09						
Aluminum	<	0.05	mg/L							
Antimony	<	0.001	mg/L							
Arsenic	<	0.005	mg/L							
Barium	<	0.005	mg/L							

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Dissolved Metals by ICPMS, Batch R901721, Continued

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (R901721-BLK2), Continued				Prepared & Analyzed: Jun-29-09						
Beryllium	<	0.001	mg/L							
Bismuth	<	0.001	mg/L							
Boron	<	0.02	mg/L							
Cadmium	<	0.0001	mg/L							
Calcium	<	1	mg/L							
Chromium	<	0.005	mg/L							
Cobalt	<	0.0005	mg/L							
Copper	<	0.001	mg/L							
Iron	<	0.1	mg/L							
Lead	<	0.001	mg/L							
Lithium	<	0.001	mg/L							
Magnesium	<	0.1	mg/L							
Manganese	<	0.002	mg/L							
Mercury	<	0.0005	mg/L							
Molybdenum	<	0.001	mg/L							
Nickel	<	0.002	mg/L							
Phosphorus	<	0.2	mg/L							
Potassium	<	0.1	mg/L							
Selenium	<	0.003	mg/L							
Silicon	<	2	mg/L							
Silver	<	0.0005	mg/L							
Sodium	<	0.1	mg/L							
Strontium	<	0.005	mg/L							
Tellurium	<	0.002	mg/L							
Thallium	<	0.0002	mg/L							
Thorium	<	0.001	mg/L							
Tin	<	0.002	mg/L							
Titanium	<	0.05	mg/L							
Uranium	<	0.0002	mg/L							
Vanadium	<	0.01	mg/L							
Zinc	<	0.01	mg/L							
Zirconium	<	0.001	mg/L							
Duplicate (R901721-DUP1)	**Source: K9F0981-01**			Prepared & Analyzed: Jun-29-09						
Aluminum	0.8	0.05	mg/L		0.9			5	20	
Antimony	<	0.001	mg/L		0.001				20	
Arsenic	0.01	0.005	mg/L		0.01				20	
Barium	0.08	0.005	mg/L		0.08			0.01	20	
Beryllium	<	0.001	mg/L		<				20	
Bismuth	<	0.001	mg/L		<				20	
Boron	1	0.02	mg/L		1			9	20	
Cadmium	<	0.0001	mg/L		<				20	
Calcium	396	1	mg/L		389			2	20	
Chromium	0.02	0.005	mg/L		0.02				20	RPD
Cobalt	0.005	0.0005	mg/L		0.005			2	20	
Copper	0.01	0.001	mg/L		0.01			6	20	
Iron	16	0.1	mg/L		16			2	20	
Lead	0.001	0.001	mg/L		0.001				20	
Lithium	0.02	0.001	mg/L		0.01			11	20	
Magnesium	244	0.1	mg/L		238			2	20	
Manganese	8.2	0.002	mg/L		8.1			0.8	20	
Mercury	<	0.0005	mg/L		<				20	
Molybdenum	0.001	0.001	mg/L		0.002				20	
Nickel	0.05	0.002	mg/L		0.05			0.8	20	
Phosphorus	0.3	0.2	mg/L		0.3				20	
Potassium	5	0.1	mg/L		5			2	20	
Selenium	<	0.003	mg/L		<				20	
Silicon	26	2	mg/L		25			4	20	
Silver	<	0.0005	mg/L		<				20	
Sodium	191	0.1	mg/L		183			5	20	
Strontium	3.4	0.005	mg/L		3.2			3	20	
Tellurium	<	0.002	mg/L		<				20	
Thallium	<	0.0002	mg/L		<				20	
Thorium	<	0.001	mg/L		<				20	

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dissolved Metals by ICPMS, Batch R901721, Continued										
Duplicate (R901721-DUP1), Continued		**Source: K9F0981-01**		Prepared & Analyzed: Jun-29-09						
Tin	<	0.002	mg/L		<				20	
Titanium	<	0.05	mg/L		<				20	
Uranium	0.001	0.0002	mg/L		0.0009				20	
Vanadium	0.02	0.01	mg/L		0.01				20	
Zinc	<	0.01	mg/L		<				20	
Zirconium	0.01	0.001	mg/L		0.009			10	20	
Matrix Spike (R901721-MS2)		**Source: K9F0981-06**		Prepared & Analyzed: Jun-29-09						
Antimony	1.9	0.001	mg/L	2.00	<	93	80-120			
Arsenic	1.1	0.005	mg/L	1.00	<	106	80-120			
Barium	5.0	0.005	mg/L	5.00	0.01	101	70-130			
Beryllium	2.2	0.001	mg/L	2.00	<	111	70-130			
Cadmium	0.57	0.0001	mg/L	0.500	<	115	70-130			
Chromium	2.2	0.005	mg/L	2.00	0.005	110	70-130			
Cobalt	2.41	0.0005	mg/L	2.00	<	120	70-130			
Copper	2.1	0.001	mg/L	2.00	0.01	107	70-130			
Iron	10	0.1	mg/L	10.0	<	102	70-130			
Lead	1.1	0.001	mg/L	1.00	<	110	70-130			
Manganese	2.5	0.002	mg/L	2.00	<	123	70-130			
Nickel	2.3	0.002	mg/L	2.00	0.003	114	70-130			
Selenium	0.6	0.003	mg/L	0.500	<	111	80-120			
Silver	0.52	0.0005	mg/L	0.500	<	104	60-140			
Thallium	0.53	0.0002	mg/L	0.500	<	107	80-120			
Vanadium	1.1	0.01	mg/L	1.00	<	105	80-120			
Zinc	5.7	0.01	mg/L	5.00	0.01	115	70-130			
Reference (R901721-SRM1)				Prepared & Analyzed: Jun-29-09						
Aluminum	0.2	0.05	mg/L	0.209		105	80-120			
Antimony	0.05	0.001	mg/L	0.0400		122	80-120			SRM
Arsenic	0.4	0.005	mg/L	0.400		104	80-120			
Barium	3.3	0.005	mg/L	3.12		106	80-120			
Beryllium	0.2	0.001	mg/L	0.197		110	80-120			
Boron	2	0.02	mg/L	1.61		100	80-120			
Cadmium	0.21	0.0001	mg/L	0.200		105	80-120			
Calcium	8	1	mg/L	6.50		116	80-120			
Chromium	0.4	0.005	mg/L	0.401		103	80-120			
Cobalt	0.12	0.0005	mg/L	0.119		105	80-120			
Copper	0.9	0.001	mg/L	0.781		111	80-120			
Iron	1	0.1	mg/L	1.17		107	80-120			
Lead	0.1	0.001	mg/L	0.102		104	80-120			
Lithium	0.1	0.001	mg/L	0.0960		107	80-120			
Magnesium	7	0.1	mg/L	6.11		115	80-120			
Manganese	0.3	0.002	mg/L	0.318		105	80-120			
Molybdenum	0.4	0.001	mg/L	0.387		105	80-120			
Nickel	0.9	0.002	mg/L	0.789		110	80-120			
Phosphorus	0.4	0.2	mg/L	0.448		92	70-130			
Potassium	3	0.1	mg/L	2.84		103	80-120			
Selenium	0.03	0.003	mg/L	0.0300		113	80-120			
Sodium	19	0.1	mg/L	17.4		110	80-120			
Strontium	1.0	0.005	mg/L	0.979		104	80-120			
Thallium	0.04	0.0002	mg/L	0.0350		117	80-120			
Uranium	0.21	0.0002	mg/L	0.244		85	60-140			
Vanadium	0.8	0.01	mg/L	0.798		100	80-120			
Zinc	0.9	0.01	mg/L	0.800		116	80-120			
Reference (R901721-SRM2)				Prepared & Analyzed: Jun-29-09						
Aluminum	0.2	0.05	mg/L	0.209		102	80-120			
Antimony	0.05	0.001	mg/L	0.0400		120	80-120			
Arsenic	0.4	0.005	mg/L	0.400		101	80-120			
Barium	3.2	0.005	mg/L	3.12		102	80-120			
Beryllium	0.2	0.001	mg/L	0.197		111	80-120			
Boron	2	0.02	mg/L	1.61		95	80-120			
Cadmium	0.20	0.0001	mg/L	0.200		102	80-120			

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dissolved Metals by ICPMS, Batch R901721, Continued										
Reference (R901721-SRM2), Continued				Prepared & Analyzed: Jun-29-09						
Calcium	7	1	mg/L	6.50		115	80-120			
Chromium	0.4	0.005	mg/L	0.401		101	80-120			
Cobalt	0.12	0.0005	mg/L	0.119		103	80-120			
Copper	0.8	0.001	mg/L	0.781		108	80-120			
Iron	1	0.1	mg/L	1.17		104	80-120			
Lead	0.1	0.001	mg/L	0.102		102	80-120			
Lithium	0.1	0.001	mg/L	0.0960		105	80-120			
Magnesium	7	0.1	mg/L	6.11		112	80-120			
Manganese	0.3	0.002	mg/L	0.318		103	80-120			
Molybdenum	0.4	0.001	mg/L	0.387		104	80-120			
Nickel	0.8	0.002	mg/L	0.789		107	80-120			
Phosphorus	0.4	0.2	mg/L	0.448		88	70-130			
Potassium	3	0.1	mg/L	2.84		99	80-120			
Selenium	0.03	0.003	mg/L	0.0300		112	80-120			
Sodium	19	0.1	mg/L	17.4		108	80-120			
Strontium	1.0	0.005	mg/L	0.979		103	80-120			
Thallium	0.04	0.0002	mg/L	0.0350		116	80-120			
Uranium	0.20	0.0002	mg/L	0.244		84	60-140			
Vanadium	0.8	0.01	mg/L	0.798		98	80-120			
Zinc	0.9	0.01	mg/L	0.800		110	80-120			
General Parameters, Batch K902283										
Blank (K902283-BLK1)				Prepared & Analyzed: Jun-25-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
Blank (K902283-BLK2)				Prepared & Analyzed: Jun-25-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
Blank (K902283-BLK3)				Prepared & Analyzed: Jun-25-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
Blank (K902283-BLK4)				Prepared & Analyzed: Jun-25-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
LCS (K902283-BS1)				Prepared & Analyzed: Jun-25-09						
Nitrogen, Ammonia as N	9.79	0.20	mg/L	10.0		98	80-120			
LCS (K902283-BS2)				Prepared & Analyzed: Jun-25-09						
Nitrogen, Ammonia as N	9.88	0.20	mg/L	10.0		99	80-120			
LCS (K902283-BS3)				Prepared & Analyzed: Jun-25-09						
Nitrogen, Ammonia as N	9.95	0.20	mg/L	10.0		100	80-120			
LCS (K902283-BS4)				Prepared & Analyzed: Jun-25-09						
Nitrogen, Ammonia as N	9.67	0.20	mg/L	10.0		97	80-120			
Duplicate (K902283-DUP3)		**Source: K9F0981-05**		Prepared & Analyzed: Jun-25-09						
Nitrogen, Ammonia as N	0.94	0.02	mg/L		0.94			0	20	
General Parameters, Batch K902288										
Blank (K902288-BLK1)				Prepared & Analyzed: Jun-26-09						
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K902288-BLK2)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K902288, Continued										
Blank (K902288-BLK3)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K902288-BLK4)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K902288-BLK5)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K902288-BLK6)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K902288-BLK7)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
LCS (K902288-BS1)				Prepared & Analyzed: Jun-26-09						
Nitrogen, Nitrate as N	2.01	0.01	mg/L	2.00		100	85-115			
Nitrogen, Nitrite as N	1.91	0.01	mg/L	2.00		96	85-115			
Sulfate	1.9	1.0	mg/L	2.00		95	85-115			
LCS (K902288-BS2)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L	2.00			85-115			
Nitrogen, Nitrite as N	<	0.01	mg/L	2.00			85-115			
Sulfate	<	1.0	mg/L	2.00			85-115			
LCS (K902288-BS3)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L	2.00			85-115			
Nitrogen, Nitrite as N	<	0.01	mg/L	2.00			85-115			
Sulfate	<	1.0	mg/L	2.00			85-115			
LCS (K902288-BS4)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L	2.00			85-115			
Nitrogen, Nitrite as N	<	0.01	mg/L	2.00			85-115			
Sulfate	<	1.0	mg/L	2.00			85-115			
LCS (K902288-BS5)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L	2.00			85-115			
Nitrogen, Nitrite as N	<	0.01	mg/L	2.00			85-115			
Sulfate	<	1.0	mg/L	2.00			85-115			
LCS (K902288-BS6)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L	2.00			85-115			
Nitrogen, Nitrite as N	<	0.01	mg/L	2.00			85-115			
Sulfate	<	1.0	mg/L	2.00			85-115			
LCS (K902288-BS7)				Prepared: Jun-26-09 Analyzed: Jul-02-09						
Nitrogen, Nitrate as N	<	0.01	mg/L	2.00			85-115			
Nitrogen, Nitrite as N	<	0.01	mg/L	2.00			85-115			
Sulfate	<	1.0	mg/L	2.00			85-115			
General Parameters, Batch K902303										

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K902303, Continued										
Blank (K902303-BLK1)				Prepared & Analyzed: Jun-26-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
Blank (K902303-BLK2)				Prepared & Analyzed: Jun-26-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
Blank (K902303-BLK3)				Prepared & Analyzed: Jun-26-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
Blank (K902303-BLK4)				Prepared & Analyzed: Jun-26-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
LCS (K902303-BS1)				Prepared & Analyzed: Jun-26-09						
Alkalinity, Total as CaCO3	102	1.0	mg/L	100		102	85-115			
LCS (K902303-BS2)				Prepared & Analyzed: Jun-26-09						
Alkalinity, Total as CaCO3	101	1.0	mg/L	100		101	85-115			
LCS (K902303-BS3)				Prepared & Analyzed: Jun-26-09						
Conductivity (EC)	1400	5	uS/cm	1410		100	95-105			
LCS (K902303-BS4)				Prepared & Analyzed: Jun-26-09						
Conductivity (EC)	1380	5	uS/cm	1410		98	95-105			
LCS (K902303-BS5)				Prepared & Analyzed: Jun-26-09						
Conductivity (EC)	1370	5	uS/cm	1410		97	95-105			
LCS (K902303-BS6)				Prepared & Analyzed: Jun-26-09						
Conductivity (EC)	1360	5	uS/cm	1410		97	95-105			
LCS (K902303-BS7)				Prepared & Analyzed: Jun-26-09						
Alkalinity, Total as CaCO3	98.9	1.0	mg/L	100		99	85-115			
Duplicate (K902303-DUP2)	**Source: K9F0981-05**			Prepared & Analyzed: Jun-26-09						
Alkalinity, Total as CaCO3	1470	1.0	mg/L		1460			0.6	15	
Conductivity (EC)	3760	5	uS/cm		3760			0	10	
pH	7.13	0.10	pH Units		7.15			0.3	5	
Reference (K902303-SRM1)				Prepared & Analyzed: Jun-26-09						
pH	6.99	0.10	pH Units	7.00		100	98-102			
Reference (K902303-SRM2)				Prepared & Analyzed: Jun-26-09						
pH	6.98	0.10	pH Units	7.00		100	98-102			
Reference (K902303-SRM3)				Prepared & Analyzed: Jun-26-09						
pH	7.04	0.10	pH Units	7.00		101	98-102			
Reference (K902303-SRM4)				Prepared & Analyzed: Jun-26-09						
pH	7.00	0.10	pH Units	7.00		100	98-102			
General Parameters, Batch K902306										
Blank (K902306-BLK1)				Prepared & Analyzed: Jun-29-09						
Solids, Total Dissolved	<	0.05	mg/L							

