



MORRISON HERSHFIELD

Resort Municipality of Whistler Landfill Annual Monitoring Report – 2017

Whistler, BC

Presented to:

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Report No. **1801536.00**

April 2018

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1. INTRODUCTION

This annual report incorporates landfill monitoring data collected in 2017. The Resort Municipality of Whistler (RMOW) former landfill site is located approximately 8 km west of Whistler Village and is accessed off Highway 99 on Cheakamus Lake Road. The location of the site is illustrated in Figure 1.

The Whistler landfill opened in 1977 and initially accepted residential, industrial, commercial and institutional waste. This continued until the landfill's operating permit was amended in 1988 to also accept construction and demolition waste. The landfill site was closed in October, 2005, to accommodate plans to use the area east of the site as the location of the Athletes' Village for the 2010 Winter Olympic Games. Between 1977 and 2005 approximately 350,000 tonnes of waste was disposed of at the Whistler Landfill (CH2M Hill, 2008a).

Construction of residential and commercial buildings in the area commenced in 2007 following the installation of a cover system and landfill gas (LFG) collection system in 2006.

Morrison Hershfield was retained by RMOW to complete the annual environmental monitoring and fulfill reporting requirements as set out in Section 3.31 of the 2005 Whistler Landfill Operational Certificate (MR-04693) and the Whistler Landfill Closure Plan (CH2M Hill, 2006a).

This current report documents the 2017 monitoring program and presents a summary of its findings.

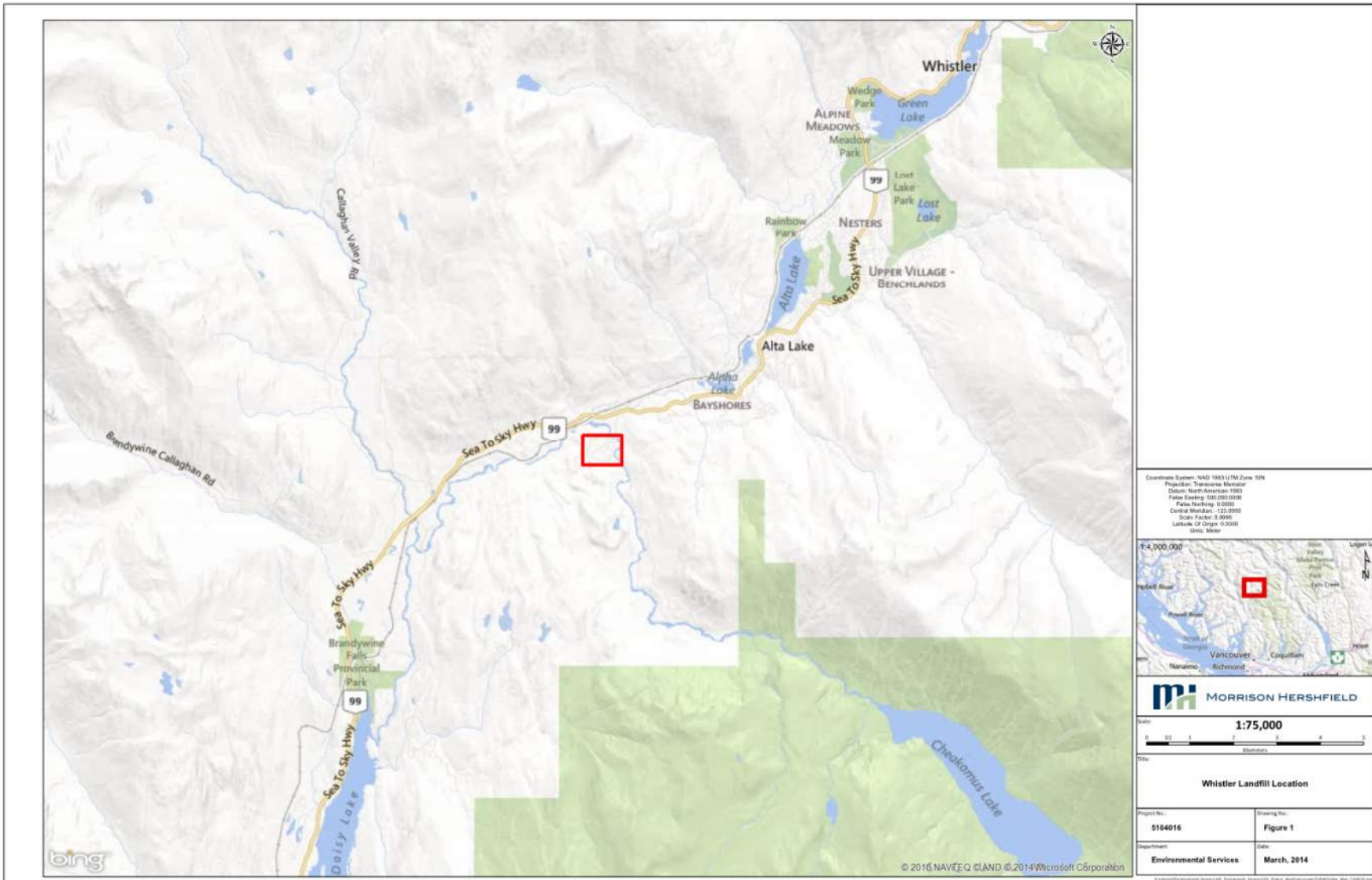


Figure 1: Former Whistler Landfill Location

1.1 Program Objectives

The overall objective of the Whistler landfill monitoring program is to help ensure and confirm that the closed landfill is not causing impacts to the surrounding environment. Three distinct facets of the former landfill site were assessed: on-site surface water, groundwater and migration of landfill gas (LFG).

The objectives of the Surface Water and Groundwater Monitoring Program are as follows:

- Determine if the landfill is negatively affecting local groundwater and surface water quality; and
- Apply corrective measures as necessary to minimize landfill effects on groundwater and surface water.

The objectives of the LFG monitoring program are as follows:

- Monitor levels of LFG generation;
- Assess the overall collection performance of the Landfill Gas Collection System (LFGCS)
- Identify the composition of LFG within the soil at monitoring probe locations; and
- Adjust LFGCS as necessary based on monitoring data results to prevent off-site gas migration.

As outlined in the Closure Plan (CH2M Hill, 2006a), the monitoring program was to be re-evaluated following the completion of monitoring over a 2-year period. This evaluation occurred in 2011. Subsequent monitoring reports, including this one, incorporate the MOE recommendations that were made in 2012. Specific monitoring requirements are outlined in Section 3.

1.2 Report Purpose

The purpose of this report is to address the reporting requirements of the facility's Landfill Operational Certificate (MR-04692) and the following requirements included in the Whistler Landfill Closure Plan:

- Annual reporting of monitoring data collected (2017); and
- Summary of maintenance activities that were completed on site in 2017, as well as any planned activities in 2018.

2. SITE DESCRIPTION

2.1 Landfill

The former landfill contains three distinct cells that were developed at different times over its lifespan.

- The northeast cell commenced in 1977 and contains residential waste in addition to industrial, commercial and institutional (ICI) waste. This material is not contained in a lined cell and relies on natural attenuation, coupled with a perimeter collection system, to manage leachate.
- Operations within the southwest cell began in 1988. Only construction and demolition (C & D) waste was accepted within this cell. This cell also relies on natural attenuation and a perimeter collection system to manage leachate.
- A central cell was developed in 1988 between the northeast and southwest cells for residential and ICI waste. This area was developed with a high-density polyethylene (HDPE) liner and an engineered leachate collection system.

In addition to the three cells, a biosolids storage area was installed at the south end of the landfill, covering a portion of the old southwest cell. Based on CH2M Hill (2006a) preliminary survey information from 2005, there was an estimated 6,000 m³ of biosolids stockpiled there.

2.2 Hydrological Conditions

The former landfill site is located within the Cheakamus River watershed. The Cheakamus River itself is located approximately 300 metres north of the waste mass and flows along the eastern boundary of the Athletes' Village (CH2M Hill, 2006a). The surface water features are concentrated mainly to the perimeter of the site, which is due to a combination of the natural and constructed topography of the area.

2.3 Geological Conditions

The following description of geological conditions associated with the site is described by CH2M Hill (2008a).

In general, the site topography slopes from south to north. As described in the Whistler Landfill Closure Plan, within areas on the site and within adjacent lands, aggregate extraction activities have removed much of the natural overburden materials for use as industrial aggregates and replaced them with imported fill materials. As a result, the present ground surface associated with the landfill has likely been altered by industrial activities. As part of historical aggregate extraction activities conducted at the site, much of the natural overburden materials had been removed from the area and replaced with imported fill, resulting in a disturbance of the natural topography of the site. Exposed bedrock surface, characterized by glaciated surfaces and steep inclines, are present throughout the site. Areas between the exposed bedrock are infilled by coarse and medium grain sediments.

Based on the results of the borehole investigation conducted by CH2M Hill in January 2006, the top layer of the site stratigraphy is composed of sand, gravel, cobbles, and boulders (fill material), followed by a gravel-sand layer. The subsurface includes a poorly graded fine sand layer with some silt, followed by still sandy silt located above the bedrock (green basalt) (CH2M Hill, 2006a).

Overburden at the site was generally found to be consistent across the advanced boreholes and is characterized by progressively finer particle size of the sediments with increasing depth. Overburden thickness is highly variable, ranging from 0 to greater than 21 m. The overburden is consistent with fluvial or near-shore lacustrine deposition environments.

2.4 Hydrogeological Conditions

The following description of hydrogeological conditions associated with the site is described by CH2M Hill (2006a) as follows:

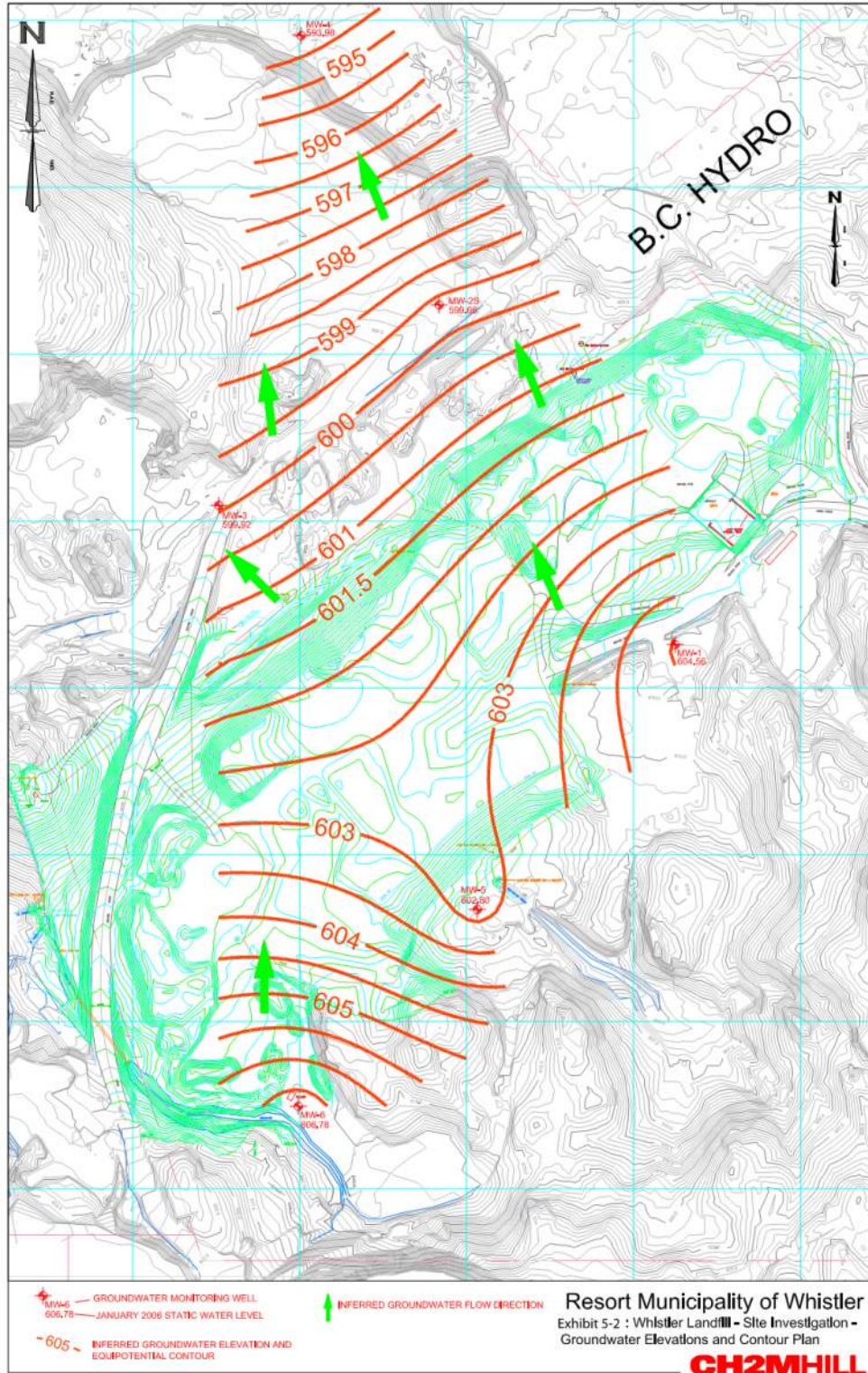
A single unconfined aquifer is within the overburden on the site. The saturated zone in most locations extends from the bedrock surface at depth to within less than one metre of the ground surface. Bedrock in the area was found to be relatively dry and presented no visual indication of water bearing fractures. Groundwater flow is generally in a south to north direction, consistent with the surface topography.

Interpreted groundwater flow at the site is illustrated in Figure 2 (from CH2M Hill, 2006a).

2.5 Climate

The long-term average climatic conditions (1981 – 2010) recorded at the Whistler meteorological station (approximately 8 km from the site) indicate the daily average annual temperature in the area is 6.7°C, and the mean annual precipitation is 1227.7 mm per year. The precipitation can be further divided into an average of 855.9 mm of rainfall, and 418.7 cm of snowfall.

Figure 2: Groundwater Elevations and Flow Pattern at the Former Whistler Landfill Site (from CH2M Hill, 2006a)



3. MONITORING REQUIREMENTS

The following documents form the basis of the post-closure monitoring program and associated requirements, including parameters to be monitored. They are frequently referenced throughout this report.

- *Whistler Landfill Closure Plan, Final Report (CH2M HILL, 2006a)*
- *Whistler Landfill Gas Pre-Design Memorandum (CH2M HILL, 2006b)*
- *Landfill Operational Certificate MR-04692 (B.C. Ministry of Environment, 2005)*
- *Mitigation and Safety Measures for Reduction of Landfill Gas Migration Risks (CH2M HILL, 2008a)*
- *Landfill Gas Collection System Operation and Maintenance Manual (CH2M HILL, 2008b)*
- *Monitoring and Reporting Requirements (CH2M HILL, 2008c)*
- *Resort Municipality of Whistler Landfill Annual Monitoring Report – 2011 & Revised Monitoring Program Recommendations (Morrison Hershfield, June 2012).*

Monitoring and reporting requirements established in the Closure Plan (CH2MHill 2008c) were amended in 2012 (Morrison Hershfield, 2012) based on a review of monitoring data.

4. METHODOLOGY

4.1 Overview of Sampling Locations, Schedule and Applicable Standards & Guidelines

The various leachate, groundwater, surface water and landfill gas (LFG) monitoring locations are shown in Figure 3. Groundwater monitoring locations are identified as MW (monitoring well) followed by a number or number / letter combination (e.g. MW-3, MW-2S), a letter is added when both a shallow (S) and a deep (D) well were installed within a single borehole. Surface water sample locations are identified as SFC (surface), followed by a number or number / letter combination (e.g. SFC-2, SFC-2B), where the letter is used to indicate a second surface water sample on the same watercourse. L1 is the single leachate collection point.

The LFG collection system consists of the following components:

- Thirteen vertical LFG extraction wells connected to horizontal LFG collection trenches covering the landfill cell footprint;
- A 200mm diameter header approximately 800m in length that carries the LFG from the vertical well and horizontal trench network to a flare station;
- A LFG abstraction plant on the north side of the property that burns the collected LFG in a candle-stick flare;
- Twenty-one monitoring probes (MP) located around the perimeter of the landfill cell; and
- Approximately 91 test ports within selected buildings and residences in close proximity to the landfill.

The landfill gas monitoring probes around the circumference of the landfill mass are identified as MP followed by a number (e.g. MP 14). Also identified in Figure 3 are several components of the LFG collection system, including: thirteen LFG extraction wells (labeled as “W” followed by a number [e.g. W11]), the flare station, and header valves. A new monitoring probe was installed in November 2012 to the west of MP17 (identified as MP17A). As of December 2012, sampling commenced at MP17A and was omitted at MP17.

As per the requirements outlined in CH2M Hill (2008c) and confirmed by the MOE in 2012, groundwater and surface water monitoring have been conducted quarterly. Quarterly monitoring is tracked and reported based on a calendar year.

Figure 3: Post-Closure Monitoring Sites at the Former Whistler Landfill

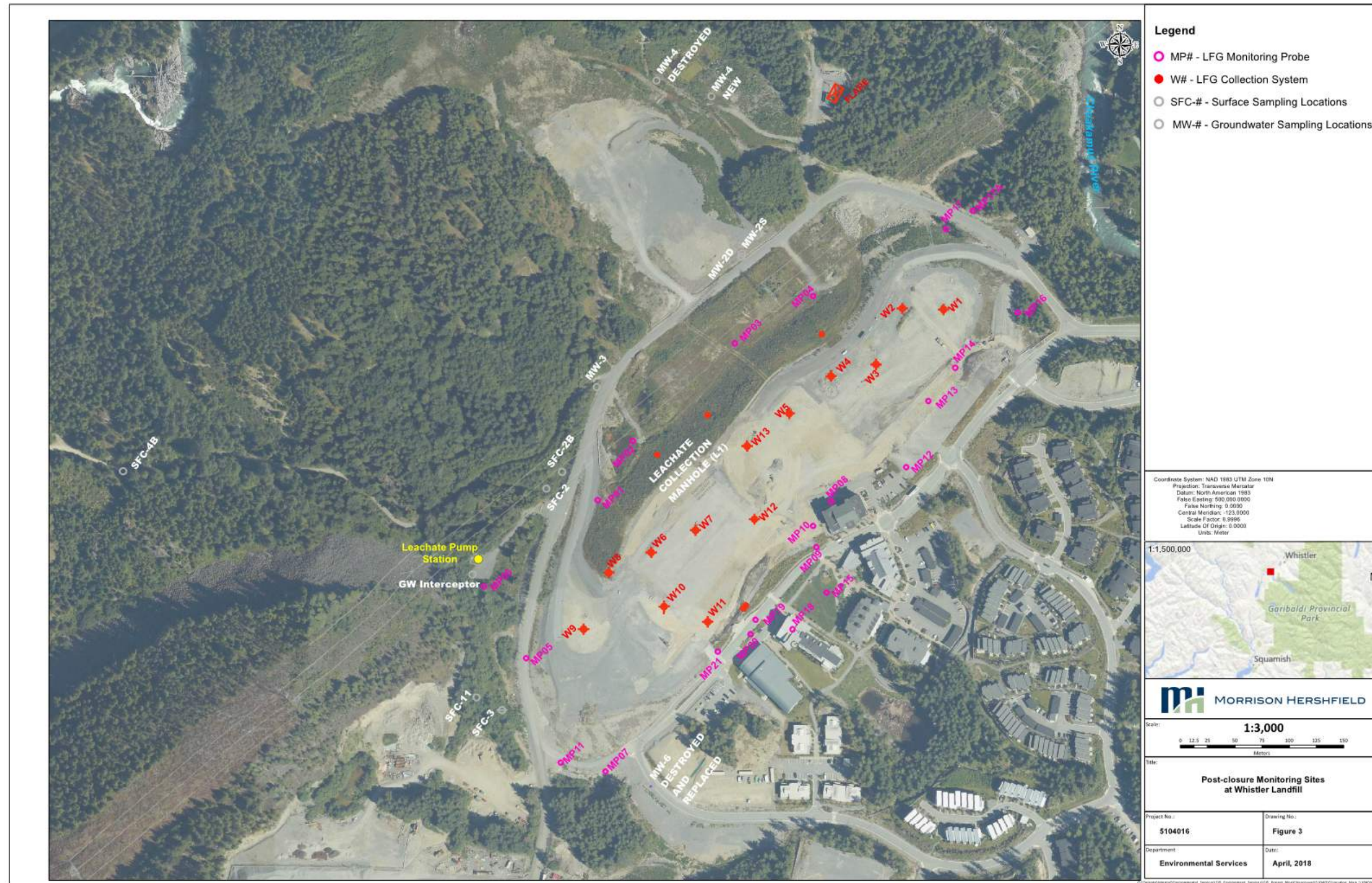


Table 1: 2017 Quarterly Monitoring Dates

Monitoring Dates 2017	
Quarter 1 (Q1 2017)	March 30, 2017
Quarter 2 (Q2 2017)	June 20 and June 22, 2017
Quarter 3 (Q3 2017)	September 13, 2017
Quarter 4 (Q4 2017)	December 20, 2017

The 2017 leachate, groundwater and surface water monitoring program was completed by Morrison Hershfield. The LFG monitoring program that has been in effect since 2009 has been conducted by Norseman Engineering Ltd. on a minimum monthly basis. During the winter months monitoring occurs on a weekly basis (November through April) when there is snow cover on the landfill or frozen ground (i.e. conditions that could facilitate subsurface LFG migration).

4.1.1 Leachate Monitoring

Leachate is captured and treated by the Whistler Wastewater Treatment Plant. For monitoring purposes, the leachate quality is tested as part of this monitoring program. The monitoring results help to determine when in the future leachate treatment will no longer be required.

A leachate collection point (Leachate Manhole) located on the down gradient side of the landfill mass (Figure 3) was sampled to provide an indicator of the elevated concentration of target parameters within the landfill cell. Leachate samples were obtained using a plastic pail rinsed three times with the leachate water.

A leachate sample was collected during first quarter sampling event. In addition to the sample for laboratory analysis, standard leachate field parameters were collected and measured during the sampling event. The parameters measured include: pH, temperature (°C), dissolved oxygen (mg/L), and conductivity (µS/cm). Field parameters were measured using an YSI model 556 multi-probe meter. Although scheduled to collect a sample during the third quarter, there was so little leachate in the manhole that a sample could not be obtained.

Sampling is also conducted at the Groundwater (GW) Interceptor, adjacent to the Leachate Pump Station to the west and north of the landfill mass (Figure 3). The GW Interceptor is located adjacent to the existing leachate pump station in the southwest area of the closed landfill. The interceptor consists of 24 metres of perforated HDPE pipe (60 cm diameter). A new leachate collection wet well and pump station were constructed in 2009 in close proximity to the GW Interceptor. Intercepted groundwater is piped to the new leachate pump station wet well, where it is pumped along with landfill leachate, to the RMOW Wastewater Treatment Plant (WWTP) for treatment.

The GW Interceptor is located downgradient from the unlined Construction and Demolition (C&D) waste cell and was (presumably) installed to minimize the potential for off-site impacts associated with groundwater influenced by the C&D waste cell.

Samples were obtained using a plastic pail rinsed three times with the liquid in the manhole. One sample was collected during all quarterly samples in 2017. The exception to this procedure was during the December 2017 sampling event, as there was maintenance activities occurring at this location. As a result the sample was collected directly from a pump prior to passing through the pump impellor. The pump had been pumping liquid from the GW Interceptor most of the day and the sample was collected in the late afternoon.

A summary of the leachate monitoring results in comparison to the applicable standards and guidelines are provided in Table 7 and Table 8. Complete laboratory results can be found in Appendix A.