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K902306, Continued										
Blank (K902306-BLK2)				Prepared & Analyzed: Jun-29-09						
Solids, Total Dissolved	<	0.05	mg/L							
Reference (K902306-SRM1)				Prepared & Analyzed: Jun-29-09						
Solids, Total Dissolved	220	0.1	mg/L	240		92	85-115			
Reference (K902306-SRM2)				Prepared & Analyzed: Jun-29-09						
Solids, Total Dissolved	210	0.1	mg/L	240		88	85-115			
General Parameters, Batch K902307										
Blank (K902307-BLK1)				Prepared: Jun-29-09 Analyzed: Jul-02-09						
Nitrogen, Total Kjeldahl	<	0.05	mg/L							
LCS (K902307-BS1)				Prepared: Jun-29-09 Analyzed: Jul-02-09						
Nitrogen, Total Kjeldahl	9.81	0.50	mg/L	10.0		98	80-120			
Duplicate (K902307-DUP1)		**Source: K9F0981-01**		Prepared: Jun-29-09 Analyzed: Jul-02-09						
Nitrogen, Total Kjeldahl	4.88	0.25	mg/L		4.76			3	20	
General Parameters, Batch K902336										
Blank (K902336-BLK1)				Prepared & Analyzed: Jun-30-09						
Chloride	<	0.10	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K902336-BLK2)				Prepared & Analyzed: Jun-30-09						
Chloride	<	0.10	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K902336-BLK3)				Prepared & Analyzed: Jun-30-09						
Chloride	<	0.10	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K902336-BLK4)				Prepared & Analyzed: Jun-30-09						
Chloride	<	0.10	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K902336-BLK5)				Prepared & Analyzed: Jun-30-09						
Chloride	<	0.10	mg/L							
Sulfate	<	1.0	mg/L							
LCS (K902336-BS1)				Prepared & Analyzed: Jun-30-09						
Chloride	1.93	0.10	mg/L	2.00		96	85-115			
Sulfate	1.9	1.0	mg/L	2.00		94	85-115			
LCS (K902336-BS2)				Prepared & Analyzed: Jun-30-09						
Chloride	1.95	0.10	mg/L	2.00		98	85-115			
Sulfate	1.9	1.0	mg/L	2.00		95	85-115			
LCS (K902336-BS3)				Prepared & Analyzed: Jun-30-09						
Chloride	1.94	0.10	mg/L	2.00		97	85-115			
Sulfate	1.9	1.0	mg/L	2.00		95	85-115			
LCS (K902336-BS4)				Prepared & Analyzed: Jun-30-09						
Chloride	1.84	0.10	mg/L	2.00		92	85-115			
Sulfate	1.9	1.0	mg/L	2.00		95	85-115			
LCS (K902336-BS5)				Prepared & Analyzed: Jun-30-09						
Chloride	1.96	0.10	mg/L	2.00		98	85-115			
Sulfate	1.9	1.0	mg/L	2.00		95	85-115			

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9F0981
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Jul-02-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K902336, Continued										
Duplicate (K902336-DUP1)		**Source: K9F0981-01**		Prepared & Analyzed: Jun-30-09						
Chloride	537	2.50	mg/L		537			0.05	20	
Sulfate	7.2	1.0	mg/L		7.1			1	20	

QC Qualifiers:

RPD	Relative percent difference(s) (RPD) of one or more analytes on duplicate analysis are outside of control limits. Data accepted based on acceptable performance of other batch QC.
SRM	Recovery of one or more analytes on Standard Reference Material (SRM) analysis are outside of control limits. Data accepted based on acceptable performance of other batch QC.

CERTIFICATE OF ANALYSIS

CARO ANALYTICAL SERVICES

CLIENT	**Regional District of Central Okanagan**		
	1450 KLO Road		
	KELOWNA BC	TEL	(250) 763-4918
	V1W 3Z4	FAX	(250) 768-2260
ATTENTION	**Charlie Cameron**		

RECEIVED / TEMP	Sep-25-09 14:10 / 13.0 °C	**WORK ORDER #**	K9I0925
REPORTED	Oct-22-09	**PROJECT FILE**	Westside Landfill & Shannon Lake
COC #(s)	18085	**PROJECT NAME**	Sampling Via Golder

General Comments:

CARO Analytical Services employs methods which are based on those found in "Standard Methods for the Examination of Water and Wastewater", 21st Edition, 2005, published by the American Public Health Association (APHA); US EPA protocols found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846", 3rd Edition; and protocols published by the British Columbia Ministry of Environment (BCMOE).

Methods not described in these publications are conducted according to procedures accepted by appropriate regulatory agencies, and/or are done in accordance with recognized professional standards using accepted testing methodologies and quality control efforts except where otherwise agreed to by the client.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirity. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing.

- All solids results are reported on a dry weight basis unless otherwise noted

- Units: mg/kg = milligrams per kilogram, equivalent to parts per million (ppm)
  mg/L = milligrams per litre, equivalent to parts per million (ppm)
  ug/L = micrograms per litre, equivalent to parts per billion (ppb)
  ug/g = micrograms per gram, equivalent to parts per million (ppm)
  ug/m3 = micrograms per cubic meter of air

- "RDL" Reported detection limit
- "<" Less than reported detection limit
- "AO" Aesthetic objective
- "MAC" Maximum acceptable concentration (health-related guideline)
- "LAB" RMD = CARO - Richmond location, KEL = CARO - Kelowna location, SUB = Subcontracted

Please contact CARO if more information is needed.

CARO Analytical Services

Final Review Per: **Jennifer Shanko, AScT**
Coordinator, Operations/Admin

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters							
BH2 (K9I0925-01) Matrix: Water Sampled: Sep-24-09							
Alkalinity, Total as CaCO3	**1560**	1.0	mg/L	Sep-25-09	APHA 2320 B	KEL	
Chloride	**302**	1.00	mg/L	Sep-28-09	APHA 4110 B	KEL	
Conductivity (EC)	**3330**	5	uS/cm	Sep-25-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1730**	3	mg/L	Sep-28-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.37**	0.02	mg/L	Sep-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**0.68**	0.01	mg/L	Sep-25-09	Calc	KEL	
Nitrogen, Nitrate as N	**0.68**	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**3.24**	0.25	mg/L	Oct-01-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**3.92**	0.25	mg/L	Oct-01-09	Calc	KEL	
pH	**7.12**	0.10	pH Units	Sep-25-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**2330**	5	mg/L	Sep-28-09	APHA 2540 C	KEL	
Sulfate	**19.1**	1.0	mg/L	Sep-25-09	APHA 4110 B	KEL	
BH5 (K9I0925-02) Matrix: Water Sampled: Sep-25-09							
Alkalinity, Total as CaCO3	**248**	1.0	mg/L	Sep-25-09	APHA 2320 B	KEL	
Chloride	**60.0**	0.50	mg/L	Sep-28-09	APHA 4110 B	KEL	
Conductivity (EC)	**844**	5	uS/cm	Sep-25-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**342**	3	mg/L	Sep-28-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	<0.02	0.02	mg/L	Sep-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**10.1**	0.05	mg/L	Sep-25-09	Calc	KEL	
Nitrogen, Nitrate as N	**10.1**	0.05	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**0.21**	0.05	mg/L	Oct-01-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**10.3**	0.05	mg/L	Oct-01-09	Calc	KEL	
pH	**7.75**	0.10	pH Units	Sep-25-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**522**	5	mg/L	Sep-28-09	APHA 2540 C	KEL	
Sulfate	**77.7**	5.0	mg/L	Sep-28-09	APHA 4110 B	KEL	
SLMHP (K9I0925-03) Matrix: Water Sampled: Sep-25-09							
Alkalinity, Total as CaCO3	**357**	1.0	mg/L	Sep-25-09	APHA 2320 B	KEL	
Chloride	**48.1**	0.50	mg/L	Sep-25-09	APHA 4110 B	KEL	
Conductivity (EC)	**889**	5	uS/cm	Sep-25-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**354**	3	mg/L	Sep-28-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.03**	0.02	mg/L	Sep-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**0.47**	0.01	mg/L	Sep-25-09	Calc	KEL	
Nitrogen, Nitrate as N	**0.47**	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**0.23**	0.05	mg/L	Oct-01-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**0.70**	0.05	mg/L	Oct-01-09	Calc	KEL	
pH	**7.60**	0.10	pH Units	Sep-25-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**524**	5	mg/L	Sep-28-09	APHA 2540 C	KEL	
Sulfate	**29.1**	1.0	mg/L	Sep-25-09	APHA 4110 B	KEL	
BH A (K9I0925-04) Matrix: Water Sampled: Sep-25-09							
Alkalinity, Total as CaCO3	**357**	1.0	mg/L	Sep-25-09	APHA 2320 B	KEL	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters, Continued							
BH A (K9I0925-04) Matrix: Water Sampled: Sep-25-09, Continued							
Chloride	**48.3**	0.50	mg/L	Sep-25-09	APHA 4110 B	KEL	
Conductivity (EC)	**897**	5	uS/cm	Sep-25-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**357**	3	mg/L	Sep-28-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.02**	0.02	mg/L	Sep-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**0.47**	0.01	mg/L	Sep-25-09	Calc	KEL	
Nitrogen, Nitrate as N	**0.47**	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**0.19**	0.05	mg/L	Oct-01-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**0.66**	0.05	mg/L	Oct-01-09	Calc	KEL	
pH	**7.63**	0.10	pH Units	Sep-25-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**534**	5	mg/L	Sep-28-09	APHA 2540 C	KEL	
Sulfate	**29.4**	1.0	mg/L	Sep-25-09	APHA 4110 B	KEL	
BH1 (K9I0925-05) Matrix: Water Sampled: Sep-25-09							
Alkalinity, Total as CaCO3	**1340**	1.0	mg/L	Sep-25-09	APHA 2320 B	KEL	
BOD, 5-day	**26**	10	mg/L	Sep-25-09	APHA 5210 B	KEL	
Chloride	**413**	1.00	mg/L	Sep-28-09	APHA 4110 B	KEL	
Chemical Oxygen Demand	**280**	5	mg/L	Sep-30-09	APHA 5220 B	KEL	
Conductivity (EC)	**3520**	5	uS/cm	Sep-25-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1670**	3	mg/L	Sep-28-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.85**	0.02	mg/L	Sep-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**0.60**	0.01	mg/L	Sep-25-09	Calc	KEL	
Nitrogen, Nitrate as N	**0.60**	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**4.12**	0.50	mg/L	Oct-01-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**4.72**	0.50	mg/L	Oct-01-09	Calc	KEL	
pH	**7.15**	0.10	pH Units	Sep-25-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**2560**	5	mg/L	Sep-28-09	APHA 2540 C	KEL	
Sulfate	**115**	10.0	mg/L	Sep-28-09	APHA 4110 B	KEL	
BH4 (K9I0925-06) Matrix: Water Sampled: Sep-24-09							
Alkalinity, Total as CaCO3	**839**	1.0	mg/L	Sep-25-09	APHA 2320 B	KEL	
BOD, 5-day	<10	10	mg/L	Sep-25-09	APHA 5210 B	KEL	
Chloride	**366**	1.00	mg/L	Sep-29-09	APHA 4110 B	KEL	
Chemical Oxygen Demand	**42**	5	mg/L	Sep-29-09	APHA 5220 B	KEL	
Conductivity (EC)	**2690**	5	uS/cm	Sep-25-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1250**	3	mg/L	Sep-28-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.07**	0.02	mg/L	Sep-25-09	APHA 4500-NH3 F	KEL	
Nitrogen, Nitrate+Nitrite as N	**0.28**	0.01	mg/L	Sep-25-09	Calc	KEL	
Nitrogen, Nitrate as N	**0.28**	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	0.01	mg/L	Sep-25-09	APHA 4110 B	KEL	
Nitrogen, Total Kjeldahl	**0.68**	0.05	mg/L	Oct-01-09	APHA 4500-Norg	KEL	
Nitrogen, Total	**0.95**	0.05	mg/L	Oct-01-09	Calc	KEL	
pH	**7.49**	0.10	pH Units	Sep-25-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**1680**	5	mg/L	Sep-28-09	APHA 2540 C	KEL	
Sulfate	**72.0**	5.0	mg/L	Sep-30-09	APHA 4110 B	KEL	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Dissolved Metals by ICPMS

BH2 (K9I0925-01) Matrix: Water Sampled: Sep-24-09

Aluminum	**2.18**	0.050	mg/L	Sep-28-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Arsenic	<0.0050	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Barium	**0.0324**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Boron	**0.432**	0.020	mg/L	Sep-28-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Sep-28-09	EPA 6020A	RMD
Calcium	**366**	1.00	mg/L	Sep-28-09	EPA 6020A	RMD
Chromium	**0.0182**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Cobalt	**0.00442**	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD
Copper	**0.0029**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Iron	**3.62**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD
Lead	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Lithium	**0.0210**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Magnesium	**198**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD
Manganese	**10.1**	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD
Mercury	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD
Molybdenum	**0.0048**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Nickel	**0.0423**	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD
Phosphorus	**0.252**	0.200	mg/L	Sep-28-09	EPA 6020A	RMD
Potassium	**2.64**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Sep-28-09	EPA 6020A	RMD
Silicon	**30.8**	2.00	mg/L	Sep-28-09	EPA 6020A	RMD
Silver	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD
Sodium	**135**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD
Strontium	**3.45**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Sep-28-09	EPA 6020A	RMD
Uranium	**0.00622**	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD
Vanadium	**0.0129**	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD
Zinc	**0.0103**	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD
Zirconium	**0.0081**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD

BH5 (K9I0925-02) Matrix: Water Sampled: Sep-25-09

Aluminum	**2.86**	0.050	mg/L	Sep-28-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Arsenic	<0.0050	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Barium	**0.0531**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Boron	**0.032**	0.020	mg/L	Sep-28-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Sep-28-09	EPA 6020A	RMD

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
Dissolved Metals by ICPMS, Continued							
BH5 (K9I0925-02) Matrix: Water Sampled: Sep-25-09, Continued							
Calcium	**91.7**	1.00	mg/L	Sep-28-09	EPA 6020A	RMD	
Chromium	**0.0060**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Cobalt	**0.00288**	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Copper	**0.0051**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Iron	**3.86**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Lead	**0.0025**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Lithium	**0.0148**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Magnesium	**27.4**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Manganese	**0.321**	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Molybdenum	**0.0072**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Nickel	**0.0072**	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Phosphorus	**0.616**	0.200	mg/L	Sep-28-09	EPA 6020A	RMD	
Potassium	**3.38**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Sep-28-09	EPA 6020A	RMD	
Silicon	**14.1**	2.00	mg/L	Sep-28-09	EPA 6020A	RMD	
Silver	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Sodium	**47.8**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Strontium	**0.474**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Titanium	**0.144**	0.050	mg/L	Sep-28-09	EPA 6020A	RMD	
Uranium	**0.00818**	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD	
Vanadium	**0.0182**	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD	
Zinc	**0.0203**	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD	
Zirconium	**0.0047**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
SLMHP (K9I0925-03) Matrix: Water Sampled: Sep-25-09							
Aluminum	<0.050	0.050	mg/L	Sep-28-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Arsenic	<0.0050	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Barium	**0.0158**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Beryllium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Bismuth	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Boron	**0.022**	0.020	mg/L	Sep-28-09	EPA 6020A	RMD	
Cadmium	<0.00010	0.00010	mg/L	Sep-28-09	EPA 6020A	RMD	
Calcium	**92.7**	1.00	mg/L	Sep-28-09	EPA 6020A	RMD	
Chromium	<0.0050	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Cobalt	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Copper	**0.0130**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Iron	<0.100	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Lead	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Lithium	**0.0151**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Magnesium	**29.8**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Dissolved Metals by ICPMS, Continued