4.1.2 Groundwater Monitoring

CH2M Hill originally installed six monitoring wells (MW-1 to MW-6), one of which (MW-2) was constructed with a shallow and a deep screen, for a total of seven groundwater sampling points. The monitoring wells were constructed with 50 mm (2") diameter new PVC pipe. Screen intervals were constructed with 50 mm (2") diameter #10 slot PVC screen. The depth and screen length of each well was selected in the field based on observations made during drilling. Bentonite surface seals were installed (as required) to prevent infiltration of surface water into the well (CH2M Hill, 2006a).

The groundwater monitoring locations are situated both up- and down-gradient of the landfill to monitor the potential migration of leachate, and to be able to separate potential groundwater impacts of residential and commercial development from impacts of the landfill. MW-6 is up gradient of the landfill mass and is used to represent the local background conditions for the area. All of the other wells are down gradient of the landfill footprint.

The installation of these wells was conducted prior to the extensive re-grading that occurred during construction of the Athlete's Village. During construction four of the existing wells were destroyed: MW-1, MW-4, MW-5 and MW-6. The four destroyed wells are indicated in Figure 3 with the monitoring well name followed by "destroyed" (i.e. MW-1 DESTROYED).

Three of the four destroyed monitoring wells (MW-4, MW-5, and MW-6) were replaced prior to 2010 sampling to prevent data gaps in the monitoring program. However, due to low groundwater levels since 2010, the replacement for MW-5 has since been omitted from the sampling program. Table 2 provides a summary of groundwater wells monitored in 2017.

An old and abandoned well located approximately 10 – 15 meters from the northwest corner of 1310 Cloudburst Drive, north of the existing MW 6, was assessed by MH during Q2. This well was likely installed in the mid-2000s by CH2MHill prior to construction of the athlete's village. The flat well cover inside the manhole was secure, however the bentonite clay around the well has heaved, encasing the well cap likely. This is likely caused by freeze – thaw process over time. This well should be properly decommissioned as per the *BC Water Sustainability Regulation*.

Table 2: 2017 Groundwater Monitoring Events and Locations

Site	Site Description	Q1	Q2	Q3	Q4
MW-2S and 2D	Immediately down gradient of the landfill footprint	✓	✓	✓	✓
MW-3	Down gradient of the landfill mass	✓	✓	✓	✓
MW-4	Down gradient of the landfill mass	✓	✓	✓	✓
MW-6 *	Up gradient of the landfill mass (background)			✓	✓

*Could not locate well during Q1 and Q2 sampling therefore not sampled.

Groundwater samples were collected using dedicated HDPE tubing and foot valves. The procedure for the collection of all groundwater samples follows that described in CH2M Hill (2008c). Laboratory analyses for all of the samples were performed by CARO Analytical Services in Richmond, BC. Appendix A provides a summary of the analytical results associated with groundwater quality monitoring. Appendix C provides a summary of the parameters that were analyzed, the detection method, and detection limit.

All groundwater samples collected for dissolved metals analysis were filtered and preserved in the field. In addition to the samples for laboratory analysis, field parameters were also collected using a YSI model 556 multi-probe meter (or similar). The static water level depth in each well prior to sample collection was also measured.

Applicable Standards & Guidelines

The regulatory framework that applies to this project for groundwater water quality include the provincial standard for landfill closure: Schedule 6, Column II (Generic Numerical Water Standards for Aquatic Life) of the B.C. Contaminated Sites Regulation. The standards assume a minimum 10 to 1 dilution factor is available prior to the groundwater reaching any water body that supports aquatic life. As outlined in section 9.2.1 of the Closure Plan, exceedance of any compliance criteria for a period of two consecutive sampling events at any one monitoring location will trigger contingency planning. .

As of November 1, 2017 the B.C. Contaminated Sites Regulation was amended. The amendments included changes to the water standards that are typically used in the annual monitoring of groundwater and surface water at the Whistler landfill. Because these changes came into effect in November 2017 i.e. the fourth quarter (Q4) of sampling, they have not been reflected in this report, but will be used in the presentation of and interpretation of 2018 results.

In addition to the comparison to the regulatory standards, the tables showing the groundwater results also include a comparison to the B.C. Working and Approved Water Quality Guidelines to provide MoE with additional information for year to year comparison. . These guidelines are more restrictive since they generally apply to receiving water conditions and not to groundwater within the landfill site. The guidelines provide concentrations to prevent detrimental effects in water bodies that support aquatic life. Unlike the B.C. Contaminated Sites regulation there is no dilution factor incorporated; thus the values represented in the BC Ambient Water Quality

guidelines are more stringent for many parameters. Therefore, while not directly applicable to monitoring locations at the landfill site, these guidelines provide a point of reference for assessing contaminant levels over time.

A summary of the groundwater quality results is provided in Section 5.1. Detailed laboratory results can be found in Appendix A.

4.1.3 Surface Water Monitoring

Table 3 provides a summary of the surface water sites sampled in 2016. Sample station SFC-11 is located cross-gradient from the landfill and the tributary extends southwest away from the landfill; therefore the watershed for this tributary does not include the landfill area (Figure 3). Sample station SFC-2B is located in a watercourse which originates in the wetland feature immediately adjacent to the leachate collection point. It is also located immediately down gradient of the lined ICI and Residential Waste Cell and the historic biosolids and wood chip storage area. SFC-2 is located approximately 10 m downstream of SFC-2B. The source of the water in SFC-2 is from a culvert extending from the Athlete’s Village that collects surface water runoff. SFC-3 is located in a perimeter watercourse. SFC-3 and SFC-11 are up gradient of the landfill and provide indicators of natural background surface water conditions.

Monitoring of the nearest receiving waterbody (Cheakamus River) is not incorporated within this monitoring program (as defined by the provincially-approved Landfill Closure Plan). Sampling results from the furthest down gradient surface water monitoring location, and the one nearest the Cheakamus River, at SFC-4B, provide the best indication of potential impacts to receiving water quality resulting from the site.

Table 3: 2017 Surface Water Monitoring Events and Locations

Site	Site Description	Q1	Q2	Q3	Q4
SFC-2	Down stream of landfill	✓	✓	✓	✓
SFC-2B	Immediately adjacent to the leachate collection point	✓	✓	Not enough water to sample.	✓
SFC-3	Located in a perimeter watercourse (background)	✓	✓	✓	✓
SFC-11	Cross gradient from the landfill (background)	✓	✓	✓	✓
SFC-4B	Furthest down gradient and the closest monitoring point to the Cheakamus River	✓	✓	✓	✓

Surface water samples were collected using the techniques outlined in CH2M Hill (2008c). Field parameters were also collected using a YSI model 556 multi-probe meter (or similar). As required, the surface water samples collected for total metal analyses were not filtered however they were preserved at time of collection in the field. Appendix B provides a summary of the

field data that was collected. Similar to the groundwater samples, all surface water samples were sent to CARO in Richmond, B.C. for analysis.

Applicable Standards & Guidelines

The regulatory framework that applies to this project for surface water quality is the same as for groundwater, the applicable standards are the Schedule 6, Column II (Generic Numerical Water Standards for Aquatic Life) of the B.C. Contaminated Sites Regulation (as stated previously in Section 4.1.2, the 2016 B.C. Contaminated Sites Regulations have been used for this report). As outlined in section 9.2.1 of the Closure Plan, exceedance of any compliance criteria for a period of two consecutive sampling events at any one monitoring location will trigger contingency planning.

Surface water results are also compared to the B.C. Working and Approved Water Quality Guidelines to provide MoE with additional information for year to year comparison, in the same manner as groundwater results. These guidelines are more restrictive since they generally apply to receiving water conditions and not to locations within the landfill site. The guidelines provide concentrations to prevent detrimental effects in water bodies that support aquatic life. Unlike the B.C. Contaminated Sites regulation there is no dilution factor incorporated; thus the values represented in the BC Ambient Water Quality guidelines are more stringent for many parameters. Therefore, while not directly applicable to monitoring locations at the landfill site, these guidelines provide a point of reference for assessing contaminant levels over time.

A summary of the surface water quality results is presented in Section 5.2. Appendix A provides a summary of the analytical results associated with surface water quality monitoring.

4.1.4 Landfill Gas Monitoring

Landfill gas monitoring was completed by Norseman Engineering Ltd. on a weekly (winter months) to monthly basis throughout the year. Monitoring at the building ports is conducted twice per year during months when there is snow pack, at least one month apart. Standard monitoring procedures were followed for LFG monitoring.

The following data has been collected:

- Methane content at the subsurface probes;
- Methane and oxygen contents, flow rate, and inlet suction at the flare station; and
- Valve position (percent open), methane content and suction at each of the extraction wells (monitored for assessing the operational efficiency of the LFG collection system).

Pressure at the wells is measured using 0 – 5” water column (w.c.) or 0 – 0.5” w.c. magnahelic pressure gauges. Methane content, as percent of the Lower Explosive Limit (LEL), is detected using a Gastech device, model NP204¹. Other parameters measured at the flare station are obtained from the programmable logic controller associated with the LFG collection system. The

¹ A concentration of 5% methane in the air is "the lower explosive limit" (LEL), and concentrations equal to or greater than the LEL are considered hazardous (BC MOE, 1996)

data gathered are important for assessing the overall function of the LFG collection system, particularly the concentration of methane present in the landfill for flaring and to determine if the gas is escaping into the atmosphere and/or migrating off-site.

As per Morrison Hershfield (2012), the frequency of LFG monitoring should increase from monthly or weekly to daily in the event of LFG collection system malfunction or maintenance requirements, or if detection of methane in excess of the trigger level (10% LEL) is observed. Morrison Hershfield (2012) also notes that, following detection of methane in excess of the trigger levels, monitoring frequency should be increased to daily at all of the monitoring probes and any buildings within 100 m of the MP. Monitoring at a daily frequency should continue until there are two consecutive days of undetectable methane content in the monitoring probes. If gas concentrations at the property boundaries remain above recommended trigger limits for more than 2 days, additional measures are outlined in the revised LFG monitoring program.

4.2 Quality Assurance and Quality Control

In addition to using an accredited laboratory, Quality Assurance/Quality Control (QA/QC) measures were applied to the monitoring program to determine the accuracy and precision of the field results and the laboratory testing procedures.

For each surface and groundwater sampling event a sample replicate and a travel blank were submitted for analysis. Replicate samples were also collected from one monitoring location each Quarter using the word “rep” as denoted in the sample ID. Travel blanks are used to confirm that the samples have not been contaminated during transportation from the site to the laboratory. The samples are transported in laboratory supplied coolers, remain closed, and are only reopened in the laboratory for analyses.

5. RESULTS AND DISCUSSION

Water quality monitoring at Whistler Landfill has included a broad suite of parameters, including the following groups of parameters:

- Dissolved & total metals
- Hardness
- Alkalinity
- Total Dissolved Solids
- Ammonia
- Dissolved Organic Carbon (DOC)
- Volatile Organic Compounds (VOCs)
- Chemical Oxygen Demand (COD)
- Extractable and Volatile Hydrocarbons (EPH & VH)
- BTEX
- Polycyclic Aromatic Hydrocarbons (PAHs)

There are a limited number of key parameters that have been reviewed as both landfill related *indicator* parameters and parameters of potential *concern*:

Indicator parameters are compounds that are indicative and reliable indicators of groundwater impact from waste disposal, but in of themselves may not be a compound of concern. For the purposes of this water quality review, the landfill-related indicator parameters assessed include:

- chloride,
- conductivity,
- hardness,
- sulfate, and
- iron and manganese.

Parameters of potential concern at landfill sites consist primarily of ammonia (which can be toxic to aquatic life if it reaches an aquatic receptor at high enough concentrations). Other parameters of concern, may include: presence of:

- ammonia
- hydrocarbons and/or volatile organic compounds, and
- possibly elevated concentration of heavy metals.

5.1 Groundwater

Monitoring locations up gradient provide a method to identify parameters that occur at natural or background elevated levels in the local groundwater environment. MW-6 is up gradient of the landfill and is used to represent the local background conditions for the area, whereas MW-4 is down gradient of the landfill and the closest groundwater monitoring point to the Cheakamus River.