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
SLMHP (K9I0925-03) Matrix: Water Sampled: Sep-25-09, Continued							
Manganese	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Molybdenum	**0.0035**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Nickel	**0.0026**	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Phosphorus	<0.200	0.200	mg/L	Sep-28-09	EPA 6020A	RMD	
Potassium	**3.89**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Sep-28-09	EPA 6020A	RMD	
Silicon	**13.5**	2.00	mg/L	Sep-28-09	EPA 6020A	RMD	
Silver	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Sodium	**47.1**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Strontium	**0.705**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Titanium	<0.050	0.050	mg/L	Sep-28-09	EPA 6020A	RMD	
Uranium	**0.00770**	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD	
Zinc	**0.0134**	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD	
Zirconium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
BH A (K9I0925-04) Matrix: Water Sampled: Sep-25-09							
Aluminum	<0.050	0.050	mg/L	Sep-28-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Arsenic	<0.0050	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Barium	**0.0151**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Beryllium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Bismuth	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Boron	**0.021**	0.020	mg/L	Sep-28-09	EPA 6020A	RMD	
Cadmium	<0.00010	0.00010	mg/L	Sep-28-09	EPA 6020A	RMD	
Calcium	**93.5**	1.00	mg/L	Sep-28-09	EPA 6020A	RMD	
Chromium	<0.0050	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Cobalt	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Copper	**0.0131**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Iron	<0.100	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Lead	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Lithium	**0.0149**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Magnesium	**30.1**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Manganese	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Molybdenum	**0.0034**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Nickel	**0.0027**	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Phosphorus	<0.200	0.200	mg/L	Sep-28-09	EPA 6020A	RMD	
Potassium	**3.88**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Sep-28-09	EPA 6020A	RMD	
Silicon	**13.6**	2.00	mg/L	Sep-28-09	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Dissolved Metals by ICPMS, Continued

BH A (K9I0925-04) Matrix: Water Sampled: Sep-25-09, Continued

Silver	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD
Sodium	**47.8**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD
Strontium	**0.709**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Sep-28-09	EPA 6020A	RMD
Uranium	**0.00793**	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD
Vanadium	<0.0100	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD
Zinc	**0.0135**	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD
Zirconium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD

BH1 (K9I0925-05) Matrix: Water Sampled: Sep-25-09

Aluminum	**1.35**	0.050	mg/L	Sep-28-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Arsenic	**0.0086**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Barium	**0.0892**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Boron	**1.43**	0.020	mg/L	Sep-28-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Sep-28-09	EPA 6020A	RMD
Calcium	**339**	1.00	mg/L	Sep-28-09	EPA 6020A	RMD
Chromium	**0.0137**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Cobalt	**0.00545**	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD
Copper	**0.0182**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Iron	**13.3**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD
Lead	**0.0013**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Lithium	**0.0192**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Magnesium	**200**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD
Manganese	**6.68**	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD
Mercury	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD
Molybdenum	**0.0019**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Nickel	**0.0397**	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD
Phosphorus	**0.258**	0.200	mg/L	Sep-28-09	EPA 6020A	RMD
Potassium	**6.74**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Sep-28-09	EPA 6020A	RMD
Silicon	**26.7**	2.00	mg/L	Sep-28-09	EPA 6020A	RMD
Silver	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD
Sodium	**181**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD
Strontium	**3.00**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD
Titanium	**0.081**	0.050	mg/L	Sep-28-09	EPA 6020A	RMD

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
Dissolved Metals by ICPMS, Continued							
BH1 (K9I0925-05) Matrix: Water Sampled: Sep-25-09, Continued							
Uranium	**0.00260**	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD	
Vanadium	**0.0139**	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD	
Zinc	**0.0136**	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD	
Zirconium	**0.0078**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
BH4 (K9I0925-06) Matrix: Water Sampled: Sep-24-09							
Aluminum	**1.29**	0.050	mg/L	Sep-28-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Arsenic	<0.0050	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Barium	**0.0776**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Beryllium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Bismuth	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Boron	**0.376**	0.020	mg/L	Sep-28-09	EPA 6020A	RMD	
Cadmium	**0.00011**	0.00010	mg/L	Sep-28-09	EPA 6020A	RMD	
Calcium	**232**	1.00	mg/L	Sep-28-09	EPA 6020A	RMD	
Chromium	**0.0078**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Cobalt	**0.00318**	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Copper	**0.0058**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Iron	**1.20**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Lead	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Lithium	**0.0348**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Magnesium	**164**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Manganese	**0.648**	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Molybdenum	**0.0052**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Nickel	**0.0392**	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Phosphorus	**0.308**	0.200	mg/L	Sep-28-09	EPA 6020A	RMD	
Potassium	**6.25**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Sep-28-09	EPA 6020A	RMD	
Silicon	**15.0**	2.00	mg/L	Sep-28-09	EPA 6020A	RMD	
Silver	<0.00050	0.00050	mg/L	Sep-28-09	EPA 6020A	RMD	
Sodium	**107**	0.100	mg/L	Sep-28-09	EPA 6020A	RMD	
Strontium	**2.88**	0.0050	mg/L	Sep-28-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Sep-28-09	EPA 6020A	RMD	
Titanium	<0.050	0.050	mg/L	Sep-28-09	EPA 6020A	RMD	
Uranium	**0.0435**	0.00020	mg/L	Sep-28-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD	
Zinc	<0.0100	0.0100	mg/L	Sep-28-09	EPA 6020A	RMD	
Zirconium	**0.0021**	0.0010	mg/L	Sep-28-09	EPA 6020A	RMD	
Aggregate Organic Parameters							

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
Aggregate Organic Parameters, Continued							
BH1 (K9I0925-05) Matrix: Water Sampled: Sep-25-09							
EPHw (10-19)	**870**	100	ug/L	Sep-29-09	BCMOE	RMD	
LEPHw	**870**	100	ug/L	Sep-29-09	BCMOE	RMD	
EPHw (19-32)	**730**	100	ug/L	Sep-29-09	BCMOE	RMD	
HEPHw	**730**	100	ug/L	Sep-29-09	BCMOE	RMD	
Total PAH	**0.57**	0.10	ug/L	Sep-29-09	BCMOE	RMD	
BH4 (K9I0925-06) Matrix: Water Sampled: Sep-24-09							
EPHw (10-19)	**120**	100	ug/L	Sep-29-09	BCMOE	RMD	
LEPHw	**120**	100	ug/L	Sep-29-09	BCMOE	RMD	
EPHw (19-32)	**120**	100	ug/L	Sep-29-09	BCMOE	RMD	
HEPHw	**120**	100	ug/L	Sep-29-09	BCMOE	RMD	
Total PAH	**0.30**	0.10	ug/L	Sep-29-09	BCMOE	RMD	
Miscellaneous Semivolatile Organics by GC/MS							
BH1 (K9I0925-05) Matrix: Water Sampled: Sep-25-09							
1-Chloronaphthalene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4-Dinitrotoluene	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,6-Dinitrotoluene	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2-Chloronaphthalene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
3,3'-Dichlorobenzidine	<5	5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
4-Bromophenyl phenyl ether	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
4-Chlorophenyl phenyl ether	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Bis(2-chloroethoxy)methane	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Bis(2-chloroethyl)ether	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Bis(2-chloroisopropyl)ether	<2	2	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Dibenzofuran	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Hexachlorobutadiene	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Hexachlorocyclopentadiene	<2	2	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Hexachloroethane	<3	3	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Isophorone	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Nitrobenzene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
N-Nitroso-di-n-propylamine	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
N-Nitrosodiphenylamine	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
1,2,4-Trichlorobenzene	<3	3	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
1,2-Dichlorobenzene	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
1,3-Dichlorobenzene	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
1,4-Dichlorobenzene	**2**	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Hexachlorobenzene	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
1-Methylnaphthalene	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2-Methylnaphthalene	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Acenaphthene	<0.9	0.9	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Acenaphthylene	<0.9	0.9	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Anthracene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Benzo (a) anthracene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Benzo (a) pyrene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Miscellaneous Semivolatile Organics by GC/MS, Continued

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
BH1 (K9I0925-05) Matrix: Water Sampled: Sep-25-09, Continued							
Benzo (b & j) fluoranthene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Benzo (g,h,i) perylene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Benzo (k) fluoranthene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Chrysene	<0.9	0.9	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Dibenz (a,h) anthracene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Fluoranthene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Fluorene	<0.9	0.9	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Indeno(1,2,3-cd)pyrene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Naphthalene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Perylene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Phenanthrene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Pyrene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,3,4,5-Tetrachlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,3,4,6-Tetrachlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,3,4-Trichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,3,5-Trichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4 & 2,5-Dichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4,5-Trichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4,6-Trichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4-Dimethylphenol	<3	3	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4-Dinitrophenol	<8	8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,6-Dichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2-Chlorophenol	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2-Methylphenol	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2-Nitrophenol	<0.9	0.9	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
4,6-Dinitro-2-methylphenol	<5	5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
4-Chloro-3-methylphenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
4-Nitrophenol	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
m,p-Cresols	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Pentachlorophenol	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Phenol	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Bis(2-ethylhexyl) phthalate	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Butyl benzyl phthalate	<5	5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Diethylphthalate	<3	3	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Dimethyl phthalate	<3	3	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Di-n-butyl phthalate	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Di-n-octyl phthalate	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
BH4 (K9I0925-06) Matrix: Water Sampled: Sep-24-09							
1-Chloronaphthalene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4-Dinitrotoluene	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,6-Dinitrotoluene	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2-Chloronaphthalene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
3,3'-Dichlorobenzidine	<5	5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
4-Bromophenyl phenyl ether	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
4-Chlorophenyl phenyl ether	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Miscellaneous Semivolatile Organics by GC/MS, Continued

BH4 (K9I0925-06) Matrix: Water Sampled: Sep-24-09, Continued

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
Bis(2-chloroethoxy)methane	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Bis(2-chloroethyl)ether	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Bis(2-chloroisopropyl)ether	<2	2	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Dibenzofuran	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Hexachlorobutadiene	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Hexachlorocyclopentadiene	<2	2	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Hexachloroethane	<3	3	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Isophorone	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Nitrobenzene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
N-Nitroso-di-n-propylamine	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
N-Nitrosodiphenylamine	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
1,2,4-Trichlorobenzene	<3	3	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
1,2-Dichlorobenzene	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
1,3-Dichlorobenzene	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
1,4-Dichlorobenzene	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Hexachlorobenzene	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
1-Methylnaphthalene	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2-Methylnaphthalene	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Acenaphthene	<0.9	0.9	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Acenaphthylene	<0.9	0.9	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Anthracene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Benzo (a) anthracene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Benzo (a) pyrene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Benzo (b & j) fluoranthene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Benzo (g,h,i) perylene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Benzo (k) fluoranthene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Chrysene	<0.9	0.9	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Dibenz (a,h) anthracene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Fluoranthene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Fluorene	<0.9	0.9	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Indeno(1,2,3-cd)pyrene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Naphthalene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Perylene	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Phenanthrene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
Pyrene	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,3,4,5-Tetrachlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,3,4,6-Tetrachlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,3,4-Trichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,3,5-Trichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4 & 2,5-Dichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4,5-Trichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4,6-Trichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4-Dimethylphenol	<3	3	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,4-Dinitrophenol	<8	8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	
2,6-Dichlorophenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Miscellaneous Semivolatile Organics by GC/MS, Continued

BH4 (K9I0925-06) Matrix: Water Sampled: Sep-24-09, Continued

2-Chlorophenol	<0.8	0.8	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
2-Methylphenol	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
2-Nitrophenol	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
4,6-Dinitro-2-methylphenol	<5	5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
4-Chloro-3-methylphenol	<0.7	0.7	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
4-Nitrophenol	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
m,p-Cresols	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
Pentachlorophenol	<0.5	0.5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
Phenol	<0.6	0.6	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
Bis(2-ethylhexyl) phthalate	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
Butyl benzyl phthalate	<5	5	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
Diethylphthalate	<3	3	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
Dimethyl phthalate	<3	3	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
Di-n-butyl phthalate	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB
Di-n-octyl phthalate	<1	1	ug/L	Oct-02-09	EPA 3510C/8270B	SUB

Polycyclic Aromatic Hydrocarbons by GCMS

BH1 (K9I0925-05) Matrix: Water Sampled: Sep-25-09

Acenaphthene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Acenaphthylene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Acridine	<0.00010	0.00010	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Anthracene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Benzo (a) anthracene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Benzo (a) pyrene	<0.00001	0.00001	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Benzo (b) fluoranthene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Benzo (g,h,i) perylene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Benzo (k) fluoranthene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Chrysene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Dibenz (a,h) anthracene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Fluoranthene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Fluorene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Indeno (1,2,3-cd) pyrene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Naphthalene	<0.00010	0.00010	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Phenanthrene	**0.00028**	0.00010	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Pyrene	**0.00029**	0.00010	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Quinoline	<0.00010	0.00010	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Surrogate: Naphthalene-d8	*72 %*	*50-130*		*Sep-29-09*		
Surrogate: Acenaphthene-d10	*106 %*	*50-130*		*Sep-29-09*		
Surrogate: Phenanthrene-d10	*85 %*	*60-130*		*Sep-29-09*		
Surrogate: Chrysene-d12	*82 %*	*60-130*		*Sep-29-09*		
Surrogate: Perylene-d12	*69 %*	*60-130*		*Sep-29-09*		

BH4 (K9I0925-06) Matrix: Water Sampled: Sep-24-09

Acenaphthene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Acenaphthylene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Polycyclic Aromatic Hydrocarbons by GCMS, Continued

BH4 (K9I0925-06) Matrix: Water Sampled: Sep-24-09, Continued

Acridine	<0.00010	0.00010	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Anthracene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Benzo (a) anthracene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Benzo (a) pyrene	<0.00001	0.00001	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Benzo (b) fluoranthene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Benzo (g,h,i) perylene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Benzo (k) fluoranthene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Chrysene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Dibenz (a,h) anthracene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Fluoranthene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Fluorene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Indeno (1,2,3-cd) pyrene	<0.00005	0.00005	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Naphthalene	<0.00010	0.00010	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Phenanthrene	**0.00015**	0.00010	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Pyrene	**0.00015**	0.00010	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Quinoline	<0.00010	0.00010	mg/L	Sep-29-09	EPA 3510C/8270D	RMD
Surrogate: Naphthalene-d8	*70 %*	*50-130*		*Sep-29-09*		
Surrogate: Acenaphthene-d10	*75 %*	*50-130*		*Sep-29-09*		
Surrogate: Phenanthrene-d10	*84 %*	*60-130*		*Sep-29-09*		
Surrogate: Chrysene-d12	*81 %*	*60-130*		*Sep-29-09*		
Surrogate: Perylene-d12	*65 %*	*60-130*		*Sep-29-09*		

Volatile Organic Compounds by PT-GCMS

BH1 (K9I0925-05) Matrix: Water Sampled: Sep-25-09

1,1,1-Trichloroethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,1,2,2-Tetrachloroethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,1,2-Trichloroethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,1-Dichloroethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,1-Dichloroethene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,2-Dibromoethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,2-Dichlorobenzene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,2-Dichloroethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,2-Dichloropropane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,3-Dichlorobenzene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,4-Dichlorobenzene	**0.0026**	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Benzene	**0.0012**	0.0005	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Bromodichloromethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Bromoform	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Bromomethane	<0.0020	0.0020	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Carbon tetrachloride	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Chlorobenzene	**0.0019**	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Chloroform	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Chloromethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
cis-1,2-Dichloroethene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
cis-1,3-Dichloropropene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Volatile Organic Compounds by PT-GCMS, Continued

BH1 (K9I0925-05) Matrix: Water Sampled: Sep-25-09, Continued

Dibromochloromethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Dibromomethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Ethylbenzene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Methyl tert-butyl ether	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Methylene chloride	<0.0030	0.0030	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Styrene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Tetrachloroethene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Toluene	<0.0005	0.0005	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
trans-1,2-Dichloroethene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
trans-1,3-Dichloropropene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Trichloroethene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Trichlorofluoromethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Vinyl chloride	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Xylenes (total)	<0.0020	0.0020	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Surrogate: Toluene-d8	*98 %*	*80-120*		*Sep-28-09*		
Surrogate: 4-Bromofluorobenzene	*101 %*	*80-120*		*Sep-28-09*		
Surrogate: 1,4-Dichlorobenzene-d4	*91 %*	*80-120*		*Sep-28-09*		

BH4 (K9I0925-06) Matrix: Water Sampled: Sep-24-09

1,1,1-Trichloroethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,1,2,2-Tetrachloroethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,1,2-Trichloroethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,1-Dichloroethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,1-Dichloroethene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,2-Dibromoethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,2-Dichlorobenzene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,2-Dichloroethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,2-Dichloropropane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,3-Dichlorobenzene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
1,4-Dichlorobenzene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Benzene	<0.0005	0.0005	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Bromodichloromethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Bromoform	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Bromomethane	<0.0020	0.0020	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Carbon tetrachloride	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Chlorobenzene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Chloroform	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Chloromethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
cis-1,2-Dichloroethene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
cis-1,3-Dichloropropene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Dibromochloromethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Dibromomethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Ethylbenzene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Methyl tert-butyl ether	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Methylene chloride	<0.0030	0.0030	mg/L	Sep-28-09	EPA 5030B/8260B	RMD
Styrene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
Volatile Organic Compounds by PT-GCMS, Continued							
BH4 (K9I0925-06) Matrix: Water Sampled: Sep-24-09, Continued							
Tetrachloroethene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD	
Toluene	<0.0005	0.0005	mg/L	Sep-28-09	EPA 5030B/8260B	RMD	
trans-1,2-Dichloroethene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD	
trans-1,3-Dichloropropene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD	
Trichloroethene	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD	
Trichlorofluoromethane	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD	
Vinyl chloride	<0.0010	0.0010	mg/L	Sep-28-09	EPA 5030B/8260B	RMD	
Xylenes (total)	<0.0020	0.0020	mg/L	Sep-28-09	EPA 5030B/8260B	RMD	
Surrogate: Toluene-d8	*92 %*	*80-120*		*Sep-28-09*			
Surrogate: 4-Bromofluorobenzene	*95 %*	*80-120*		*Sep-28-09*			
Surrogate: 1,4-Dichlorobenzene-d4	*87 %*	*80-120*		*Sep-28-09*			

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

The following section reports quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with quality control samples that ensure your data is of the highest quality. Common QC types include:

- Method Blank (Blk): Laboratory reagent water is carried through sample preparation and analysis steps. Method Blanks indicate that results are free from contamination, i.e. not biased high from sources such as the sample container or the laboratory environment

- Duplicate (Dup): Preparation and analysis of a replicate aliquot of a sample. Duplicates provide a measure of the analytical method's precision, i.e. how reproducible a result is. Duplicates are only reported if they are associated with your sample data.

- Blank Spike (BS): A known amount of standard is carried through sample preparation and analysis steps. Blank Spikes, also known as laboratory control samples (LCS), are prepared from a different source of standard than used for the calibration. They ensure that the calibration is acceptable (i.e. not biased high or low) and also provide a measure of the analytical method's accuracy (i.e. closeness of the result to a target value).

- Standard Reference Material (SRM): A material of similar matrix to the samples, externally certified for the parameter(s) listed. Standard Reference Materials ensure that the preparation steps in the method are adequate to achieve acceptable recoveries of the parameter(s) tested for.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Aggregate Organic Parameters, Batch R902633										
Blank (R902633-BLK1)				Analyzed: Sep-29-09						
EPHw (10-19)	<	100	ug/L							
EPHw (19-32)	<	100	ug/L							
LCS (R902633-BS1)				Analyzed: Sep-29-09						
EPHw (10-19)	3190	100	ug/L	3800		84	70-120			
EPHw (19-32)	3620	100	ug/L	4400		82	70-120			
Dissolved Metals by ICPMS, Batch R902621										
Blank (R902621-BLK1)				Analyzed: Sep-28-09						
Aluminum	<	0.05	mg/L							
Antimony	<	0.001	mg/L							
Arsenic	<	0.005	mg/L							
Barium	<	0.005	mg/L							
Beryllium	<	0.001	mg/L							
Bismuth	<	0.001	mg/L							
Boron	<	0.02	mg/L							
Cadmium	<	0.0001	mg/L							
Calcium	<	1	mg/L							
Chromium	<	0.005	mg/L							
Cobalt	<	0.0005	mg/L							
Copper	<	0.001	mg/L							
Iron	<	0.1	mg/L							
Lead	<	0.001	mg/L							
Lithium	<	0.001	mg/L							
Magnesium	<	0.1	mg/L							
Manganese	<	0.002	mg/L							
Mercury	<	0.0005	mg/L							
Molybdenum	<	0.001	mg/L							
Nickel	<	0.002	mg/L							
Phosphorus	<	0.2	mg/L							
Potassium	<	0.1	mg/L							
Selenium	<	0.003	mg/L							
Silicon	<	2	mg/L							
Silver	<	0.0005	mg/L							
Sodium	<	0.1	mg/L							
Strontium	<	0.005	mg/L							
Tellurium	<	0.002	mg/L							
Thallium	<	0.0002	mg/L							
Thorium	<	0.001	mg/L							
Tin	<	0.002	mg/L							

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dissolved Metals by ICPMS, Batch R902621, Continued										
Blank (R902621-BLK1), Continued				Analyzed: Sep-28-09						
Titanium	<	0.05	mg/L							
Uranium	<	0.0002	mg/L							
Vanadium	<	0.01	mg/L							
Zinc	<	0.01	mg/L							
Zirconium	<	0.001	mg/L							
Blank (R902621-BLK2)				Analyzed: Sep-28-09						
Aluminum	<	0.05	mg/L							
Antimony	<	0.001	mg/L							
Arsenic	<	0.005	mg/L							
Barium	<	0.005	mg/L							
Beryllium	<	0.001	mg/L							
Bismuth	<	0.001	mg/L							
Boron	<	0.02	mg/L							
Cadmium	<	0.0001	mg/L							
Calcium	<	1	mg/L							
Chromium	<	0.005	mg/L							
Cobalt	<	0.0005	mg/L							
Copper	<	0.001	mg/L							
Iron	<	0.1	mg/L							
Lead	<	0.001	mg/L							
Lithium	<	0.001	mg/L							
Magnesium	<	0.1	mg/L							
Manganese	<	0.002	mg/L							
Mercury	<	0.0005	mg/L							
Molybdenum	<	0.001	mg/L							
Nickel	<	0.002	mg/L							
Phosphorus	<	0.2	mg/L							
Potassium	<	0.1	mg/L							
Selenium	<	0.003	mg/L							
Silicon	<	2	mg/L							
Silver	<	0.0005	mg/L							
Sodium	<	0.1	mg/L							
Strontium	<	0.005	mg/L							
Tellurium	<	0.002	mg/L							
Thallium	<	0.0002	mg/L							
Thorium	<	0.001	mg/L							
Tin	<	0.002	mg/L							
Titanium	<	0.05	mg/L							
Uranium	<	0.0002	mg/L							
Vanadium	<	0.01	mg/L							
Zinc	<	0.01	mg/L							
Zirconium	<	0.001	mg/L							
Blank (R902621-BLK3)				Analyzed: Sep-28-09						
Aluminum	<	0.05	mg/L							
Antimony	<	0.001	mg/L							
Arsenic	<	0.005	mg/L							
Barium	0.005	0.005	mg/L							
Beryllium	<	0.001	mg/L							
Bismuth	<	0.001	mg/L							
Boron	<	0.02	mg/L							
Cadmium	<	0.0001	mg/L							
Calcium	<	1	mg/L							
Chromium	<	0.005	mg/L							
Cobalt	<	0.0005	mg/L							
Copper	<	0.001	mg/L							
Iron	<	0.1	mg/L							
Lead	<	0.001	mg/L							
Lithium	<	0.001	mg/L							
Magnesium	<	0.1	mg/L							
Manganese	<	0.002	mg/L							
Mercury	<	0.0005	mg/L							

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dissolved Metals by ICPMS, Batch R902621, Continued										
Blank (R902621-BLK3), Continued				Analyzed: Sep-28-09						
Molybdenum	<	0.001	mg/L							
Nickel	<	0.002	mg/L							
Phosphorus	<	0.2	mg/L							
Potassium	<	0.1	mg/L							
Selenium	<	0.003	mg/L							
Silicon	<	2	mg/L							
Silver	<	0.0005	mg/L							
Sodium	<	0.1	mg/L							
Strontium	<	0.005	mg/L							
Tellurium	<	0.002	mg/L							
Thallium	<	0.0002	mg/L							
Thorium	<	0.001	mg/L							
Tin	<	0.002	mg/L							
Titanium	<	0.05	mg/L							
Uranium	<	0.0002	mg/L							
Vanadium	<	0.01	mg/L							
Zinc	<	0.01	mg/L							
Zirconium	<	0.001	mg/L							
Duplicate (R902621-DUP3)	**Source: K9I0925-05**			Analyzed: Sep-28-09						
Aluminum	1	0.05	mg/L		1			0.1	20	
Antimony	<	0.001	mg/L		<				20	
Arsenic	0.008	0.005	mg/L		0.009				20	
Barium	0.09	0.005	mg/L		0.09			2	20	
Beryllium	<	0.001	mg/L		<				20	
Bismuth	<	0.001	mg/L		<				20	
Boron	1	0.02	mg/L		1			2	20	
Cadmium	<	0.0001	mg/L		0.0001				20	
Calcium	325	1	mg/L		339			4	20	
Chromium	0.01	0.005	mg/L		0.01				20	
Cobalt	0.005	0.0005	mg/L		0.005			0.3	20	
Copper	0.02	0.001	mg/L		0.02			4	20	
Iron	13	0.1	mg/L		13			0.5	20	
Lead	0.001	0.001	mg/L		0.001				20	
Lithium	0.02	0.001	mg/L		0.02			9	20	
Magnesium	199	0.1	mg/L		200			0.2	20	
Manganese	6.6	0.002	mg/L		6.7			0.4	20	
Mercury	<	0.0005	mg/L		<				20	
Molybdenum	0.002	0.001	mg/L		0.002				20	
Nickel	0.04	0.002	mg/L		0.04			4	20	
Phosphorus	0.2	0.2	mg/L		0.3				20	
Potassium	6	0.1	mg/L		7			4	20	
Selenium	<	0.003	mg/L		<				20	
Silicon	27	2	mg/L		27			0.5	20	
Silver	<	0.0005	mg/L		<				20	
Sodium	180	0.1	mg/L		181			0.4	20	
Strontium	3.0	0.005	mg/L		3.0			0.04	20	
Tellurium	<	0.002	mg/L		<				20	
Thallium	<	0.0002	mg/L		<				20	
Thorium	<	0.001	mg/L		<				20	
Tin	<	0.002	mg/L		<				20	
Titanium	0.08	0.05	mg/L		0.08				20	
Uranium	0.003	0.0002	mg/L		0.003			2	20	
Vanadium	0.01	0.01	mg/L		0.01				20	
Zinc	0.01	0.01	mg/L		0.01				20	
Zirconium	0.008	0.001	mg/L		0.008			4	20	
Matrix Spike (R902621-MS3)	**Source: K9I0925-06**			Analyzed: Sep-28-09						
Antimony	0.4	0.001	mg/L	0.400	<	99	80-120			
Arsenic	0.2	0.005	mg/L	0.200	<	99	80-120			
Barium	1.1	0.005	mg/L	1.00	0.08	100	70-130			
Beryllium	0.4	0.001	mg/L	0.400	<	94	70-130			
Cadmium	0.10	0.0001	mg/L	0.100	0.0001	98	70-130			

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Dissolved Metals by ICPMS, Batch R902621, Continued

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (R902621-MS3), Continued	**Source: K9I0925-06**			Analyzed: Sep-28-09						
Chromium	0.4	0.005	mg/L	0.400	0.008	100	70-130			
Cobalt	0.39	0.0005	mg/L	0.400	0.003	97	70-130			
Copper	0.4	0.001	mg/L	0.400	0.006	97	70-130			
Iron	4	0.1	mg/L	2.00	1	115	70-130			
Lead	0.2	0.001	mg/L	0.200	<	96	70-130			
Manganese	1.0	0.002	mg/L	0.400	0.6	94	70-130			
Nickel	0.4	0.002	mg/L	0.400	0.04	96	70-130			
Selenium	0.1	0.003	mg/L	0.100	<	103	80-120			
Silver	0.09	0.0005	mg/L	0.100	<	89	60-140			
Thallium	0.09	0.0002	mg/L	0.100	<	87	80-120			
Vanadium	0.2	0.01	mg/L	0.200	<	98	80-120			
Zinc	1.0	0.01	mg/L	1.00	0.01	101	70-130			
Reference (R902621-SRM1)				Analyzed: Sep-28-09						
Aluminum	0.2	0.05	mg/L	0.209		106	80-120			
Antimony	0.04	0.001	mg/L	0.0400		99	80-120			
Arsenic	0.4	0.005	mg/L	0.400		98	80-120			
Barium	3.2	0.005	mg/L	3.12		104	80-120			
Beryllium	0.2	0.001	mg/L	0.197		97	80-120			
Boron	2	0.02	mg/L	1.61		97	80-120			
Cadmium	0.20	0.0001	mg/L	0.200		100	80-120			
Calcium	6	1	mg/L	6.50		100	80-120			
Chromium	0.4	0.005	mg/L	0.401		103	80-120			
Cobalt	0.12	0.0005	mg/L	0.119		103	80-120			
Copper	0.8	0.001	mg/L	0.781		103	80-120			
Iron	1	0.1	mg/L	1.17		101	80-120			
Lead	0.1	0.001	mg/L	0.102		102	80-120			
Lithium	0.1	0.001	mg/L	0.0960		101	80-120			
Magnesium	6	0.1	mg/L	6.11		104	80-120			
Manganese	0.3	0.002	mg/L	0.318		105	80-120			
Molybdenum	0.4	0.001	mg/L	0.387		105	80-120			
Nickel	0.8	0.002	mg/L	0.789		103	80-120			
Phosphorus	0.4	0.2	mg/L	0.448		90	70-130			
Potassium	3	0.1	mg/L	2.84		103	80-120			
Selenium	0.03	0.003	mg/L	0.0300		105	80-120			
Sodium	17	0.1	mg/L	17.4		99	80-120			
Strontium	1.0	0.005	mg/L	0.979		103	80-120			
Thallium	0.04	0.0002	mg/L	0.0350		102	80-120			
Uranium	0.22	0.0002	mg/L	0.244		91	60-140			
Vanadium	0.8	0.01	mg/L	0.798		100	80-120			
Zinc	0.8	0.01	mg/L	0.800		104	80-120			
Reference (R902621-SRM2)				Analyzed: Sep-28-09						
Aluminum	0.2	0.05	mg/L	0.209		101	80-120			
Antimony	0.04	0.001	mg/L	0.0400		101	80-120			
Arsenic	0.4	0.005	mg/L	0.400		98	80-120			
Barium	3.3	0.005	mg/L	3.12		104	80-120			
Beryllium	0.2	0.001	mg/L	0.197		89	80-120			
Boron	1	0.02	mg/L	1.61		89	80-120			
Cadmium	0.20	0.0001	mg/L	0.200		100	80-120			
Calcium	6	1	mg/L	6.50		100	80-120			
Chromium	0.4	0.005	mg/L	0.401		103	80-120			
Cobalt	0.12	0.0005	mg/L	0.119		103	80-120			
Copper	0.8	0.001	mg/L	0.781		104	80-120			
Iron	1	0.1	mg/L	1.17		104	80-120			
Lead	0.1	0.001	mg/L	0.102		102	80-120			
Lithium	0.08	0.001	mg/L	0.0960		86	80-120			
Magnesium	6	0.1	mg/L	6.11		101	80-120			
Manganese	0.3	0.002	mg/L	0.318		105	80-120			
Molybdenum	0.4	0.001	mg/L	0.387		106	80-120			
Nickel	0.8	0.002	mg/L	0.789		104	80-120			
Phosphorus	0.4	0.2	mg/L	0.448		91	70-130			
Potassium	3	0.1	mg/L	2.84		103	80-120			