A summary of the groundwater quality results in comparison to the applicable standards and guidelines are provided in Table 4 and Table 5. Detailed laboratory results can be found in Appendix A.

The following summarizes the groundwater exceedances of the standards and the guidelines for 2017.

BC Contaminated Sites Regulation, Schedule 6, Column II Aquatic Life

- No groundwater indicator parameters or parameters of potential concern exceeded the BC CSR standards in 2017.

BC Ambient Water Quality Guidelines

- Iron exceeded for MW-2S and MW-2D (Q1 to Q4), MW-3 (Q1 and Q4), MW-4 (Q1 to Q4) and in MW6 (Q3).
- Chloride exceeded guidelines for MW 6 in Q3.
- Fluoride exceeded the guidelines for MW-2S and MW-3 in Q3.
- Cobalt concentrations exceeded the guidelines at MW-2D and MW-4 each quarter.
- Cobalt concentrations exceeded the guidelines at MW-3 in Q1 and Q4.

5.1.1 Discussion

Indicators of leachate influenced groundwater quality appears at this time to be limited to locations immediately down gradient of the landfill footprint (MW-2S / MW-2D and MW-3), and further down gradient of the landfill (MW-4). A potential outlier is the chloride concentrations detected in MW-6 which are elevated compared to other down gradient wells. Since this well is up gradient of the landfill footprint, it is suspected that these concentrations are related to road salt application on the sidewalk and road immediately adjacent to the monitoring well, and not indicative of landfill leachate impacts.

5.2 Surface Water

Similarly to groundwater, there are surface water monitoring locations both up gradient and down gradient of the landfill. SFC-3 and SFC-11 are up gradient of the landfill and provide indicators of natural background surface water conditions. SFC-4B is the furthest down gradient and the closest monitoring point to the Cheakamus River.

A summary of the surface water monitoring results in comparison to the applicable standards and guidelines are provided in Table 6. Complete laboratory results can be found in Appendix A.

The following summarizes the surface water exceedances of the standards and the guidelines for 2017.

BC Contaminated Sites Regulation, Schedule 6, Column II Aquatic Life

- Sulfate concentrations at SFC-2B exceeded the standards in Q4.
- Cobalt was above the standards at SFC-2B in Q2 and Q4.
- Copper concentrations were above the respective standards at:
 - SFC-2 in Q1;
 - SFC-2B in Q1, Q2 and Q4;
 - SFC-3 in Q3,
 - SFC- 4B in Q1; and
 - SFC-11 in Q1.

BC Ambient Water Quality Guidelines

- Iron exceeded the guidelines at all surface sample locations (SFC-2, SFC-2B, SFC-3, SFC-4B and SFC-11).
- Fluoride exceeded the guidelines at SFC-2B in Q2 and Q4.
- Manganese concentrations at SFC-2 exceeded the guidelines in Q3, and at SFC-2B in Q2 and Q4.
- Aluminum concentrations exceeded the guidelines at SFC-2B for each sample collected in 2017 and SFC-11 in Q1.
- Chromium concentrations exceeded the guidelines at SFC-2B for each sample collected in 2017, and Q1 for SFC-3, SFC-4B and SFC-11.
- Nickel concentrations exceeded the guidelines at SFC-2B in Q2 and Q4.
- Zinc concentrations only slightly exceeded the guidelines for SFC-2B and SFC-3 in Q1.

5.2.1 Discussion

Hardness, conductivity, sulfate, iron and manganese (and aluminum) were consistently elevated at SFC-2, SFC-2B and SFC-3 relative to background concentrations and were regularly above BC Water Quality Guidelines. These locations appear to be influenced by landfill leachate.

At the sample location SFC-2B the concentrations of copper and cobalt were in exceedance of the standards for two sampling events in a row, which as per the Closure Plan indicates that contingency planning should be initiated. Prior to initiating contingency planning or measures, an assessment of the environmental risks was conducted, the findings of which are discussed here. There were three key areas that we looked at; the zone of influence, contribution of flow or magnitude of the issue, and habitat value within the watercourse sampled at SFC-2B.

Zone of Influence: At SFC-2B the exceedances of the standards did not report downstream at SFC-2, which is a sample location less than 30m downstream in a connected waterbody. Also, , the closest sampling location to the Cheakamus River, SFC-4B, did not show the same exceedances as those seen at SFC-2B for copper in Q2 or Q4, or cobalt in Q2 and Q4. For Q1, the copper standard was also exceeded in an upgradient drainage uninfluenced by landfill activities (SFC-11). Suspended solids levels recorded during the Q1 event at SFC-11 were unusually high (235 mg/L) and likely contributed to the higher (total) copper concentrations at both SFC-11 and the downgradient site at SFC-4B.

Flow: SFC-2B is a drainage feature that is often dry or only standing water during Q3 sampling events, throughout the year the flow contribution to the downstream environment in SFC-2 and SFC-4B is very minimal.

Habitat: SFC-2B is dense with vegetation, and as noted above has intermittent flow. Furthermore, there is a partial barrier to fish passage (gradient is steep with minimal flow) at the confluence with the downstream waterbody. Given these attributes, it is highly unlikely that it supports a fishery.

Based on these three elements (zone of influence, flow and habitat value), it was decided that immediate contingency planning is not warranted this year, however a trend analysis to observe water quality patterns should be completed in 2019 and used for future monitoring and contingency planning.

5.3 Leachate & Groundwater Interceptor

A summary of the leachate monitoring results in comparison to the applicable standards and guidelines are provided in Table 7 and Table 8. Complete laboratory results can be found in Appendix A.

The following summarizes the leachate exceedances of the standards and the guidelines for 2017.

BC Contaminated Sites Regulation, Schedule 6, Column II Aquatic Life

- Nitrate exceeded the standards in Q1 at the Leachate Manhole.

BC Ambient Water Quality Guidelines

- Iron exceeded the guidelines in the GW Interceptor for each sample collected in 2017.
- Ammonia exceeded the guidelines in Q3 for GW Interceptor.
- Fluoride exceeded the guidelines in Q4 for the GW Interceptor.
- Aluminum exceeded the guidelines in Q1 for GW Interceptor.
- Pyrene exceeded the guidelines at the GW Interceptor for each sample collected in 2017.

5.3.1 Discussion

The concentration of the indicator parameters were generally higher at the GW Interceptor than at the Leachate Manhole. Similarly, concentrations of the potential parameters of concern were also higher at the GW Interceptor than at the Leachate Manhole. Hydrocarbons and volatile organic compounds were not detected at the Leachate Manhole. However, several compounds were detected in the GW Interceptor, specifically acenaphthene, anthracene, fluoranthene, fluorine, pyrene and quinoline.

5.4 Landfill Gas

Testing was performed monthly during the months with no snow cover (May – October); however no sample was collected in July 2017. During the months with snow pack (January – March and November – December) sampling was completed weekly. A summary of the landfill gas monitoring results is provided in Table 9.

Trace amounts of methane were detected at MP # 16 on January 6 and 13, which is located near the access road to the flare near the new tennis court. No methane was detected at this location for the rest of 2017.

Trace amounts of methane were also recorded at M.P. #14 in late October. Remedial action was taken immediately in the form of raising the flare flow and adjusting the extraction wells to direct more vacuum to the problem area. This was successful and the methane reading reverted back to zero by the end of the testing day (October 27, 2017).

No methane was detected at any other monitoring points in 2017, meaning there was no off site landfill gas migration. Based on 2017 data, the operation and maintenance of the landfill gas system ensured that landfill gas is effectively extracted from the landfill area and lateral migration was prevented.

5.4.1 Maintenance Activities

Routine maintenance of monitoring probes were completed on as needed basis during monthly (and weekly) monitoring activities by Norseman Engineering.

- In February, there was a discrepancy with the reading of the oxygen level. However, in March the oxygen readings were much more realistic with no apparent issues, therefore the probe continued to be monitored to ensure readings were accurate.
- In April, the flare was on alarm mode when testing was performed on April 28. It appeared that the igniter was not lighting the flare gas. The RMOW staff were contacted and made aware of the problem.
- In May, a lack of vacuum to the southern wells was noticed during extraction well testing in early winter of 2017. This means that a blockage in the collection header was preventing free flow of landfill gas, although some extraction was still happening (a similar situation happened in June 2015). A 35 mm (1 ½”) flexible hose was obtained and was marked in 10’ sections. The operation center was contacted and was told that the flare would be turned off during pumping and to not send anyone to investigate. The

hose was pushed down the collection header to the 35 foot mark and the pump was activated. The amount of condensate pumped was approximately 341 liters, about 50% more than previously (in 2016). The heavy rains in the fall may be responsible for the increased volume of condensate extracted. A check of the wells after the flare was activated again confirmed that vacuum was restored to the southern wells.

- In June, it was noticed that the existing Rosemount flow meter at the flare was replaced with a new Yokogawa model.
- In August it was observed that the alarm history at the cabinet recorded some high amperage alarms and vibration alarms when running blower #301. This would indicate that there is a bearing problem in the electric motor or possibly in the blower itself. This problem should be rectified before the winter weather comes so that there is a spare blower in place.
- There were some oscillations in the flare vacuum on November 17, which means that accumulations of liquid condensate are starting to fill up a known low spot in the landfill gas collection header. The oscillations stopped by November 24. No further issues with blockage were observed and no additional maintenance was required.

6. RECOMMENDATIONS

6.1 Groundwater, Surface Water & Leachate

6.1.1 Monitoring

Data from the 2017 monitoring results are generally consistent with the results from previous years' monitoring. There were no new or extraordinary issues noted in the groundwater, surface water or leachate monitoring results.

Groundwater

- The trigger for contingency planning was not observed in the 2017 results (as described in section 4.1.2).
- Indicators of leachate influenced groundwater quality appears at this time to be limited to locations immediately down gradient of the landfill footprint (MW-2S / MW-2D and MW-3), and further down gradient of the landfill (MW-4).
- There were no new groundwater parameters in exceedance of the standards or guidelines, the parameters were consistent with observations from past years (i.e. iron, chloride, cobalt).
- Down gradient of the landfill there are no groundwater points of diversion / users.

Based on the elements noted above, continued monitoring of groundwater in 2018 is recommended and required as per the Closure Plan. No contingency planning is recommended based on the 2017 monitoring results.

Surface Water

- The trigger for contingency planning was met at SFC-2B for copper and cobalt, however the zone of influence was limited to only SFC-2B, the flow contribution to downstream waterbodies is minimal, and the habitat value at this location is low. As a result, the risk to the environment is considered low. At this time it is recommended that trend analysis for the water quality at all of the sampling sites (ground and surface water) is conducted in 2019 (to incorporate 2018 data). The trend analysis should demonstrate the directionality of water quality (improvements or decline) as well as look at leachate influence areas for each sample site. The data can then be used for future monitoring and contingency planning purposes.
- Surface water samples have exceeded the standards in the past for sulfate and metals, this was observed again in 2017 results.
- Hardness, conductivity, sulfate, iron and manganese (and aluminum) were consistently elevated at SFC-2, SFC-2B and SFC-3 relative to background concentrations; this is consistent with historic sampling events. These locations appears to be influenced by landfill leachate.
- Surface water sampling location SFC-4B is the nearest to the Cheakamus River, therefore this location provides the best indication of potential impacts to receiving water quality resulting from the site. All standards were met at this location except for (total) copper during the Q1 sampling event. Suspended solids levels recorded during the Q1

event at SFC-11 (an upgradient drainage uninfluenced by the landfill) were unusually high and likely contributed to the higher (total) copper concentrations at both SFC-11 and the downgradient site at SFC-4B.

In addition to the trend analysis outlined under bullet item one, continued surface water monitoring in 2018 is recommended and required as per the Closure Plan. **Leachate**

Continued monitoring is recommended in 2018 for leachate to assist in determining when in the future leachate treatment will no longer be required.

6.1.2 Maintenance

The following are recommended for 2018 maintenance activities:

- It is recommended that the abandoned well at the northwest corner of 1310 Cloudburst Drive be properly decommissioned as it can no longer be used.
- Monitoring well sampling devices (i.e. tubing and footvalves) should be replaced as needed in 2018.

6.2 Landfill Gas

6.2.1 Monitoring

Monitoring data from 2017 indicates that the overall performance of the LFG Collection System continues to operate effectively and prevent LFG migration. Continued monitoring for LFG as prescribed in the methodology (Morrison Hershfield 2012) is recommended.

6.2.2 Maintenance

The LFG Collection System was adjusted as necessary throughout the year (see section 5.4), and as a result there was a recommendation to ensure that both landfill gas blowers are inspected and brought into working order to provide back-up in the event of one blower failing. Having a functional back-up is of particular importance during the winter months to prevent landfill gas migration. Continued maintenance and operation for the LFG Collection System as prescribed in the methodology (Morrison Hershfield 2012) is recommended.

7. REFERENCES

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TABLE 4: 2017 GROUNDWATER QUALITY - GENERAL CHEMISTRY AND DISSOLVED METALS

SAMPLE LOCATION				MW2S					MW2D				MW3					MW4				MW6					
SAMPLE ID				MW2S	MW2S	MW2 Dup	MW2S	MW2S	MW2D	MW2D	MW2D	MW2D	MW3	MW3	MW3	MW3 Dup	MW3	MW4	MW4	MW4	MW4	MW6	MW6	MW6	MW6		
DATE SAMPLED				30-Mar-17	22-Jun-17	22-Jun-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	20-Dec-17						
MATRIX	UNITS	MRL	BCCSR-SR-Water FAL (mg/L)	BC Ambient Water Quality Guidelines (mg/L)	Q1	Q2	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Field Parameters																											
Field Conductivity	uS/cm	-	-	-	362.60	358	358	267.2	497.3	766.0	1181	774	497.3	126.80	156.3	94.7	94.7	1136	335.30	560.8	215.2	432.5				607	705.2
Temp	C	-	-	-	7.9	8.7	8.7	8.3	5	8.1	8.8	8.7	5	7.6	8.9	9.2	9.2	7.3	7.6	8.4	8.6	7.2				9	6.2
pH	-	-	-	-	6.96	6.18	6.18	6.83	6.82	6.67	6.58	6.5	6.82	6.57	7.36	6.59	6.59	6.52	6.94	6.7	6.76	6.66				5.62	5.72
Dissolved Oxygen	mg/L	-	-	-	35.10%	13.8	13.8	0.3	4.05	19.40%	30.2	1.6	4.05	29.40%	40.2	0.3	0.3	2.47	38.60%	17.5	2.2	3.36				4.5	7.29
ANIONS AND GENERAL CHEMISTRY																											
Alkalinity as CaCO3	mg/L	1	-	-	118	80.5	82.2	89.5	123	278	260	282	310	33	31	31.3	29.1	31.1	130	132	71.3	135				6.5	9
Bromide	mg/L	0.1	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	0.13	0.13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10				<0.10	<0.10
Chloride	mg/L	0.1	1500	150	18.8	6.91	6.53	9.4	10.7	35.8	45.4	53.7	39.8	10.5	10.2	11.1	8.32	22.7	17	23.6	17.1	17.7				206	119
Fluoride	mg/L	0.01	2	0.4	0.27	<0.10	<0.10	0.45	<0.10	0.3	<0.10	0.14	0.12	0.17	<0.10	0.32	0.53	<0.10	0.13	<0.10	0.38	0.16				0.24	0.16
Nitrite as N	mg/L	0.001	0.2	0.06	<0.005	<0.0050	<0.0050	0.0016	0.0059	<0.005	<0.0050	0.0016	0.0186	<0.005	<0.0050	0.0016	0.0026	0.0035	<0.005	<0.0050	0.0023	0.0047				0.0019	0.007
Ammonia as N	mg/L	0.005	pH dependent (1.31-18.4)	-	6.34	4.15	4.06	4.69	4.43	10.7	11.7	10.2	9.99	0.359	0.277	0.503	0.556	0.539	1.96	2.01	1.53	1.69				0.07	0.181
Nitrate+Nitrite as N	mg/L	0.005	400	-	0.011	0.013	0.016	0.0118	0.0409	0.02	0.021	0.0167	0.0924	0.264	0.669	0.0118	0.0119	0.149	0.017	0.022	0.0218	0.0239				0.209	0.324
Nitrogen Kjeldahl	mg/L	0.05	-	-	6.33	4.14	4.12	4.8	5.02	11.4	11.7	10.4	13	0.51	0.354	0.508	0.598	0.663	2.48	3.16	2.1	3.79				0.639	4.12
Nitrate as N	mg/L	0.01	400	32.8	0.0112	0.0128	0.0163	0.0102	0.035	0.0201	0.0209	0.0151	0.0738	0.264	0.669	0.0102	0.0093	0.146	0.0166	0.0218	0.0195	0.0192				0.207	0.316
Nitrogen	mg/L	0.05	-	-	6.34	4.15	4.13	4.81	5.06	11.4	11.7	10.4	13.1	0.77	1.02	0.52	0.61	0.812	2.49	3.19	2.12	3.82				0.848	4.44
Sulfate	mg/L	1	1000	128 - 429 (Hardness dependent)	79.9	54.8	53.5	63.6	74.8	196	266	200	207	31	25.7	19	19.5	32.7	44.9	58.5	25.4	43.8				114	118
Chemical Oxygen Demand	mg/L	5	-	-	19	15	12	27	<20	24	29	27	22	<5	<5	<20	<20	<20	12	19	<20	<20				23	51
Solids Suspended	mg/L	2	-	-	58	96.4	107	161	199	168	2180	852	712	7	160	17.6	16.6	3.8	572	459	206	1580				924	954
pH	pH units	0.01	-	9	6.89	6.75	6.71	7.15	6.51	6.9	6.9	7.24	6.56	6.38	6.52	6.81	6.78	6.21	6.69	6.71	6.98	6.32				5.98	5.73
Conductivity (EC)	uS/cm	2	-	-	470	291	279	340	397	1070	1050	1010	1050	181	151	129	120	223	374	424	234	351				929	764
Hardness (Diss. as CaCO3)	mg/L	0.5	-	-	138	88.2	87.4	104	141	397	422	390	383	44.9	41.8	40.4	40.3	54.6	144	147	77.2	123				157	123
DISSOLVED METALS																											
Aluminum	mg/L	0.005	-	(at pH ≥ 6.5) 0.1 - max. 0.05 - avg.	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.0050	<0.0050	<0.0050	0.04	0.016	0.0107	0.011	0.0205	0.007	<0.0050	<0.0050	<0.0050				0.104	0.0581
Antimony	mg/L	0.0001	0.2	0.02	<0.0001	<0.00010	<0.00010	<0.00020	<0.00020	<0.0001	<0.00010	<0.00020	<0.00020	<0.0001	<0.00010	<0.00020	<0.00020	<0.00020	<0.0001	<0.00010	<0.00020	<0.00020				<0.00020	<0.00020
Arsenic	mg/L	0.0005	0.05	0.005 (for total metals)	0.0075	0.00705	0.00713	0.00742	0.00809	0.0126	0.0151	0.014	0.0136	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	0.007	0.00817	0.00587	0.00553				<0.00050	<0.00050
Barium	mg/L	0.005	10	1	0.111	0.0665	0.0676	0.0679	0.103	0.033	0.0326	0.0307	0.0338	0.061	0.058	0.0531	0.0529	0.0713	0.195	0.189	0.08	0.142				0.0474	0.0333
Beryllium	mg/L	0.0001	0.053	-	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010				<0.00010	<0.00010
Bismuth	mg/L	0.0001	-	-	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010				<0.00010	<0.00010
Boron	mg/L	0.004	50	1.2	0.143	0.114	0.106	0.11	0.109	0.288	0.312	0.273	0.274	0.019	0.013	0.0206	0.0118	0.0099	0.078	0.066	0.0456	0.0569				0.0334	0.0212
Cadmium	mg/L	0.00001	Hardness dependent (0.0001 - 0.0006)	Hardness dependent (0.01 - 0.06)	<0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.00001	<0.000010	<0.000010	<0.000010	0.00027	0.000195	0.000094	0.000094	0.000337	0.00038	0.000203	0.000057	0.000249				0.000303	0.000119
Calcium	mg/L	0.2	-	-	43.9	28	27.7	32.3	44	132	141	129	127	13.7	13.2	12.3	12.2	16.6	46.4	47.9	25.4	40.1				51.9	41.1
Chromium	mg/L	0.0005	0.01	0.001	0.0007	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	<0.00050	<0.00050				<0.00050	<0.00050
Cobalt	mg/L	0.00005	0.04	0.004	0.00187	0.00123	0.00124	0.00181	0.0023	0.0133	0.0144	0.013	0.0125	0.008	0.0026	0.00133	0.0013	0.0104	0.0318	0.03	0.0165	0.0218				0.00395	0.00023
Copper	mg/L	0.0002	Hardness dependent (0.02 - 0.09)	0.094(H) + 2 (in µg/L) (for total metals)	<0.0002	<0.00020	<0.00020	0.00056	<0.00040	0.0004	<0.00020	<0.00040	0.00094	0.0055	0.00302	0.00175	0.00186	0.00394	0.0021	0.00112	<0.00040	0.00084				0.0032	0.00173
Iron	mg/L	0.01	-	0.35	39.4	26.8	26.8	33.5	47.6	56.2	60.8	59.9	57.7	0.651	0.028	0.058	0.051	0.562	44.7	49.8	27.7	32.4				1.72	<0.010
Lead	mg/L	0.0001	Hardness dependent (0.04 - 0.16)	0.003	<0.0001	<0.00010	<0.00010	<0.00020	<0.00020	<0.0001	<0.00010	<0.00020	<0.00020	<0.0001	<0.00010	<0.00020	<0.00020	<0.00020	<0.0001	<0.00010	<0.00020	<0.00020				<0.00020	<0.00020
Lithium	mg/L	0.0001	-	0.014	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	0.00018	0.0002	<0.00010	<0.00010	0.0001	0.00017	0.0001	<0.00010	<0.00010	0.00028				<0.00010	0.00015
Magnesium	mg/L	0.01	-	-	6.84	4.4	4.38	5.53	7.44	16.1	17.1	14.1	15.9	2.35	2.15	2.35	2.35	3.18	6.77	6.56	3.3	5.43				6.56	4.87
Manganese	mg/L	0.0002	-	Hardness Dependent (0.8 - 3.8) (for total metals)	2.02	1.39	1.41	1.66	2.39	3.61	3.94	4.24	3.83	1.61	0.874	1.08	1.05	2.14	2.64	2.73	1.58	2.31				0.604	0.187
Mercury	mg/L	0.00002	0.001	0.000001	<0.00002	<0.00002	<0.00002	<0.000010	<0.000010	<0.00002	<0.00002	<0.000010	<0.000010	<0.00002	<0.00002	<0.000010	<0.000010	<0.000010	<0.00002	<0.00002	<0.000010	<0.000010				<0.000010	<0.000010
Molybdenum	mg/L	0.0001	10	1	0.0041	0.00375	0.00377	0.0047																			

TABLE 4: 2017 GROUNDWATER QUALITY - GENERAL CHEMISTRY AND DISSOLVED METALS

SAMPLE LOCATION	MW2S					MW2D				MW3					MW4				MW6			
SAMPLE ID	MW2S	MW2S	MW2 Dup	MW2S	MW2S	MW2D	MW2D	MW2D	MW2D	MW3	MW3	MW3	MW3 Dup	MW3	MW4	MW4	MW4	MW4	MW6	MW6	MW6	MW6
DATE SAMPLED	30-Mar-17	22-Jun-17	22-Jun-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	20-Dec-17				