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dissolved Metals by ICPMS, Batch R902621, Continued										
Reference (R902621-SRM2), Continued				Analyzed: Sep-28-09						
Selenium	0.03	0.003	mg/L	0.0300		109	80-120			
Sodium	17	0.1	mg/L	17.4		96	80-120			
Strontium	1.0	0.005	mg/L	0.979		103	80-120			
Thallium	0.04	0.0002	mg/L	0.0350		102	80-120			
Uranium	0.22	0.0002	mg/L	0.244		89	60-140			
Vanadium	0.8	0.01	mg/L	0.798		100	80-120			
Zinc	0.8	0.01	mg/L	0.800		104	80-120			
Reference (R902621-SRM3)				Analyzed: Sep-28-09						
Aluminum	0.2	0.05	mg/L	0.209		102	80-120			
Antimony	0.04	0.001	mg/L	0.0400		98	80-120			
Arsenic	0.4	0.005	mg/L	0.400		97	80-120			
Barium	3.2	0.005	mg/L	3.12		102	80-120			
Beryllium	0.2	0.001	mg/L	0.197		97	80-120			
Boron	1	0.02	mg/L	1.61		93	80-120			
Cadmium	0.20	0.0001	mg/L	0.200		99	80-120			
Calcium	6	1	mg/L	6.50		97	80-120			
Chromium	0.4	0.005	mg/L	0.401		102	80-120			
Cobalt	0.12	0.0005	mg/L	0.119		103	80-120			
Copper	0.8	0.001	mg/L	0.781		103	80-120			
Iron	1	0.1	mg/L	1.17		103	80-120			
Lead	0.1	0.001	mg/L	0.102		103	80-120			
Lithium	0.09	0.001	mg/L	0.0960		96	80-120			
Magnesium	6	0.1	mg/L	6.11		103	80-120			
Manganese	0.3	0.002	mg/L	0.318		105	80-120			
Molybdenum	0.4	0.001	mg/L	0.387		105	80-120			
Nickel	0.8	0.002	mg/L	0.789		102	80-120			
Phosphorus	0.4	0.2	mg/L	0.448		89	70-130			
Potassium	3	0.1	mg/L	2.84		103	80-120			
Selenium	0.03	0.003	mg/L	0.0300		106	80-120			
Sodium	17	0.1	mg/L	17.4		97	80-120			
Strontium	1.0	0.005	mg/L	0.979		103	80-120			
Thallium	0.04	0.0002	mg/L	0.0350		103	80-120			
Uranium	0.22	0.0002	mg/L	0.244		91	60-140			
Vanadium	0.8	0.01	mg/L	0.798		99	80-120			
Zinc	0.8	0.01	mg/L	0.800		103	80-120			
General Parameters, Batch K903633										
Blank (K903633-BLK1)				Analyzed: Sep-25-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
Blank (K903633-BLK2)				Analyzed: Sep-25-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
Blank (K903633-BLK3)				Analyzed: Sep-25-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
LCS (K903633-BS1)				Analyzed: Sep-25-09						
Nitrogen, Ammonia as N	10.2	0.20	mg/L	10.0		102	80-120			
LCS (K903633-BS2)				Analyzed: Sep-25-09						
Nitrogen, Ammonia as N	10.5	0.20	mg/L	10.0		105	80-120			
LCS (K903633-BS3)				Analyzed: Sep-25-09						
Nitrogen, Ammonia as N	10.3	0.20	mg/L	10.0		103	80-120			
General Parameters, Batch K903637										
Blank (K903637-BLK1)				Analyzed: Sep-25-09						
BOD, 5-day	<	10	mg/L							

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K903637, Continued										
Blank (K903637-BLK2)				Analyzed: Sep-25-09						
BOD, 5-day	<	10	mg/L							
LCS (K903637-BS1)				Analyzed: Sep-25-09						
BOD, 5-day	190	10	mg/L	198		97	80-120			
LCS (K903637-BS2)				Analyzed: Sep-25-09						
BOD, 5-day	200	10	mg/L	198		100	80-120			
General Parameters, Batch K903644										
Blank (K903644-BLK1)				Analyzed: Sep-28-09						
Solids, Total Dissolved	<	5	mg/L							
Duplicate (K903644-DUP1)	**Source: K9I0925-01**			Analyzed: Sep-28-09						
Solids, Total Dissolved	2380	5	mg/L		2330			2	20	
Reference (K903644-SRM1)				Analyzed: Sep-28-09						
Solids, Total Dissolved	241	5	mg/L	240		100	85-115			
General Parameters, Batch K903645										
Blank (K903645-BLK1)				Analyzed: Sep-25-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
Blank (K903645-BLK2)				Analyzed: Sep-25-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
Blank (K903645-BLK3)				Analyzed: Sep-25-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
LCS (K903645-BS1)				Analyzed: Sep-25-09						
Alkalinity, Total as CaCO3	101	1.0	mg/L	100		101	85-115			
LCS (K903645-BS2)				Analyzed: Sep-25-09						
Alkalinity, Total as CaCO3	102	1.0	mg/L	100		102	85-115			
LCS (K903645-BS3)				Analyzed: Sep-25-09						
Alkalinity, Total as CaCO3	101	1.0	mg/L	100		101	85-115			
LCS (K903645-BS4)				Analyzed: Sep-25-09						
Conductivity (EC)	1400	5	uS/cm	1410		99	95-105			
LCS (K903645-BS5)				Analyzed: Sep-25-09						
Conductivity (EC)	1390	5	uS/cm	1410		99	95-105			
LCS (K903645-BS6)				Analyzed: Sep-25-09						
Conductivity (EC)	1400	5	uS/cm	1410		99	95-105			
Duplicate (K903645-DUP3)	**Source: K9I0925-06**			Analyzed: Sep-25-09						
Alkalinity, Total as CaCO3	834	1.0	mg/L		839			0.6	15	
Conductivity (EC)	2680	5	uS/cm		2690			0.4	10	
pH	7.56	0.10	pH Units		7.49			0.9	5	
Reference (K903645-SRM1)				Analyzed: Sep-25-09						
pH	7.01	0.10	pH Units	7.00		100	98-102			

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K903645, Continued										
Reference (K903645-SRM2)				Analyzed: Sep-25-09						
pH	7.01	0.10	pH Units	7.00		100	98-102			
Reference (K903645-SRM3)				Analyzed: Sep-25-09						
pH	7.01	0.10	pH Units	7.00		100	98-102			
General Parameters, Batch K903647										
Blank (K903647-BLK1)				Analyzed: Sep-25-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K903647-BLK2)				Analyzed: Sep-25-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K903647-BLK3)				Analyzed: Sep-25-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K903647-BLK4)				Analyzed: Sep-25-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K903647-BLK5)				Analyzed: Sep-25-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
LCS (K903647-BS1)				Analyzed: Sep-25-09						
Chloride	3.96	0.10	mg/L	4.00		99	85-115			
Nitrogen, Nitrate as N	4.23	0.01	mg/L	4.00		106	85-115			
Nitrogen, Nitrite as N	3.81	0.01	mg/L	4.00		95	85-115			
Sulfate	3.9	1.0	mg/L	4.00		98	85-115			
LCS (K903647-BS2)				Analyzed: Sep-25-09						
Chloride	3.93	0.10	mg/L	4.00		98	85-115			
Nitrogen, Nitrate as N	4.20	0.01	mg/L	4.00		105	85-115			
Nitrogen, Nitrite as N	3.73	0.01	mg/L	4.00		93	85-115			
Sulfate	3.9	1.0	mg/L	4.00		98	85-115			
LCS (K903647-BS3)				Analyzed: Sep-25-09						
Chloride	3.93	0.10	mg/L	4.00		98	85-115			
Nitrogen, Nitrate as N	4.20	0.01	mg/L	4.00		105	85-115			
Nitrogen, Nitrite as N	3.79	0.01	mg/L	4.00		95	85-115			
Sulfate	3.9	1.0	mg/L	4.00		98	85-115			
LCS (K903647-BS4)				Analyzed: Sep-25-09						
Chloride	3.90	0.10	mg/L	4.00		97	85-115			
Nitrogen, Nitrate as N	4.17	0.01	mg/L	4.00		104	85-115			
Nitrogen, Nitrite as N	3.79	0.01	mg/L	4.00		95	85-115			
Sulfate	3.9	1.0	mg/L	4.00		98	85-115			

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K903647, Continued										
LCS (K903647-BS5)				Analyzed: Sep-25-09						
Chloride	3.90	0.10	mg/L	4.00		97	85-115			
Nitrogen, Nitrate as N	4.15	0.01	mg/L	4.00		104	85-115			
Nitrogen, Nitrite as N	3.57	0.01	mg/L	4.00		89	85-115			
Sulfate	3.9	1.0	mg/L	4.00		97	85-115			
General Parameters, Batch K903651										
Blank (K903651-BLK1)				Analyzed: Oct-01-09						
Nitrogen, Total Kjeldahl	<	0.05	mg/L							
Blank (K903651-BLK2)				Analyzed: Oct-01-09						
Nitrogen, Total Kjeldahl	<	0.05	mg/L							
Blank (K903651-BLK3)				Analyzed: Oct-01-09						
Nitrogen, Total Kjeldahl	<	0.05	mg/L							
LCS (K903651-BS1)				Analyzed: Oct-01-09						
Nitrogen, Total Kjeldahl	10.2	0.50	mg/L	10.0		102	80-120			
LCS (K903651-BS2)				Analyzed: Oct-01-09						
Nitrogen, Total Kjeldahl	9.98	0.50	mg/L	10.0		100	80-120			
LCS (K903651-BS3)				Analyzed: Oct-01-09						
Nitrogen, Total Kjeldahl	10.4	0.50	mg/L	10.0		104	80-120			
Duplicate (K903651-DUP3)	**Source: K9I0925-05**			Analyzed: Oct-01-09						
Nitrogen, Total Kjeldahl	4.08	0.50	mg/L		4.12			1	20	
General Parameters, Batch K903662										
Blank (K903662-BLK1)				Analyzed: Sep-28-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K903662-BLK2)				Analyzed: Sep-28-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K903662-BLK3)				Analyzed: Sep-28-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Nitrogen, Nitrite as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
LCS (K903662-BS1)				Analyzed: Sep-28-09						
Chloride	4.20	0.10	mg/L	4.00		105	85-115			
Nitrogen, Nitrate as N	4.07	0.01	mg/L	4.00		102	85-115			
Nitrogen, Nitrite as N	3.90	0.01	mg/L	4.00		98	85-115			
Sulfate	4.1	1.0	mg/L	4.00		103	85-115			
LCS (K903662-BS2)				Analyzed: Sep-28-09						
Chloride	4.24	0.10	mg/L	4.00		106	85-115			
Nitrogen, Nitrate as N	4.31	0.01	mg/L	4.00		108	85-115			
Nitrogen, Nitrite as N	3.77	0.01	mg/L	4.00		94	85-115			
Sulfate	4.2	1.0	mg/L	4.00		106	85-115			

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K903662, Continued										
LCS (K903662-BS3)				Analyzed: Sep-28-09						
Chloride	4.26	0.10	mg/L	4.00		106	85-115			
Nitrogen, Nitrate as N	4.43	0.01	mg/L	4.00		111	85-115			
Nitrogen, Nitrite as N	3.99	0.01	mg/L	4.00		100	85-115			
Sulfate	4.1	1.0	mg/L	4.00		103	85-115			
General Parameters, Batch K903681										
Blank (K903681-BLK1)				Analyzed: Sep-29-09						
Chemical Oxygen Demand	<	5	mg/L							
LCS (K903681-BS1)				Analyzed: Sep-29-09						
Chemical Oxygen Demand	510	5	mg/L	500		103	85-115			
General Parameters, Batch K903690										
Blank (K903690-BLK1)				Analyzed: Sep-29-09						
Chloride	<	0.10	mg/L							
Blank (K903690-BLK2)				Analyzed: Sep-29-09						
Chloride	<	0.10	mg/L							
Blank (K903690-BLK3)				Analyzed: Sep-29-09						
Chloride	<	0.10	mg/L							
LCS (K903690-BS1)				Analyzed: Sep-29-09						
Chloride	4.31	0.10	mg/L	4.00		108	85-115			
LCS (K903690-BS2)				Analyzed: Sep-29-09						
Chloride	4.32	0.10	mg/L	4.00		108	85-115			
LCS (K903690-BS3)				Analyzed: Sep-29-09						
Chloride	4.31	0.10	mg/L	4.00		108	85-115			
General Parameters, Batch K903709										
Blank (K903709-BLK1)				Analyzed: Sep-30-09						
Chemical Oxygen Demand	<	5	mg/L							
LCS (K903709-BS1)				Analyzed: Sep-30-09						
Chemical Oxygen Demand	500	5	mg/L	500		99	85-115			
Polycyclic Aromatic Hydrocarbons by GCMS, Batch R902633										
Blank (R902633-BLK1)				Analyzed: Sep-29-09						
Acenaphthene	<	0.00005	mg/L							
Acenaphthylene	<	0.00005	mg/L							
Acridine	<	0.0001	mg/L							
Anthracene	<	0.00005	mg/L							
Benzo (a) anthracene	<	0.00005	mg/L							
Benzo (a) pyrene	<	0.00001	mg/L							
Benzo (b) fluoranthene	<	0.00005	mg/L							
Benzo (g,h,i) perylene	<	0.00005	mg/L							
Benzo (k) fluoranthene	<	0.00005	mg/L							
Chrysene	<	0.00005	mg/L							
Dibenz (a,h) anthracene	<	0.00005	mg/L							
Fluoranthene	<	0.00005	mg/L							
Fluorene	<	0.00005	mg/L							
Indeno (1,2,3-cd) pyrene	<	0.00005	mg/L							
Naphthalene	<	0.0001	mg/L							
Phenanthrene	<	0.0001	mg/L							