MATRIX	UNITS	MRL	BCCSR-SR-Water FAL (mg/L)	BC Ambient Water Quality Guidelines (mg/L)	Q1	Q2	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Tellurium	mg/L	0.0002	-	-	<0.0002	<0.00020	<0.00020	<0.00050	<0.00050	<0.0002	<0.00020	<0.00050	<0.00050	<0.0002	<0.00020	<0.00050	<0.00050	<0.00050	<0.0002	<0.00020	<0.00050	<0.00050				<0.00050	<0.00050
Thallium	mg/L	0.00002	0.003	0.0003	<0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.00002	<0.000020	<0.000020	<0.000020	0.00011	0.000081	<0.000020	<0.000020	0.000119	0.00003	0.000028	<0.000020	0.000033				<0.000020	0.000031
Thorium	mg/L	0.0001	-	-	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010				<0.00010	<0.00010
Tin	mg/L	0.0002	-	-	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.0002	<0.00020	<0.00020	0.00021	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.0002	<0.00020	<0.00020	<0.00020				<0.00020	<0.00020
Titanium	mg/L	0.005	1	2	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.0050	<0.0050	<0.0050	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.0050	<0.0050	<0.0050				<0.0050	<0.0050
Uranium	mg/L	0.00002	3	0.3	0.00004	<0.000020	<0.000020	<0.000020	0.000033	0.00023	0.000199	0.000165	0.000161	<0.00002	<0.000020	<0.000020	<0.000020	<0.000020	0.00021	0.000218	0.00006	0.000167				<0.000020	<0.000020
Vanadium	mg/L	0.001	-	-	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.0010	<0.0010				<0.0010	<0.0010
Zinc	mg/L	0.004	Hardness dependent (0.075 - 2.4)	33 + 0.75 (H - 90) (for total metals)	0.004	<0.0040	<0.0040	0.0067	<0.0040	0.006	<0.0040	0.0042	0.0069	0.007	<0.0040	<0.0040	<0.0040	0.0048	0.011	0.0077	<0.0040	0.0088				0.0055	0.0048
Zirconium	mg/L	0.0001	-	-	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010				<0.00010	<0.00010

Yellow = exceed standard or exceed standard AND guideline
Blue = exceed guideline
Orange = RDL is > guideline or standard

TABLE 5: 2017 GROUNDWATER QUALITY - PETROLEUM HYDROCARBONS

SAMPLE LOCATION			MW2S				MW2D				MW3				MW4				MW6				
SAMPLE ID			MW2S	MW2S	MW2S	MW2S	MW2D	MW2D	MW2D	MW2D	MW3	MW3	MW3	MW3 Dup	MW3	MW4	MW4	MW4	MW4	MW6	MW6	MW6	MW6
SAMPLE DATE			30-Mar-17	22-Jun-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	20-Dec-17
MATRIX	BCCSR-SR-Water FAL (ug/L)	BC Ambient Water Quality Guidelines (ug/L)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
HYDROCARBONS																							
VPHw	1500	-	<100	-	<100	-	<100	-	<100	-	<100	-	<100	<100	-	<100	-	<100	-	-	-	<100	-
LEPHw	500	-	<250	-	<250	-	<250	-	<250	-	<250	-	<250	<250	-	<250	-	<250	-	-	-	329	-
HEPHw	-	-	<250	-	<250	-	<250	-	<250	-	<250	-	<250	<250	-	<250	-	<250	-	-	-	412	-
Total PAH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PAHs, VOCs & BTEX																							
Acenaphthene	60	6	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	-	-	<0.050	-
Acenaphthylene	-	-	<0.200	-	<0.200	-	<0.200	-	<0.200	-	<0.200	-	<0.200	<0.200	-	<0.200	-	<0.200	-	-	-	<0.200	-
Acridine	0.5	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	-	-	<0.050	-
Anthracene	1	0.1	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	<0.010	-	<0.010	-	<0.010	-	-	-	<0.010	-
Benzo (a) anthracene	1	0.1	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	<0.010	-	<0.010	-	<0.010	-	-	-	<0.010	-
Benzo (a) pyrene	0.1	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	<0.010	-	<0.010	-	<0.010	-	-	-	<0.010	-
Benzo (b) fluoranthene	-	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	-	-	<0.050	-
Benzo (g,h,i) perylene	-	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	-	-	<0.050	-
Benzo (k) fluoranthene	-	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	-	-	<0.050	-
Chrysene	1	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	-	-	<0.050	-
Dibenz (a,h) anthracene	-	-	<0.050	-	<0.010	-	<0.050	-	<0.010	-	<0.050	-	<0.010	<0.010	-	<0.050	-	<0.010	-	-	-	<0.010	-
Fluoranthene	2	0.2	<0.030	-	<0.030	-	<0.030	-	<0.030	-	<0.030	-	<0.030	<0.030	-	<0.030	-	<0.030	-	-	-	<0.030	-
Fluorene	120	12	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	-	-	<0.050	-
Indeno (1,2,3-cd) pyrene	-	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	-	-	<0.050	-
Naphthalene	10	1	<0.200	-	<0.200	-	<0.200	-	<0.200	-	<0.200	-	<0.200	<0.200	-	<0.200	-	<0.200	-	-	-	0.332	-
Phenanthrene	3	0.3	<0.100	-	<0.100	-	<0.100	-	<0.100	-	<0.100	-	<0.100	<0.100	-	<0.100	-	<0.100	-	-	-	<0.100	-
Pyrene	0.2	0.02	<0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.020	<0.020	-	<0.020	-	<0.020	-	-	-	<0.020	-
Quinoline	34	3.4	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	-	-	<0.050	-
Acetone	-	-	<10.0	-	<10.0	-	<10.0	-	<10.0	-	<10.0	-	<10.0	<10.0	-	<10.0	-	<10.0	-	-	-	<10.0	-
Benzene	4000	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
Bromoform	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
Bromomethane	-	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	<2.0	-	<2.0	-	<2.0	-	-	-	<2.0	-
2-Butanone (MEK)	-	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0	<5.0	-	<5.0	-	<5.0	-	-	-	<5.0	-
Carbon tetrachloride	130	133	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-
Chlorobenzene	13	1.3	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	<2.0	-	<2.0	-	<2.0	-	-	-	<2.0	-
Chloroethane	-	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	<2.0	-	<2.0	-	<2.0	-	-	-	<2.0	-
Chloroform	20	1.8	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
Chloromethane	-	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	<2.0	-	<2.0	-	<2.0	-	-	-	<2.0	-
Dibromochloromethane	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
Dibromomethane	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
1,2-Dichlorobenzene	7	0.7	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-
1,3-Dichlorobenzene	1500	150	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
1,4-Dichlorobenzene	260	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
1,1-Dichloroethane	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
1,2-Dichloroethane	1000	100	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
1,1-Dichloroethene	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
cis-1,2-Dichloroethene	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
trans-1,2-Dichloroethene	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
1,2-Dichloropropane	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
cis-1,3-Dichloropropene	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
trans-1,3-Dichloropropene	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
Ethylbenzene	2000	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	34000	3400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	980	98.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (MIBK)	-	-	<10.0	-	<10.0	-	<10.0	-	<10.0	-	<10.0	-	<10.0	<10.0	-	<10.0	-	<10.0	-	-	-	<10.0	-
Styrene	720	72	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
1,1,1,2-Tetrachloroethane	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<1.0	-	<1.0	-	<1.0	-	-	-	<1.0	-
1,1,1,2,2-Tetrachloroethane	1100	111	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-
Tetrachloroethene	-	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	<									