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Polycyclic Aromatic Hydrocarbons by GCMS, Batch R902633, Continued										
Blank (R902633-BLK1), Continued				Analyzed: Sep-29-09						
Pyrene	<	0.0001	mg/L							
Quinoline	<	0.0001	mg/L							
Surrogate: Naphthalene-d8	*0.000899*		*mg/L*	*0.00100*		*90*	*50-130*			
Surrogate: Acenaphthene-d10	*0.000935*		*mg/L*	*0.00100*		*93*	*50-130*			
Surrogate: Phenanthrene-d10	*0.000972*		*mg/L*	*0.00100*		*97*	*60-130*			
Surrogate: Chrysene-d12	*0.000949*		*mg/L*	*0.00100*		*95*	*60-130*			
Surrogate: Perylene-d12	*0.000738*		*mg/L*	*0.00100*		*74*	*60-130*			
Surrogate: Naphthalene-d8	*0.000442*		*mg/L*	*0.00100*		*44*	*50-130*			
Surrogate: Acenaphthene-d10	*0.000645*		*mg/L*	*0.00100*		*64*	*50-130*			
Surrogate: Phenanthrene-d10	*-0.00100*		*mg/L*	*0.00100*			*60-130*			
Surrogate: Chrysene-d12	*0.00*		*mg/L*	*0.00100*			*60-130*			
Surrogate: Perylene-d12	*0.00*		*mg/L*	*0.00100*			*60-130*			
LCS (R902633-BS2)				Analyzed: Sep-30-09						
Acenaphthene	0.0009	0.00005	mg/L	0.00100		90	50-130			
Acenaphthylene	0.0009	0.00005	mg/L	0.00100		86	50-130			
Acridine	0.0007	0.0001	mg/L	0.000970		72	50-130			
Anthracene	0.0008	0.00005	mg/L	0.00100		84	60-130			
Benzo (a) anthracene	0.0009	0.00005	mg/L	0.00100		92	60-130			
Benzo (a) pyrene	0.0009	0.00001	mg/L	0.00100		89	60-130			
Benzo (b) fluoranthene	0.0009	0.00005	mg/L	0.00100		92	60-130			
Benzo (g,h,i) perylene	0.0008	0.00005	mg/L	0.00100		84	60-130			
Benzo (k) fluoranthene	0.001	0.00005	mg/L	0.00100		97	60-130			
Chrysene	0.0009	0.00005	mg/L	0.00100		92	60-130			
Dibenz (a,h) anthracene	0.0009	0.00005	mg/L	0.00100		87	60-130			
Fluoranthene	0.001	0.00005	mg/L	0.00100		101	60-130			
Fluorene	0.0009	0.00005	mg/L	0.00100		91	50-130			
Indeno (1,2,3-cd) pyrene	0.0009	0.00005	mg/L	0.00100		85	60-130			
Naphthalene	0.001	0.0001	mg/L	0.00100		104	50-130			
Phenanthrene	0.001	0.0001	mg/L	0.00100		97	60-130			
Pyrene	0.001	0.0001	mg/L	0.00100		113	60-130			
Quinoline	0.0007	0.0001	mg/L	0.000995		72	50-130			
Surrogate: Naphthalene-d8	*0.000955*		*mg/L*	*0.00100*		*95*	*50-130*			
Surrogate: Acenaphthene-d10	*0.000960*		*mg/L*	*0.00100*		*96*	*50-130*			
Surrogate: Phenanthrene-d10	*0.00103*		*mg/L*	*0.00100*		*103*	*60-130*			
Surrogate: Chrysene-d12	*0.00101*		*mg/L*	*0.00100*		*101*	*60-130*			
Surrogate: Perylene-d12	*0.000692*		*mg/L*	*0.00100*		*69*	*60-130*			
Volatile Organic Compounds by PT-GCMS, Batch R902597										
Blank (R902597-BLK1)				Analyzed: Sep-25-09						
1,1,1-Trichloroethane	<	0.001	mg/L							
1,1,2,2-Tetrachloroethane	<	0.001	mg/L							
1,1,2-Trichloroethane	<	0.001	mg/L							
1,1-Dichloroethane	<	0.001	mg/L							
1,1-Dichloroethene	<	0.001	mg/L							
1,2-Dibromoethane	<	0.001	mg/L							
1,2-Dichlorobenzene	<	0.001	mg/L							
1,2-Dichloroethane	<	0.001	mg/L							
1,2-Dichloropropane	<	0.001	mg/L							
1,3-Dichlorobenzene	<	0.001	mg/L							
1,4-Dichlorobenzene	<	0.001	mg/L							
Benzene	<	0.0005	mg/L							
Bromodichloromethane	<	0.001	mg/L							
Bromoform	<	0.001	mg/L							
Bromomethane	<	0.002	mg/L							
Carbon tetrachloride	<	0.001	mg/L							
Chlorobenzene	<	0.001	mg/L							
Chloroform	<	0.001	mg/L							
Chloromethane	<	0.001	mg/L							
cis-1,2-Dichloroethene	<	0.001	mg/L							
cis-1,3-Dichloropropene	<	0.001	mg/L							

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Volatile Organic Compounds by PT-GCMS, Batch R902597, Continued

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (R902597-BLK1), Continued				Analyzed: Sep-25-09						
Dibromochloromethane	<	0.001	mg/L							
Dibromomethane	<	0.001	mg/L							
Ethylbenzene	<	0.001	mg/L							
Methyl tert-butyl ether	<	0.001	mg/L							
Methylene chloride	<	0.003	mg/L							
Styrene	<	0.001	mg/L							
Tetrachloroethene	<	0.001	mg/L							
Toluene	<	0.0005	mg/L							
trans-1,2-Dichloroethene	<	0.001	mg/L							
trans-1,3-Dichloropropene	<	0.001	mg/L							
Trichloroethene	<	0.001	mg/L							
Trichlorofluoromethane	<	0.001	mg/L							
Vinyl chloride	<	0.001	mg/L							
Xylenes (total)	<	0.002	mg/L							
Surrogate: Toluene-d8	*0.0232*		*mg/L*	*0.0250*		*93*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0250*		*mg/L*	*0.0250*		*100*	*80-120*			
Surrogate: 1,4-Dichlorobenzene-d4	*0.0226*		*mg/L*	*0.0250*		*90*	*80-120*			
LCS (R902597-BS1)				Analyzed: Sep-25-09						
1,1,1-Trichloroethane	0.02	0.001	mg/L	0.0200		100	80-120			
1,1,2,2-Tetrachloroethane	0.02	0.001	mg/L	0.0200		100	80-120			
1,1,2-Trichloroethane	0.02	0.001	mg/L	0.0200		102	80-120			
1,1-Dichloroethane	0.02	0.001	mg/L	0.0200		99	80-120			
1,1-Dichloroethene	0.02	0.001	mg/L	0.0200		102	80-120			
1,2-Dibromoethane	0.02	0.001	mg/L	0.0200		102	80-120			
1,2-Dichlorobenzene	0.02	0.001	mg/L	0.0200		100	80-120			
1,2-Dichloroethane	0.02	0.001	mg/L	0.0200		97	80-120			
1,2-Dichloropropane	0.02	0.001	mg/L	0.0200		96	80-120			
1,3-Dichlorobenzene	0.02	0.001	mg/L	0.0200		100	80-120			
1,4-Dichlorobenzene	0.02	0.001	mg/L	0.0200		99	80-120			
Benzene	0.02	0.0005	mg/L	0.0200		99	80-120			
Bromodichloromethane	0.02	0.001	mg/L	0.0200		95	80-120			
Bromoform	0.02	0.001	mg/L	0.0200		101	80-120			
Bromomethane	0.02	0.002	mg/L	0.0200		101	70-130			
Carbon tetrachloride	0.02	0.001	mg/L	0.0200		101	80-120			
Chlorobenzene	0.02	0.001	mg/L	0.0200		99	80-120			
Chloroform	0.02	0.001	mg/L	0.0200		100	80-120			
Chloromethane	0.02	0.001	mg/L	0.0200		102	70-130			
cis-1,2-Dichloroethene	0.02	0.001	mg/L	0.0200		97	80-120			
cis-1,3-Dichloropropene	0.02	0.001	mg/L	0.0200		98	80-120			
Dibromochloromethane	0.02	0.001	mg/L	0.0200		103	80-120			
Dibromomethane	0.02	0.001	mg/L	0.0200		102	80-120			
Ethylbenzene	0.02	0.001	mg/L	0.0200		98	80-120			
m,p-Xylene	0.04	0.001	mg/L	0.0400		100	80-120			
Methyl tert-butyl ether	0.02	0.001	mg/L	0.0200		97	80-120			
Methylene chloride	0.02	0.003	mg/L	0.0200		99	80-120			
o-Xylene	0.02	0.001	mg/L	0.0200		99	80-120			
Styrene	0.02	0.001	mg/L	0.0200		98	80-120			
Tetrachloroethene	0.02	0.001	mg/L	0.0200		101	80-120			
Toluene	0.02	0.0005	mg/L	0.0200		100	80-120			
trans-1,2-Dichloroethene	0.02	0.001	mg/L	0.0200		100	80-120			
trans-1,3-Dichloropropene	0.02	0.001	mg/L	0.0200		98	80-120			
Trichloroethene	0.02	0.001	mg/L	0.0200		104	80-120			
Trichlorofluoromethane	0.02	0.001	mg/L	0.0200		91	70-130			
Vinyl chloride	0.02	0.001	mg/L	0.0200		96	70-130			
Surrogate: Toluene-d8	*0.0248*		*mg/L*	*0.0250*		*99*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0255*		*mg/L*	*0.0250*		*102*	*80-120*			
Surrogate: 1,4-Dichlorobenzene-d4	*0.0231*		*mg/L*	*0.0250*		*92*	*80-120*			
Benzene	0.03	0.0005	mg/L	0.0250		114	80-120			
Ethylbenzene	0.03	0.001	mg/L	0.0250		101	80-120			
m,p-Xylene	0.05	0.001	mg/L	0.0500		104	80-120			
o-Xylene	0.03	0.001	mg/L	0.0250		102	80-120			
Toluene	0.02	0.0005	mg/L	0.0250		100	80-120			

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9I0925
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Oct-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Volatile Organic Compounds by PT-GCMS, Batch R902597, Continued										
LCS (R902597-BS2), Continued				Analyzed: Sep-25-09						
Surrogate: Toluene-d8	*0.0243*		*mg/L*	*0.0250*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0261*		*mg/L*	*0.0250*		*104*	*80-120*			
Surrogate: 1,4-Dichlorobenzene-d4	*0.0247*		*mg/L*	*0.0250*		*99*	*80-120*			

CERTIFICATE OF ANALYSIS

CARO ANALYTICAL SERVICES

CLIENT	**Regional District of Central Okanagan**		
	1450 KLO Road		
	KELOWNA BC	TEL	(250) 763-4918
	V1W 3Z4	FAX	(250) 768-2260
ATTENTION	**Charlie Cameron**		

RECEIVED / TEMP	Dec-15-09 15:05 / 4.0 °C	**WORK ORDER #**	K9L0476
REPORTED	Dec-22-09	**PROJECT FILE**	Westside Landfill & Shannon Lake
COC #(s)	09586	**PROJECT NAME**	Sampling Via Golder

General Comments:

CARO Analytical Services employs methods which are based on those found in "Standard Methods for the Examination of Water and Wastewater", 21st Edition, 2005, published by the American Public Health Association (APHA); US EPA protocols found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846", 3rd Edition; and protocols published by the British Columbia Ministry of Environment (BCMOE).

Methods not described in these publications are conducted according to procedures accepted by appropriate regulatory agencies, and/or are done in accordance with recognized professional standards using accepted testing methodologies and quality control efforts except where otherwise agreed to by the client.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirity. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing.

- All solids results are reported on a dry weight basis unless otherwise noted

- Units: mg/kg = milligrams per kilogram, equivalent to parts per million (ppm)
  mg/L = milligrams per litre, equivalent to parts per million (ppm)
  ug/L = micrograms per litre, equivalent to parts per billion (ppb)
  ug/g = micrograms per gram, equivalent to parts per million (ppm)
  ug/m3 = micrograms per cubic meter of air

- "RDL" Reported detection limit
- "<" Less than reported detection limit
- "AO" Aesthetic objective
- "MAC" Maximum acceptable concentration (health-related guideline)
- "LAB" RMD = CARO - Richmond location, KEL = CARO - Kelowna location, SUB = Subcontracted

Please contact CARO if more information is needed.

CARO Analytical Services

Final Review Per: **Ed Hoppe, B.Sc, P.Chem**
Laboratory Manager

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters							
BH1 (K9L0476-01) Matrix: Water Sampled: Dec-15-09							
Alkalinity, Total as CaCO3	**1280**	1.0	mg/L	Dec-16-09	APHA 2320 B	KEL	
Chloride	**398**	2.50	mg/L	Dec-16-09	APHA 4110 B	KEL	
Conductivity (EC)	**3500**	5	uS/cm	Dec-16-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1630**	3	mg/L	Dec-20-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.96**	0.02	mg/L	Dec-16-09	APHA 4500-NH3 G	KEL	
Nitrogen, Nitrate as N	**0.78**	0.01	mg/L	Dec-16-09	APHA 4110 B	KEL	
pH	**7.06**	0.10	pH Units	Dec-16-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**2500**	5	mg/L	Dec-17-09	APHA 2540 C	KEL	
Sulfate	**81.1**	25.0	mg/L	Dec-16-09	APHA 4110 B	KEL	
BH2 (K9L0476-02) Matrix: Water Sampled: Dec-15-09							
Alkalinity, Total as CaCO3	**1570**	1.0	mg/L	Dec-16-09	APHA 2320 B	KEL	
Chloride	**268**	2.50	mg/L	Dec-16-09	APHA 4110 B	KEL	
Conductivity (EC)	**3320**	5	uS/cm	Dec-16-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1660**	3	mg/L	Dec-20-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.48**	0.02	mg/L	Dec-16-09	APHA 4500-NH3 G	KEL	
Nitrogen, Nitrate as N	**0.62**	0.01	mg/L	Dec-16-09	APHA 4110 B	KEL	
pH	**7.17**	0.10	pH Units	Dec-16-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**2350**	5	mg/L	Dec-17-09	APHA 2540 C	KEL	
Sulfate	**17.0**	1.0	mg/L	Dec-16-09	APHA 4110 B	KEL	
BH4 (K9L0476-03) Matrix: Water Sampled: Dec-15-09							
Alkalinity, Total as CaCO3	**832**	1.0	mg/L	Dec-16-09	APHA 2320 B	KEL	
Chloride	**333**	2.50	mg/L	Dec-16-09	APHA 4110 B	KEL	
Conductivity (EC)	**2650**	5	uS/cm	Dec-16-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**1160**	3	mg/L	Dec-20-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	**0.03**	0.02	mg/L	Dec-16-09	APHA 4500-NH3 G	KEL	
Nitrogen, Nitrate as N	**0.17**	0.01	mg/L	Dec-16-09	APHA 4110 B	KEL	
pH	**7.42**	0.10	pH Units	Dec-16-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**1740**	5	mg/L	Dec-17-09	APHA 2540 C	KEL	
Sulfate	**54.8**	25.0	mg/L	Dec-16-09	APHA 4110 B	KEL	
BH5 (K9L0476-04) Matrix: Water Sampled: Dec-15-09							
Alkalinity, Total as CaCO3	**255**	1.0	mg/L	Dec-16-09	APHA 2320 B	KEL	
Chloride	**47.5**	1.00	mg/L	Dec-16-09	APHA 4110 B	KEL	
Conductivity (EC)	**864**	5	uS/cm	Dec-16-09	APHA 2510 B	KEL	
Hardness, Total (Diss. as CaCO3)	**318**	3	mg/L	Dec-20-09	APHA 2340 B	RMD	
Nitrogen, Ammonia as N	<0.02	0.02	mg/L	Dec-16-09	APHA 4500-NH3 G	KEL	
Nitrogen, Nitrate as N	**8.14**	0.10	mg/L	Dec-16-09	APHA 4110 B	KEL	
pH	**7.75**	0.10	pH Units	Dec-16-09	APHA 4500-H+	KEL	
Solids, Total Dissolved	**528**	5	mg/L	Dec-17-09	APHA 2540 C	KEL	
Sulfate	**68.5**	10.0	mg/L	Dec-16-09	APHA 4110 B	KEL	
SLMHP (K9L0476-05) Matrix: Water Sampled: Dec-15-09							
Alkalinity, Total as CaCO3	**344**	1.0	mg/L	Dec-16-09	APHA 2320 B	KEL	
Chloride	**51.4**	1.00	mg/L	Dec-16-09	APHA 4110 B	KEL	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