TABLE 6: 2017 SURFACE WATER QUALITY GENERAL CHEMISTRY AND METALS

SAMPLE LOCATION					SFC 2				SFC 2B				SFC 3				SFC 4B				SFC 11			
SAMPLE ID					SFC 2	SFC 2	SFC2	SFC 2	SFC 2B	SFC 2B	SFC2B	SFC 2B	SFC 3	SFC 3	SFC3	SFC 3	SFC 4B	SFC 4B	SFC4B	SFC 4B	SFC 11	SFC 11	SFC11	SFC 11
SAMPLE DATE					30-Mar-17	20-Jun-17	13-Sep-17	2017-12-20	30-Mar-17	20-Jun-17	13-Sep-17	20-Dec-17	30-Mar-17	22-Jun-17	13-Sep-17	20-Dec-17	30-Mar-17	20-Jun-17	13-Sep-17	20-Dec-17	30-Mar-17	20-Jun-17	13-Sep-17	20-Dec-17
MATRIX	UNITS	MRL	BCCSR-SR-Water FAL (mg/L)	BC Ambient Water Quality Guidelines (mg/L)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Field Parameters																								
Field Conductivity	uS/cm	-	-	-	168.50	315.8	208	317.4	260.20	1240	627	932	169.90	198.8	100.3	249.9	110.3	209.9	254.7	551.7	45.10	191.1	87.6	105.9
Temp	C	-	-	-	5.5	8.4	9.8	7	6.4	10.8	10.3	1.2	3.5	7.4	9.9	3	3.7	8.4	10.2	3.3	3.8	7.3	6.7	4.7
pH	-	-	-	-	6.29	6.31	6.97	6.85	3.95	3.28	4.18	3.48	6.83	6.48	6.41	5.95	6.94	6.31	7.07	7.24	7.23	6.51	6.44	6.24
Dissolved Oxygen	mg/L	-	-	-	81.80%	71.7	8.4	7.12	77.30%	46.6	6.2	6.86	94.90%	95.2	6.5	10.54	99.50%	9.3	9.3	9.99	99.90%	90.1	8.6	10.9
ANIONS AND GENERAL CHEMISTRY																								
Alkalinity as CaCO3	mg/L	1	-	-	26	65.4	61.3	58.3	<1	<1.0	-	<1.0	21	35.4	32.6	26.2	17	35.7	51.7	79.1	15	26.9	32.4	27
Bromide	mg/L	0.1	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	mg/L	0.1	1500	150	15.4	18.5	14.2	15.6	5.01	14.3	-	8.94	43.8	38.8	12.6	38.4	20.7	34	47.1	38.5	7.33	34.2	12.6	7.92
Fluoride	mg/L	0.01	2	0.4	0.19	<0.10	0.34	0.1	0.35	0.77	-	0.53	0.11	<0.10	0.19	<0.10	0.15	<0.10	<0.10	<0.10	0.15	<0.10	<0.10	<0.10
Nitrite as N	mg/L	0.001	0.2	0.06	<0.005	0.0058	0.0024	0.0046	0.009	0.0162	-	0.0074	<0.005	0.0052	0.0022	0.004	<0.005	0.0076	0.0011	0.0117	<0.005	0.0061	<0.0010	0.0038
Ammonia as N	mg/L	0.005	pH dependent (1.31 - 18.4)	-	0.18	0.537	0.202	0.577	0.634	0.202	-	1	0.059	<0.020	0.094	0.03	0.054	0.051	0.064	1.85	0.023	<0.020	0.113	0.045
Nitrate+Nitrite as N	mg/L	0.005	400	-	0.524	0.183	0.0597	0.298	1.81	0.031	-	1.19	0.14	0.083	0.0303	0.199	0.304	0.234	0.142	0.706	0.273	0.09	0.134	0.318
Nitrogen Kjeldahl	mg/L	0.05	-	-	0.43	0.584	0.243	0.593	0.743	0.94	-	1.25	0.193	<0.050	0.162	0.064	0.15	0.193	0.103	1.98	0.13	0.111	0.161	0.219
Nitrate as N	mg/L	0.01	400	32.8	0.524	0.177	0.0573	0.294	1.81	0.0151	-	1.18	0.328	0.0778	0.0281	0.195	0.304	0.227	0.141	0.695	0.273	0.0836	0.134	0.314
Nitrogen	mg/L	0.05	-	-	0.958	0.767	0.653	1.04	2.75	2.25	-	2.43	0.328	0.083	0.192	0.263	0.45	0.234	0.245	2.68	0.399	0.201	0.294	0.537
Sulfate	mg/L	1	1000	128 - 429 (Hardness dependant)	82.6	55.5	48.8	61.8	109	613	-	1530	21.6	15.2	9.7	24	28.3	43.8	45.2	109	6.5	14.1	13.8	11.9
Chemical Oxygen Demand	mg/L	5	-	-	10	13	24	<20	18	23	-	<20	<5	11	<20	<20	7	9	<20	<20	<5	10	<20	<20
Solids Suspended	mg/L	2	-	-	44	12.6	8.5	-	45	30.6	-	-	57	<2.0	11	-	30	<2.0	-	235	14.6	<2.0	-	
pH	pH units	0.01	-	9	6.45	6.8	7.3	6.76	3.98	3.06	-	3.14	6.87	6.85	7.25	6.84	7.07	7.15	7.62	7.3	7.05	7.02	7.24	6.79
Conductivity (EC)	uS/cm	2	-	-	303	301	280	321	395	1260	-	1030	288	220	130	255	189	281	363	555	76.1	197	138	116
Hardness (Diss. as CaCO3)	mg/L	0.5	-	-	105	109	102	110	119	355	-	247	54.8	46	44.6	45.9	53.7	93.8	116	183	48.9	44.4	48.2	35.6
TOTAL METALS																								
Aluminum	mg/L	0.005	-	5.0 (maximum for total Al using wildlife water supply)	2.92	0.605	0.0768	2.14	6.48	25.1	-	18.9	3.91	0.0999	0.36	0.0638	2.82	0.059	0.0115	0.259	13.8	0.368	0.0251	0.0818
Antimony	mg/L	0.0001	0.2	0.02	<0.0001	<0.00010	<0.00020	<0.00020	<0.0001	0.00023	-	<0.00020	<0.0001	<0.00010	<0.00020	<0.00020	<0.0001	<0.00010	<0.00020	<0.00020	<0.0001	0.00011	<0.00020	<0.00020
Arsenic	mg/L	0.0005	0.05	0.005 (for total metals)	<0.0005	<0.00050	<0.00050	<0.00050	0.0011	0.00179	-	0.0012	<0.0005	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	<0.00050	<0.00050	0.001	<0.00050	<0.00050	<0.00050
Barium	mg/L	0.005	10	1	0.029	0.0572	0.0571	0.0471	0.017	0.0333	-	0.018	0.056	0.02	0.018	0.0224	0.036	0.0234	0.0216	0.0448	0.119	0.02	0.0104	0.0088
Beryllium	mg/L	0.0001	0.053	-	<0.0001	<0.00010	<0.00010	<0.00010	0.0002	0.00083	-	0.00059	<0.0001	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	0.0002	<0.00010	<0.00010	<0.00010
Bismuth	mg/L	0.0001	-	-	<0.0001	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	-	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.00010
Boron	mg/L	0.004	50	-	0.018	0.044	0.0496	0.0376	0.018	0.029	-	0.027	0.008	0.004	0.0091	0.0079	0.012	0.035	0.0607	0.123	0.005	0.005	0.0132	0.0118
Cadmium	mg/L	0.00001	Hardness dependent (0.0001 - 0.0006)	-	0.00013	0.000053	0.000044	0.000073	0.0004	0.000875	-	0.000823	0.0001	0.000034	0.000019	0.000026	0.00005	0.000017	<0.00010	0.000049	0.00008	0.000034	0.00002	0.000015
Calcium	mg/L	0.2	-	-	35.9	37.6	34.7	37.4	38.5	92.5	-	67.9	17.6	15.2	14	15.4	17.4	31.7	40	61.8	11.4	14.4	15.6	11.3
Chromium	mg/L	0.0005	0.01	-	0.0011	<0.00050	<0.00050	<0.00050	0.0027	0.0028	-	0.00277	0.0018	<0.00050	<0.00050	<0.00050	0.0013	<0.00050	<0.00050	<0.00050	0.0053	0.0053	<0.00050	<0.00050
Cobalt	mg/L	0.00005	0.04	0.11 (for total metals)	0.013	0.00666	0.0062	0.00816	0.0334	0.15	-	0.0959	0.00171	0.00018	0.00185	0.00035	0.00294	0.00054	0.00017	0.00444	0.00484	0.00037	<0.00010	<0.00010
Copper	mg/L	0.0002	Hardness dependent (0.02 - 0.09)	0.094(H) + 2 (in µg/L) (for total metals)	0.0718	0.0119	0.00187	0.0341	0.187	0.345	-	0.352	0.0236	0.00179	0.0329	0.00352	0.0395	0.00167	0.00078	0.00489	0.0719	0.00337	<0.00040	0.00089
Iron	mg/L	0.01	0.35	-	5.96	4.93	5.52	5.1	19.9	85.8	-	42.7	2.5	0.272	3.93	0.135	2.69	0.267	0.062	4.06	8.68	0.574	0.028	0.058
Lead	mg/L	0.0001	Hardness dependent (0.04 - 0.16)	e(1.273 ln (hardness) - 1.460)	<0.0001	<0.00010	<0.00020	<0.00020	<0.0001	0.00014	-	<0.00020	0.0011	0.00027	<0.00020	<0.00020	0.0008	<0.00010	<0.00020	<0.00020	0.0039	0.00022	<0.00020	<0.00020
Lithium	mg/L	0.0001	-	0.014	0.0008	0.00021	0.00013	0.00073	0.0022	0.00894	-	0.00644	0.002	0.00032	0.0004	0.00059	0.0015	0.00039	0.00052	0.00073	0.007	0.00046	0.00072	0.00086
Magnesium	mg/L	0.01	-	-	3.73	3.73	3.67	4.09	5.6	30	-	18.7	2.62	1.95	2.33	1.81	2.49	3.51	3.95	7	4.94	2.03	2.24	1.79
Manganese	mg/L	0.0002	-	Hardness dependent (0.8 - 3.8)	0.328	1.48	1.85	1.06	0.539	7.4	-	3.81	0.104	0.0203	0.215	0.0137	0.186	0.173	0.115	1.08	0.236	0.0297	0.00392	0.00262
Mercury	mg/L	0.00002	0.001	0.000001	<0.00002	<0.00002	<0.000010	<0.000010	<0.00002	<0.00002	-	<0.000010	<0.00002	<0.00002	<0.000010	<0.000010	<0.00002	<0.00002	<0.000010	<0.000010	<0.00002	<0.00002	<0.000010	<0.000010
Molybdenum	mg/L	0.0001	10	1	0.005	0.00281	0.00225	0.00331	0.0004	0.00028	-	0.00024	0.002	0.00035	0.00037	0.00037	0.0015	0.0004	0.0004	0.00057	0.0006	0.00043	0.00022	0.00024
Nickel	mg/L	0.0002	Hardness dependent (0.25 - 15)	0.025	0.0065	0.00154	0.00088	0.0027	0.0171	0.0611	-	0.0421	0.0019	0.00057	<0.00040	0.00057	0.0022	0.00071	<0.00040	0.00287	0.005	0.00068	<0.00040	<0.00040
Phosphorus	mg/L	0.02	-	-	0.1	<0.050	<0.050	<0.050	0.4	0.055	-	<0.050	0.11	<0.050	<0.050	<0.050	0.08	<0.050	<0.050	0.41	<0.050	<0.050	<0.050	<0.050
Potassium	mg/L	0.02	-	-	3.2	3.59	3.26	4.07	2.53	3.93	-													

TABLE 7: 2017 Leachate Manhole / GW Interceptor WATER QUALITY - GENERAL CHEMISTRY AND METALS

		SAMPLE LOCATION			LEACHATE MANHOLE				GW INTERCEPTOR				
		SAMPLE ID			L1				GW Int	GW Int.	GW Int.	GW Int.	GW Duplicate
		SAMPLE DATE			30-Mar-17				30-Mar-17	20-Jun-17	13-Sep-17	20-Dec-17	20-Dec-17
MATRIX	UNITS	MRL	BCCSR-SR-Water FAL (mg/L)	BC Ambient Water Quality Guidelines (mg/L)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q4
Field Parameters													
Field Conductivity	uS/cm	-	-	-	142.40	-	-	-	723.00	885	644	-	604
Temp	C	-	-	-	3.8	-	-	-	7.5	8	11.6	-	8.5
pH	-	-	-	-	6.49	-	-	-	6	5.67	6.2	-	6.33
Dissolved Oxygen	mg/L	-	-	-	66.60%	-	-	-	9.30%	3.2	0.2	-	3.5
ANIONS AND GENERAL CHEMISTRY													
Alkalinity as CaCO3	mg/L	1	-	-	41	-	-	-	148	108	118	158	186
Bromide	mg/L	0.1	-	-	<0.10	-	-	-	<0.10	<0.10	<0.10	<0.10	0.11
Chloride	mg/L	0.1	1500	150	2.77	-	-	-	44.3	119	114	73.4	85.3
Fluoride	mg/L	0.01	2	0.4	0.17	-	-	-	0.32	0.14	0.27	0.43	0.12
Nitrite as N	mg/L	0.001	0.2	0.06	2.33	-	-	-	0.006	0.027	0.0024	0.0356	0.0391
Ammonia as N	mg/L	0.005	pH dependent (1.31 - 18.4)	-	0.034	-	-	-	2.25	108	1.42	4.01	6.75
Nitrate+Nitrite as N	mg/L	0.005	400	-	28.6	-	-	-	261	0.0071	0.0432	1.02	1.9
Nitrogen Kjeldahl	mg/L	0.05	-	-	0.91	-	-	-	2.51	<1.0	1.81	6.36	10
Nitrate as N	mg/L	0.01	400	32.8	2.33	-	-	-	0.0065	0.0198	0.0408	0.984	1.86
Nitrogen	mg/L	0.05	-	-	3.24	-	-	-	2.51	1.35	1.85	7.38	11.9
Sulfate	mg/L	1	1000	128 - 429 (Hardness dependant)	<0.005	-	-	-	<0.005	170	96.7	225	242
Chemical Oxygen Demand	mg/L	5	-	-	22	-	-	-	14	1.32	<20	72	68
Solids Suspended	mg/L	2	-	-	3	-	-	-	26	0.0532	44	394	378
pH	pH units	0.01	-	9	6.77	-	-	-	6.63	6.59	6.88	6.87	6.84
Conductivity (EC)	uS/cm	2	-	-	230	-	-	-	1050	798	800	1030	1070
Hardness (Diss. as CaCO3)	mg/L	0.5	-	-	94.4	-	-	-	453	258	227	364	366
DISSOLVED METALS													
Aluminum	mg/L	0.005	-	Maximum 0.1 (pH ≥ 6.5)	0.037	-	-	-	0.137	0.0282	0.025	0.0108	0.0094
Antimony	mg/L	0.0001	0.2	0.02	<0.0001	-	-	-	<0.0001	<0.00010	<0.00020	<0.00020	<0.00020
Arsenic	mg/L	0.0005	0.05	-	<0.0005	-	-	-	0.0006	<0.00050	<0.00050	<0.00050	<0.00050
Barium	mg/L	0.005	10	1	0.016	-	-	-	0.088	0.0763	0.0681	0.0899	0.0903
Beryllium	mg/L	0.0001	0.053	-	<0.0001	-	-	-	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth	mg/L	0.0001	-	-	<0.0001	-	-	-	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Boron	mg/L	0.004	50	1.2	0.023	-	-	-	0.335	0.153	0.129	0.314	0.313
Cadmium	mg/L	0.00001	Hardness dependent (0.0001 - 0.0006)	Hardness dependent (0.01 - 0.06)	0.00003	-	-	-	0.00006	<0.000010	<0.000010	0.000021	0.000018
Calcium	mg/L	0.2	-	-	33.6	-	-	-	155	87.9	76.3	124	125
Chromium	mg/L	0.0005	0.01	0.001	0.0008	-	-	-	0.001	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	mg/L	0.00005	0.04	-	0.00023	-	-	-	0.0255	0.00752	0.00362	0.00886	0.00884
Copper	mg/L	0.0002	Hardness dependent (0.02 - 0.09)	0.094(H) + 2 (in µg/L) (for total metals)	0.0329	-	-	-	0.0007	<0.00020	<0.00040	0.00095	0.00088
Iron	mg/L	0.01	-	0.35	0.047	-	-	-	25.3	28.2	32.7	18.4	18.4
Lead	mg/L	0.0001	Hardness dependent (0.04 - 0.16)	0.003	<0.0001	-	-	-	<0.0001	<0.00010	<0.00020	<0.00020	<0.00020
Lithium	mg/L	0.0001	-	0.014	0.0002	-	-	-	0.0016	0.00044	0.00039	0.00051	0.0005
Magnesium	mg/L	0.01	-	-	2.52	-	-	-	15.9	9.19	8.86	12.9	13
Manganese	mg/L	0.0002	-	Hardness Dependent (0.8 - 3.8) (for total metals)	0.0042	-	-	-	2.87	2.41	2.55	2.94	2.96
Mercury	mg/L	0.00002	0.001	0.000001	<0.00002	-	-	-	<0.00002	-	-	-	-
Molybdenum	mg/L	0.0001	10	1	0.0003	-	-	-	0.0002	0.00033	0.00022	0.00052	0.00054