General Parameters, Continued

SLMHP (K9L0476-05) Matrix: Water Sampled: Dec-15-09, Continued

Conductivity (EC)	**873**	5	uS/cm	Dec-16-09	APHA 2510 B	KEL
Hardness, Total (Diss. as CaCO3)	**339**	3	mg/L	Dec-20-09	APHA 2340 B	RMD
Nitrogen, Ammonia as N	<0.02	0.02	mg/L	Dec-16-09	APHA 4500-NH3 G	KEL
Nitrogen, Nitrate as N	**1.48**	0.10	mg/L	Dec-16-09	APHA 4110 B	KEL
pH	**7.59**	0.10	pH Units	Dec-16-09	APHA 4500-H+	KEL
Solids, Total Dissolved	**502**	5	mg/L	Dec-17-09	APHA 2540 C	KEL
Sulfate	**22.5**	10.0	mg/L	Dec-16-09	APHA 4110 B	KEL

BH A (K9L0476-06) Matrix: Water Sampled: Dec-15-09

Alkalinity, Total as CaCO3	**1560**	1.0	mg/L	Dec-16-09	APHA 2320 B	KEL
Chloride	**251**	1.00	mg/L	Dec-16-09	APHA 4110 B	KEL
Conductivity (EC)	**3300**	5	uS/cm	Dec-16-09	APHA 2510 B	KEL
Hardness, Total (Diss. as CaCO3)	**1590**	3	mg/L	Dec-20-09	APHA 2340 B	RMD
Nitrogen, Ammonia as N	**0.47**	0.02	mg/L	Dec-16-09	APHA 4500-NH3 G	KEL
Nitrogen, Nitrate as N	**0.93**	0.01	mg/L	Dec-16-09	APHA 4110 B	KEL
pH	**7.23**	0.10	pH Units	Dec-16-09	APHA 4500-H+	KEL
Solids, Total Dissolved	**2270**	5	mg/L	Dec-17-09	APHA 2540 C	KEL
Sulfate	**16.3**	10.0	mg/L	Dec-16-09	APHA 4110 B	KEL

Dissolved Metals by ICPMS

BH1 (K9L0476-01) Matrix: Water Sampled: Dec-15-09

Aluminum	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Arsenic	**0.0054**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Barium	**0.0562**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Boron	**1.26**	0.020	mg/L	Dec-20-09	EPA 6020A	RMD
Cadmium	**0.00063**	0.00010	mg/L	Dec-20-09	EPA 6020A	RMD
Calcium	**328**	1.00	mg/L	Dec-20-09	EPA 6020A	RMD
Chromium	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Cobalt	**0.00425**	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD
Copper	**0.0131**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Iron	**0.758**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Lead	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Lithium	**0.0185**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Magnesium	**196**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Manganese	**5.99**	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Mercury	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD
Molybdenum	**0.0014**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Nickel	**0.0373**	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Phosphorus	<0.200	0.200	mg/L	Dec-20-09	EPA 6020A	RMD
Potassium	**5.27**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Dec-20-09	EPA 6020A	RMD
Silicon	**19.9**	2.00	mg/L	Dec-20-09	EPA 6020A	RMD

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Dissolved Metals by ICPMS, Continued

BH1 (K9L0476-01) Matrix: Water Sampled: Dec-15-09, Continued

Silver	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD
Sodium	**152**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Strontium	**2.84**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD
Uranium	**0.00197**	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD
Vanadium	<0.0100	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD
Zinc	**0.0107**	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD
Zirconium	**0.0051**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD

BH2 (K9L0476-02) Matrix: Water Sampled: Dec-15-09

Aluminum	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Arsenic	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Barium	**0.0148**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Boron	**0.440**	0.020	mg/L	Dec-20-09	EPA 6020A	RMD
Cadmium	**0.00035**	0.00010	mg/L	Dec-20-09	EPA 6020A	RMD
Calcium	**356**	1.00	mg/L	Dec-20-09	EPA 6020A	RMD
Chromium	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Cobalt	**0.00398**	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD
Copper	**0.0068**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Iron	**0.403**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Lead	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Lithium	**0.0209**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Magnesium	**188**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Manganese	**8.75**	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Mercury	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD
Molybdenum	**0.0047**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Nickel	**0.0395**	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Phosphorus	<0.200	0.200	mg/L	Dec-20-09	EPA 6020A	RMD
Potassium	**2.28**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Dec-20-09	EPA 6020A	RMD
Silicon	**21.5**	2.00	mg/L	Dec-20-09	EPA 6020A	RMD
Silver	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD
Sodium	**116**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Strontium	**3.39**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Dissolved Metals by ICPMS, Continued

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
BH2 (K9L0476-02) Matrix: Water Sampled: Dec-15-09, Continued							
Uranium	**0.00550**	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD	
Zinc	<0.0100	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD	
Zirconium	**0.0043**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
BH4 (K9L0476-03) Matrix: Water Sampled: Dec-15-09							
Aluminum	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Arsenic	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD	
Barium	**0.0541**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD	
Beryllium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Bismuth	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Boron	**0.349**	0.020	mg/L	Dec-20-09	EPA 6020A	RMD	
Cadmium	**0.00020**	0.00010	mg/L	Dec-20-09	EPA 6020A	RMD	
Calcium	**222**	1.00	mg/L	Dec-20-09	EPA 6020A	RMD	
Chromium	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD	
Cobalt	**0.00196**	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD	
Copper	**0.0054**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Iron	**0.179**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD	
Lead	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Lithium	**0.0350**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Magnesium	**147**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD	
Manganese	**0.556**	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD	
Molybdenum	**0.0055**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Nickel	**0.0362**	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD	
Phosphorus	<0.200	0.200	mg/L	Dec-20-09	EPA 6020A	RMD	
Potassium	**5.35**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Dec-20-09	EPA 6020A	RMD	
Silicon	**9.70**	2.00	mg/L	Dec-20-09	EPA 6020A	RMD	
Silver	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD	
Sodium	**87.3**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD	
Strontium	**2.68**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD	
Titanium	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD	
Uranium	**0.0400**	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD	
Zinc	<0.0100	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD	
Zirconium	**0.0022**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
BH5 (K9L0476-04) Matrix: Water Sampled: Dec-15-09							
Aluminum	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Dissolved Metals by ICPMS, Continued

BH5 (K9L0476-04) Matrix: Water Sampled: Dec-15-09, Continued

Arsenic	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Barium	**0.0161**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Boron	**0.054**	0.020	mg/L	Dec-20-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Dec-20-09	EPA 6020A	RMD
Calcium	**87.2**	1.00	mg/L	Dec-20-09	EPA 6020A	RMD
Chromium	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Cobalt	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD
Copper	**0.0016**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Iron	<0.100	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Lead	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Lithium	**0.0128**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Magnesium	**24.4**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Manganese	**0.0022**	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Mercury	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD
Molybdenum	**0.0091**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Nickel	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Phosphorus	<0.200	0.200	mg/L	Dec-20-09	EPA 6020A	RMD
Potassium	**2.56**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Dec-20-09	EPA 6020A	RMD
Silicon	**7.10**	2.00	mg/L	Dec-20-09	EPA 6020A	RMD
Silver	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD
Sodium	**39.1**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Strontium	**0.447**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD
Uranium	**0.00870**	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD
Vanadium	<0.0100	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD
Zinc	<0.0100	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD
Zirconium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD

SLMHP (K9L0476-05) Matrix: Water Sampled: Dec-15-09

Aluminum	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD
Antimony	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Arsenic	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Barium	**0.0092**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Beryllium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Bismuth	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Boron	**0.040**	0.020	mg/L	Dec-20-09	EPA 6020A	RMD
Cadmium	<0.00010	0.00010	mg/L	Dec-20-09	EPA 6020A	RMD
Calcium	**89.9**	1.00	mg/L	Dec-20-09	EPA 6020A	RMD
Chromium	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Dissolved Metals by ICPMS, Continued

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes
SLMHP (K9L0476-05) Matrix: Water Sampled: Dec-15-09, Continued							
Cobalt	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD	
Copper	**0.0199**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Iron	<0.100	0.100	mg/L	Dec-20-09	EPA 6020A	RMD	
Lead	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Lithium	**0.0150**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Magnesium	**27.9**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD	
Manganese	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD	
Molybdenum	**0.0031**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Nickel	**0.0024**	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD	
Phosphorus	<0.200	0.200	mg/L	Dec-20-09	EPA 6020A	RMD	
Potassium	**3.35**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD	
Selenium	<0.0030	0.0030	mg/L	Dec-20-09	EPA 6020A	RMD	
Silicon	**11.2**	2.00	mg/L	Dec-20-09	EPA 6020A	RMD	
Silver	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD	
Sodium	**37.0**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD	
Strontium	**0.671**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD	
Tellurium	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD	
Thallium	<0.00020	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD	
Thorium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Tin	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD	
Titanium	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD	
Uranium	**0.00652**	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD	
Vanadium	<0.0100	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD	
Zinc	**0.0233**	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD	
Zirconium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
BH A (K9L0476-06) Matrix: Water Sampled: Dec-15-09							
Aluminum	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD	
Antimony	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Arsenic	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD	
Barium	**0.0170**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD	
Beryllium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Bismuth	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Boron	**0.400**	0.020	mg/L	Dec-20-09	EPA 6020A	RMD	
Cadmium	<0.00010	0.00010	mg/L	Dec-20-09	EPA 6020A	RMD	
Calcium	**345**	1.00	mg/L	Dec-20-09	EPA 6020A	RMD	
Chromium	<0.0050	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD	
Cobalt	**0.00360**	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD	
Copper	**0.0044**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Iron	**0.365**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD	
Lead	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Lithium	**0.0202**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD	
Magnesium	**177**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD	
Manganese	**8.41**	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD	
Mercury	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Analyte	Result	RDL	Units	Analyzed	Method	Lab	Notes

Dissolved Metals by ICPMS, Continued

BH A (K9L0476-06) Matrix: Water Sampled: Dec-15-09, Continued

Molybdenum	**0.0046**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Nickel	**0.0388**	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Phosphorus	<0.200	0.200	mg/L	Dec-20-09	EPA 6020A	RMD
Potassium	**2.34**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Selenium	<0.0030	0.0030	mg/L	Dec-20-09	EPA 6020A	RMD
Silicon	**20.7**	2.00	mg/L	Dec-20-09	EPA 6020A	RMD
Silver	<0.00050	0.00050	mg/L	Dec-20-09	EPA 6020A	RMD
Sodium	**110**	0.100	mg/L	Dec-20-09	EPA 6020A	RMD
Strontium	**3.32**	0.0050	mg/L	Dec-20-09	EPA 6020A	RMD
Tellurium	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Thallium	<0.00020	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD
Thorium	<0.0010	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD
Tin	<0.0020	0.0020	mg/L	Dec-20-09	EPA 6020A	RMD
Titanium	<0.050	0.050	mg/L	Dec-20-09	EPA 6020A	RMD
Uranium	**0.00533**	0.00020	mg/L	Dec-20-09	EPA 6020A	RMD
Vanadium	<0.0100	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD
Zinc	<0.0100	0.0100	mg/L	Dec-20-09	EPA 6020A	RMD
Zirconium	**0.0042**	0.0010	mg/L	Dec-20-09	EPA 6020A	RMD

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

The following section reports quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with quality control samples that ensure your data is of the highest quality. Common QC types include:

- Method Blank (Blk): Laboratory reagent water is carried through sample preparation and analysis steps. Method Blanks indicate that results are free from contamination, i.e. not biased high from sources such as the sample container or the laboratory environment

- Duplicate (Dup): Preparation and analysis of a replicate aliquot of a sample. Duplicates provide a measure of the analytical method's precision, i.e. how reproducible a result is. Duplicates are only reported if they are associated with your sample data.

- Blank Spike (BS): A known amount of standard is carried through sample preparation and analysis steps. Blank Spikes, also known as laboratory control samples (LCS), are prepared from a different source of standard than used for the calibration. They ensure that the calibration is acceptable (i.e. not biased high or low) and also provide a measure of the analytical method's accuracy (i.e. closeness of the result to a target value).

- Standard Reference Material (SRM): A material of similar matrix to the samples, externally certified for the parameter(s) listed. Standard Reference Materials ensure that the preparation steps in the method are adequate to achieve acceptable recoveries of the parameter(s) tested for.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Dissolved Metals by ICPMS, Batch R903401

Blank (R903401-BLK1) — Analyzed: Dec-20-09

Aluminum	<	0.05	mg/L							
Antimony	<	0.001	mg/L							
Arsenic	<	0.005	mg/L							
Barium	<	0.005	mg/L							
Beryllium	<	0.001	mg/L							
Bismuth	<	0.001	mg/L							
Boron	<	0.02	mg/L							
Cadmium	<	0.0001	mg/L							
Calcium	<	1	mg/L							
Chromium	<	0.005	mg/L							
Cobalt	<	0.0005	mg/L							
Copper	<	0.001	mg/L							
Iron	<	0.1	mg/L							
Lead	<	0.001	mg/L							
Lithium	<	0.001	mg/L							
Magnesium	<	0.1	mg/L							
Manganese	<	0.002	mg/L							
Mercury	<	0.0005	mg/L							
Molybdenum	<	0.001	mg/L							
Nickel	<	0.002	mg/L							
Phosphorus	<	0.2	mg/L							
Potassium	<	0.1	mg/L							
Selenium	<	0.003	mg/L							
Silicon	<	2	mg/L							
Silver	<	0.0005	mg/L							
Sodium	<	0.1	mg/L							
Strontium	<	0.005	mg/L							
Tellurium	<	0.002	mg/L							
Thallium	<	0.0002	mg/L							
Thorium	<	0.001	mg/L							
Tin	<	0.002	mg/L							
Titanium	<	0.05	mg/L							
Uranium	<	0.0002	mg/L							
Vanadium	<	0.01	mg/L							
Zinc	<	0.01	mg/L							
Zirconium	<	0.001	mg/L							

Blank (R903401-BLK2) — Analyzed: Dec-20-09

Aluminum	<	0.05	mg/L							
Antimony	<	0.001	mg/L							
Arsenic	<	0.005	mg/L							
Barium	<	0.005	mg/L							

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Dissolved Metals by ICPMS, Batch R903401, Continued

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (R903401-BLK2), Continued				Analyzed: Dec-20-09						
Beryllium	<	0.001	mg/L							
Bismuth	<	0.001	mg/L							
Boron	<	0.02	mg/L							
Cadmium	<	0.0001	mg/L							
Calcium	<	1	mg/L							
Chromium	<	0.005	mg/L							
Cobalt	<	0.0005	mg/L							
Copper	<	0.001	mg/L							
Iron	<	0.1	mg/L							
Lead	<	0.001	mg/L							
Lithium	<	0.001	mg/L							
Magnesium	<	0.1	mg/L							
Manganese	<	0.002	mg/L							
Mercury	<	0.0005	mg/L							
Molybdenum	<	0.001	mg/L							
Nickel	<	0.002	mg/L							
Phosphorus	<	0.2	mg/L							
Potassium	<	0.1	mg/L							
Selenium	<	0.003	mg/L							
Silicon	<	2	mg/L							
Silver	<	0.0005	mg/L							
Sodium	<	0.1	mg/L							
Strontium	<	0.005	mg/L							
Tellurium	<	0.002	mg/L							
Thallium	<	0.0002	mg/L							
Thorium	<	0.001	mg/L							
Tin	<	0.002	mg/L							
Titanium	<	0.05	mg/L							
Uranium	<	0.0002	mg/L							
Vanadium	<	0.01	mg/L							
Zinc	<	0.01	mg/L							
Zirconium	<	0.001	mg/L							
Duplicate (R903401-DUP1)		**Source: K9L0476-05**		Analyzed: Dec-20-09						
Aluminum	<	0.05	mg/L		<				20	
Antimony	<	0.001	mg/L		<				20	
Arsenic	<	0.005	mg/L		<				20	
Barium	0.01	0.005	mg/L		0.009				20	
Beryllium	<	0.001	mg/L		<				20	
Bismuth	<	0.001	mg/L		<				20	
Boron	0.05	0.02	mg/L		0.04				20	
Cadmium	<	0.0001	mg/L		<				20	
Calcium	95	1	mg/L		90			5	20	
Chromium	<	0.005	mg/L		<				20	
Cobalt	<	0.0005	mg/L		<				20	
Copper	0.02	0.001	mg/L		0.02			4	20	
Iron	<	0.1	mg/L		<				20	
Lead	<	0.001	mg/L		<				20	
Lithium	0.02	0.001	mg/L		0.02			15	20	
Magnesium	31	0.1	mg/L		28			11	20	
Manganese	<	0.002	mg/L		<				20	
Mercury	<	0.0005	mg/L		<				20	
Molybdenum	0.003	0.001	mg/L		0.003				20	
Nickel	0.002	0.002	mg/L		0.002				20	
Phosphorus	<	0.2	mg/L		<				20	
Potassium	3	0.1	mg/L		3			2	20	
Selenium	<	0.003	mg/L		<				20	
Silicon	12	2	mg/L		11			8	20	
Silver	<	0.0005	mg/L		<				20	
Sodium	42	0.1	mg/L		37			13	20	
Strontium	0.7	0.005	mg/L		0.7			1	20	
Tellurium	<	0.002	mg/L		<				20	
Thallium	<	0.0002	mg/L		<				20	
Thorium	<	0.001	mg/L		<				20	

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dissolved Metals by ICPMS, Batch R903401, Continued										
Duplicate (R903401-DUP1), Continued		**Source: K9L0476-05**		Analyzed: Dec-20-09						
Tin	<	0.002	mg/L		<				20	
Titanium	<	0.05	mg/L		<				20	
Uranium	0.007	0.0002	mg/L		0.007			3	20	
Vanadium	<	0.01	mg/L		<				20	
Zinc	0.02	0.01	mg/L		0.02				20	
Zirconium	<	0.001	mg/L		<				20	
Matrix Spike (R903401-MS1)		**Source: K9L0476-06**		Analyzed: Dec-20-09						
Antimony	0.4	0.001	mg/L	0.400	<	101	80-120			
Arsenic	0.2	0.005	mg/L	0.200	<	100	80-120			
Barium	1.0	0.005	mg/L	1.00	0.02	101	70-130			
Beryllium	0.4	0.001	mg/L	0.400	<	101	70-130			
Cadmium	0.10	0.0001	mg/L	0.100	<	100	70-130			
Chromium	0.4	0.005	mg/L	0.400	<	99	70-130			
Cobalt	0.39	0.0005	mg/L	0.400	0.004	98	70-130			
Copper	0.4	0.001	mg/L	0.400	0.004	98	70-130			
Iron	2	0.1	mg/L	2.00	0.4	100	70-130			
Lead	0.2	0.001	mg/L	0.200	<	101	70-130			
Manganese	8.9	0.002	mg/L	0.400	8.4	128	70-130			
Nickel	0.4	0.002	mg/L	0.400	0.04	98	70-130			
Selenium	0.1	0.003	mg/L	0.100	<	103	80-120			
Silver	0.05	0.0005	mg/L	0.100	<	47	60-140			
Thallium	0.10	0.0002	mg/L	0.100	<	100	80-120			
Vanadium	0.2	0.01	mg/L	0.200	<	98	80-120			
Zinc	1.0	0.01	mg/L	1.00	<	101	70-130			
Reference (R903401-SRM1)				Analyzed: Dec-20-09						
Aluminum	0.2	0.05	mg/L	0.209		109	80-120			
Antimony	0.04	0.001	mg/L	0.0400		98	80-120			
Arsenic	0.4	0.005	mg/L	0.400		94	80-120			
Barium	3.0	0.005	mg/L	3.12		95	80-120			
Beryllium	0.2	0.001	mg/L	0.197		96	80-120			
Boron	1	0.02	mg/L	1.61		93	80-120			
Cadmium	0.19	0.0001	mg/L	0.200		96	80-120			
Calcium	7	1	mg/L	6.50		113	80-120			
Chromium	0.4	0.005	mg/L	0.401		97	80-120			
Cobalt	0.12	0.0005	mg/L	0.119		98	80-120			
Copper	0.8	0.001	mg/L	0.781		98	80-120			
Iron	1	0.1	mg/L	1.17		95	80-120			
Lead	0.1	0.001	mg/L	0.102		104	80-120			
Lithium	0.1	0.001	mg/L	0.0960		104	80-120			
Magnesium	7	0.1	mg/L	6.11		113	80-120			
Manganese	0.3	0.002	mg/L	0.318		99	80-120			
Molybdenum	0.4	0.001	mg/L	0.387		103	80-120			
Nickel	0.8	0.002	mg/L	0.789		99	80-120			
Phosphorus	0.4	0.2	mg/L	0.448		97	70-130			
Potassium	3	0.1	mg/L	2.84		91	80-120			
Selenium	0.03	0.003	mg/L	0.0300		102	80-120			
Sodium	16	0.1	mg/L	17.4		89	80-120			
Strontium	0.9	0.005	mg/L	0.979		97	80-120			
Thallium	0.04	0.0002	mg/L	0.0350		112	80-120			
Uranium	0.21	0.0002	mg/L	0.244		86	60-140			
Vanadium	0.7	0.01	mg/L	0.798		93	80-120			
Zinc	0.8	0.01	mg/L	0.800		98	80-120			
Reference (R903401-SRM2)				Analyzed: Dec-20-09						
Aluminum	0.2	0.05	mg/L	0.209		101	80-120			
Antimony	0.04	0.001	mg/L	0.0400		94	80-120			
Arsenic	0.4	0.005	mg/L	0.400		89	80-120			
Barium	2.8	0.005	mg/L	3.12		91	80-120			
Beryllium	0.2	0.001	mg/L	0.197		88	80-120			
Boron	1	0.02	mg/L	1.61		83	80-120			
Cadmium	0.19	0.0001	mg/L	0.200		95	80-120			

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dissolved Metals by ICPMS, Batch R903401, Continued										
Reference (R903401-SRM2), Continued				Analyzed: Dec-20-09						
Calcium	7	1	mg/L	6.50		103	80-120			
Chromium	0.4	0.005	mg/L	0.401		93	80-120			
Cobalt	0.11	0.0005	mg/L	0.119		96	80-120			
Copper	0.7	0.001	mg/L	0.781		93	80-120			
Iron	1	0.1	mg/L	1.17		91	80-120			
Lead	0.1	0.001	mg/L	0.102		99	80-120			
Lithium	0.09	0.001	mg/L	0.0960		97	80-120			
Magnesium	6	0.1	mg/L	6.11		101	80-120			
Manganese	0.3	0.002	mg/L	0.318		94	80-120			
Molybdenum	0.4	0.001	mg/L	0.387		101	80-120			
Nickel	0.8	0.002	mg/L	0.789		97	80-120			
Phosphorus	0.4	0.2	mg/L	0.448		90	70-130			
Potassium	2	0.1	mg/L	2.84		86	80-120			
Selenium	0.03	0.003	mg/L	0.0300		100	80-120			
Sodium	14	0.1	mg/L	17.4		80	80-120			
Strontium	0.9	0.005	mg/L	0.979		95	80-120			
Thallium	0.04	0.0002	mg/L	0.0350		111	80-120			
Uranium	0.20	0.0002	mg/L	0.244		84	60-140			
Vanadium	0.7	0.01	mg/L	0.798		91	80-120			
Zinc	0.7	0.01	mg/L	0.800		93	80-120			
General Parameters, Batch K904763										
Blank (K904763-BLK1)				Analyzed: Dec-15-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
Blank (K904763-BLK2)				Analyzed: Dec-15-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
Blank (K904763-BLK3)				Analyzed: Dec-15-09						
Nitrogen, Ammonia as N	<	0.02	mg/L							
LCS (K904763-BS1)				Analyzed: Dec-15-09						
Nitrogen, Ammonia as N	9.98	0.20	mg/L	10.0		100	80-120			
LCS (K904763-BS2)				Analyzed: Dec-15-09						
Nitrogen, Ammonia as N	10.0	0.20	mg/L	10.0		100	80-120			
LCS (K904763-BS3)				Analyzed: Dec-15-09						
Nitrogen, Ammonia as N	10.3	0.20	mg/L	10.0		103	80-120			
Duplicate (K904763-DUP1)		**Source: K9L0476-01**		Analyzed: Dec-15-09						
Nitrogen, Ammonia as N	0.96	0.02	mg/L		0.96			0.7	20	
General Parameters, Batch K904783										
Blank (K904783-BLK1)				Analyzed: Dec-17-09						
Solids, Total Dissolved	<	5	mg/L							
Blank (K904783-BLK2)				Analyzed: Dec-17-09						
Solids, Total Dissolved	<	5	mg/L							
Duplicate (K904783-DUP1)		**Source: K9L0476-04**		Analyzed: Dec-17-09						
Solids, Total Dissolved	533	5	mg/L		528			0.9	20	
Reference (K904783-SRM1)				Analyzed: Dec-17-09						
Solids, Total Dissolved	214	5	mg/L	240		89	85-115			
Reference (K904783-SRM2)				Analyzed: Dec-17-09						
Solids, Total Dissolved	224	5	mg/L	240		93	85-115			

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CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K904785										
Blank (K904785-BLK1)				Analyzed: Dec-16-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K904785-BLK2)				Analyzed: Dec-16-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K904785-BLK3)				Analyzed: Dec-16-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K904785-BLK4)				Analyzed: Dec-16-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
Blank (K904785-BLK5)				Analyzed: Dec-16-09						
Chloride	<	0.10	mg/L							
Nitrogen, Nitrate as N	<	0.01	mg/L							
Sulfate	<	1.0	mg/L							
LCS (K904785-BS1)				Analyzed: Dec-16-09						
Chloride	3.98	0.10	mg/L	4.00		100	85-115			
Nitrogen, Nitrate as N	4.28	0.01	mg/L	4.00		107	85-115			
Sulfate	4.0	1.0	mg/L	4.00		101	85-115			
LCS (K904785-BS2)				Analyzed: Dec-16-09						
Chloride	4.03	0.10	mg/L	4.00		101	85-115			
Nitrogen, Nitrate as N	4.12	0.01	mg/L	4.00		103	85-115			
Sulfate	4.0	1.0	mg/L	4.00		99	85-115			
LCS (K904785-BS3)				Analyzed: Dec-16-09						
Chloride	3.98	0.10	mg/L	4.00		100	85-115			
Nitrogen, Nitrate as N	3.99	0.01	mg/L	4.00		100	85-115			
Sulfate	4.0	1.0	mg/L	4.00		100	85-115			
LCS (K904785-BS4)				Analyzed: Dec-16-09						
Chloride	4.10	0.10	mg/L	4.00		102	85-115			
Nitrogen, Nitrate as N	3.85	0.01	mg/L	4.00		96	85-115			
Sulfate	4.0	1.0	mg/L	4.00		100	85-115			
LCS (K904785-BS5)				Analyzed: Dec-16-09						
Chloride	4.07	0.10	mg/L	4.00		102	85-115			
Nitrogen, Nitrate as N	4.09	0.01	mg/L	4.00		102	85-115			
Sulfate	4.0	1.0	mg/L	4.00		100	85-115			
General Parameters, Batch K904787										
Blank (K904787-BLK1)				Analyzed: Dec-16-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
pH	<	0.10	pH Units							
Blank (K904787-BLK2)				Analyzed: Dec-16-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
pH	<	0.10	pH Units							

QUALITY CONTROL DATA

CARO ANALYTICAL SERVICES

CLIENT	Regional District of Central Okanagan	**WORK ORDER #**	K9L0476
PROJECT FILE	Westside Landfill & Shannon Lake	**REPORTED**	Dec-22-09

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Parameters, Batch K904787, Continued										
Blank (K904787-BLK3)				Analyzed: Dec-16-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
pH	<	0.10	pH Units							
Blank (K904787-BLK4)				Analyzed: Dec-16-09						
Alkalinity, Total as CaCO3	<	1.0	mg/L							
Conductivity (EC)	<	5	uS/cm							
pH	<	0.10	pH Units							
LCS (K904787-BS1)				Analyzed: Dec-16-09						
Alkalinity, Total as CaCO3	103	1.0	mg/L	100		103	85-115			
LCS (K904787-BS2)				Analyzed: Dec-16-09						
Alkalinity, Total as CaCO3	102	1.0	mg/L	100		102	85-115			
LCS (K904787-BS3)				Analyzed: Dec-16-09						
Alkalinity, Total as CaCO3	101	1.0	mg/L	100		101	85-115			
LCS (K904787-BS4)				Analyzed: Dec-16-09						
Alkalinity, Total as CaCO3	100	1.0	mg/L	100		100	85-115			
LCS (K904787-BS5)				Analyzed: Dec-16-09						
Conductivity (EC)	1400	5	uS/cm	1410		99	95-105			
LCS (K904787-BS6)				Analyzed: Dec-16-09						
Conductivity (EC)	1400	5	uS/cm	1410		99	95-105			
LCS (K904787-BS7)				Analyzed: Dec-16-09						
Conductivity (EC)	1390	5	uS/cm	1410		99	95-105			
LCS (K904787-BS8)				Analyzed: Dec-16-09						
Conductivity (EC)	1380	5	uS/cm	1410		98	95-105			
Duplicate (K904787-DUP2)	**Source: K9L0476-06**			Analyzed: Dec-16-09						
Alkalinity, Total as CaCO3	1550	1.0	mg/L		1560			0.5	15	
Conductivity (EC)	3330	5	uS/cm		3300			0.9	10	
pH	7.25	0.10	pH Units		7.23			0.3	5	
Reference (K904787-SRM1)				Analyzed: Dec-16-09						
pH	7.02	0.10	pH Units	7.00		100	98-102			
Reference (K904787-SRM2)				Analyzed: Dec-16-09						
pH	6.98	0.10	pH Units	7.00		100	98-102			
Reference (K904787-SRM3)				Analyzed: Dec-16-09						
pH	7.00	0.10	pH Units	7.00		100	98-102			
Reference (K904787-SRM4)				Analyzed: Dec-16-09						
pH	7.01	0.10	pH Units	7.00		100	98-102			

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