TABLE 7: 2017 Leachate Manhole / GW Interceptor WATER QUALITY - GENERAL CHEMISTRY AND METALS

SAMPLE LOCATION					LEACHATE MANHOLE				GW INTERCEPTOR				
SAMPLE ID					L1				GW Int	GW Int.	GW Int.	GW Int.	GW Duplicate
SAMPLE DATE					30-Mar-17				30-Mar-17	20-Jun-17	13-Sep-17	20-Dec-17	20-Dec-17
MATRIX	UNITS	MRL	BCCSR-SR-Water FAL (mg/L)	BC Ambient Water Quality Guidelines (mg/L)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q4
Nickel	mg/L	0.0002	Hardness dependent (0.25 - 1.5)	0.025	0.0018	-	-	-	0.0144	0.00489	0.00321	0.00319	0.00325
Phosphorus	mg/L	0.02	-	-	<0.05	-	-	-	<0.05	<0.050	<0.050	<0.050	<0.050
Potassium	mg/L	0.02	-	373	1.78	-	-	-	6.59	5.89	7.14	11.3	11.3
Selenium	mg/L	0.0005	0.01	0.002	<0.0005	-	-	-	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050
Silicon	mg/L	0.5	-	-	6.3	-	-	-	11.5	9.1	9.8	7.9	8.2
Silver	mg/L	0.00005	0.0005 @ H ≤ 100 0.015 @ H > 100	0.00005	<0.00005	-	-	-	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Sodium	mg/L	0.02	-	-	3.58	-	-	-	34.1	51	58.3	55.5	56
Strontium	mg/L	0.001	-	-	0.114	-	-	-	0.854	0.546	0.53	0.79	0.795
Sulfur	mg/L	1	-	-	8	-	-	-	107	47.4	34.7	77.3	76.8
Tellurium	mg/L	0.0002	-	-	<0.0002	-	-	-	<0.0002	<0.00020	<0.00050	<0.00050	<0.00050
Thallium	mg/L	0.00002	0.003	0.0003	<0.00002	-	-	-	<0.00002	<0.000020	<0.000020	<0.000020	<0.000020
Thorium	mg/L	0.0001	-	-	<0.0001	-	-	-	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Tin	mg/L	0.0002	-	-	<0.0002	-	-	-	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020
Titanium	mg/L	0.005	1	2	<0.005	-	-	-	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
Uranium	mg/L	0.00002	3	0.3	<0.00002	-	-	-	<0.00002	<0.000020	<0.0010	0.000045	0.000048
Vanadium	mg/L	0.001	-	-	<0.001	-	-	-	<0.001	<0.0010	0.0197	<0.0010	<0.0010
Zinc	mg/L	0.004	Hardness dependent (0.075 - 2.4)	33 + 0.75 (H - 90) (for total metals)	0.027	-	-	-	0.258	0.0244	<0.00010	0.0574	0.0573
Zirconium	mg/L	0.0001	-	-	<0.0001	-	-	-	0.0001	0.0001	<0.00010	<0.00010	<0.00010

Yellow = exceed standard or exceed standard AND guideline

Blue = exceed guideline

Orange = RDL is > guideline or standard

TABLE 8: 2017 Leachate Manhole / GW Interceptor WATER QUALITY - PETROLEUM HYDROCARBONS

SAMPLE LOCATION					LEACHATE MANHOLE				GW INTERCEPTOR				
SAMPLE ID					L1				GW Int	GW INTERCEPTOR	GW Int.	GW Int.	GW Extra
SAMPLE DATE					30-Mar-17				30-Mar-17	20-Jun-17	13-Sep-17	20-Dec-17	20-Dec-17
MATRIX	UNITS	MRL	BCCSR-SR-Water FAL (ug/L)	BC Ambient Water Quality Guidelines (ug/L)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q4
HYDROCARBONS													
VPHw	ug/L	100	1500	-	<100	-	-	-	<100	-	<100	-	-
LEPHw	ug/L	100	500	-	<250	-	-	-	<250	<250	<250	-	-
HEPHw	ug/L	100	-	-	<250	-	-	-	<250	<250	<250	-	-
Total PAH	ug/L	0.05	-	-	-	-	-	-	-	-	-	-	-
VHw (6-10)	ug/L	100	15000	-	<100	-	-	-	<100	-	<100	-	-
EPHw (10-19)	ug/L	100	5000	-	<250	-	-	-	<250	<250	<250	-	-
EPHw (19-32)	ug/L	100	-	-	<250	-	-	-	<250	<250	<250	-	-
PAHs, VOCs & BTEX													
Acenaphthene	ug/L	0.02	60	6	<0.050	-	-	-	0.538	0.285	0.177	-	-
Acenaphthylene	ug/L	0.02	-	-	<0.200	-	-	-	<0.200	<0.200	<0.200	-	-
Acridine	ug/L	0.05	0.5	0.05	<0.050	-	-	-	<0.050	<0.050	<0.050	-	-
Anthracene	ug/L	0.01	1	0.1	<0.010	-	-	-	0.024	0.027	<0.010	-	-
Benzo (a) anthracene	ug/L	0.01	1	0.1	<0.010	-	-	-	<0.010	<0.010	<0.010	-	-
Benzo (a) pyrene	ug/L	0.01	0.1	0.01	<0.010	-	-	-	<0.010	<0.010	<0.010	-	-
Benzo (b) fluoranthene	ug/L	0.02	-	-	<0.050	-	-	-	<0.050	<0.050	<0.050	-	-
Benzo (g,h,i) perylene	ug/L	0.02	-	-	<0.050	-	-	-	<0.050	<0.050	<0.050	-	-
Benzo (k) fluoranthene	ug/L	0.02	-	-	<0.050	-	-	-	<0.050	<0.050	<0.050	-	-
Chrysene	ug/L	0.02	1	-	<0.050	-	-	-	<0.050	<0.050	<0.050	-	-
Dibenz (a,h) anthracene	ug/L	0.02	-	-	<0.050	-	-	-	<0.050	<0.050	<0.010	-	-
Fluoranthene	ug/L	0.02	2	0.2	<0.030	-	-	-	0.109	0.097	0.104	-	-
Fluorene	ug/L	0.02	120	12	<0.050	-	-	-	0.232	0.099	0.057	-	-
Indeno (1,2,3-cd) pyrene	ug/L	0.02	-	-	<0.050	-	-	-	<0.050	<0.050	<0.050	-	-
Naphthalene	ug/L	0.05	10	1	<0.200	-	-	-	<0.200	<0.200	<0.200	-	-
Phenanthrene	ug/L	0.05	3	0.3	<0.100	-	-	-	<0.100	<0.100	<0.100	-	-
Pyrene	ug/L	0.02	0.2	0.02	<0.020	-	-	-	0.06	0.054	0.054	-	-
Quinoline	ug/L	0.05	34	3.4	<0.050	-	-	-	0.06	<0.050	<0.050	-	-
Acetone	ug/L	10	-	-	<10.0	-	-	-	-	-	-	-	-
Benzene	ug/L	0.5	4000	40	<0.5	-	-	-	<0.5	<0.5	<0.5	-	-
Bromodichloromethane	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
Bromoform	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
Bromomethane	ug/L	2	-	-	<2.0	-	-	-	<2.0	<2.0	<2.0	-	-
2-Butanone (MEK)	ug/L	5	-	-	<5.0	-	-	-	<5.0	<1.0	<5.0	-	-
Carbon tetrachloride	ug/L	1	130	133	<0.5	-	-	-	<0.5	<2.0	<0.5	-	-
Chlorobenzene	ug/L	1	13	1.3	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
Chloroethane	ug/L	2	-	-	<2.0	-	-	-	<2.0	<2.0	<2.0	-	-
Chloroform	ug/L	1	20	1.8	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
Chloromethane	ug/L	2	-	-	<2.0	-	-	-	<2.0	-	<2.0	-	-
Dibromochloromethane	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
Dibromomethane	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
1,2-Dichlorobenzene	ug/L	0.5	7	0.7	<0.5	-	-	-	<0.5	<0.5	<0.5	-	-
1,3-Dichlorobenzene	ug/L	1	1500	150	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
1,4-Dichlorobenzene	ug/L	1	260	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
1,1-Dichloroethane	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
1,2-Dichloroethane	ug/L	1	1000	100	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
1,1-Dichloroethene	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
cis-1,2-Dichloroethene	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
trans-1,2-Dichloroethene	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-

TABLE 8: 2017 Leachate Manhole / GW Interceptor WATER QUALITY - PETROLEUM HYDROCARBONS

SAMPLE LOCATION					LEACHATE MANHOLE				GW INTERCEPTOR				
SAMPLE ID					L1				GW Int	GW INTERCEPTOR	GW Int.	GW Int.	GW Extra
SAMPLE DATE					30-Mar-17				30-Mar-17	20-Jun-17	13-Sep-17	20-Dec-17	20-Dec-17
MATRIX	UNITS	MRL	BCCSR-SR-Water FAL (ug/L)	BC Ambient Water Quality Guidelines (ug/L)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q4
1,2-Dichloropropane	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
cis-1,3-Dichloropropene	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
trans-1,3-Dichloropropene	ug/L	1	-	-	<1.0	-	-	-	<1.0	-	<1.0	-	-
Ethylbenzene	ug/L	1	2000	200	-	-	-	-	-	<1.0	<1.0	-	-
Methyl tert-butyl ether	ug/L	1	34000	3400	-	-	-	-	-	<1.0	<1.0	-	-
Methylene chloride	ug/L	3	980	98.1	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (MIBK)	ug/L	10	-	-	<10.0	-	-	-	<10.0	-	<10.0	-	-
Styrene	ug/L	1	720	72	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
1,1,1,2-Tetrachloroethane	ug/L	1	-	-	<1.0	-	-	-	<1.0	-	<1.0	-	-
1,1,2,2-Tetrachloroethane	ug/L	1	1100	111	<0.5	-	-	-	<0.5	<0.5	<0.5	-	-
Tetrachloroethene	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
Toluene	ug/L	1	390	0.5	-	-	-	-	-	<1.0	-	-	-
1,1,1-Trichloroethane	ug/L	1	-	11100	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
1,1,2-Trichloroethane	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
Trichloroethene	ug/L	1	200	21	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
Trichlorofluoromethane	ug/L	1	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
Vinyl chloride	ug/L	2	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	-	-
m,p-Xylene	ug/L	1	-	30	<1.0	-	-	-	<1.0	-	<1.0	-	-
Xylenes (total)	ug/L	2	-	30	<1.0	-	-	-	<1.0	<2.0	-	-	-
o-Xylene	ug/L	1	-	30	<1.0	-	-	-	<1.0	-	<1.0	-	-
1,2-Dibromoethane	ug/L	0.3	-	-	<0.2	-	-	-	<0.2	<0.2	<0.3	-	-
1,2-Dichlorobenzene	ug/L	0.5	7	-	<0.5	-	-	-	<0.5	<0.5	<0.5	-	-

Yellow = exceed standard or exceed standard AND guideline

Blue = exceed guideline

Orange = RDL is > guideline or standard

**APPENDIX A: Analytical Laboratory Results for Leachate,
Groundwater & Surface Water Results**

REPORTED TO	Morrison Hershfield Limited - Burnaby 310 - 4321 Still Creek Drive Burnaby, BC V5C 6S7	TEL	(604) 454-0402
		FAX	(604) 454-0403
ATTENTION	Josie Gilson	WORK ORDER	7040006
PO NUMBER	721849	RECEIVED / TEMP	2017-03-31 13:35 / 3°C
PROJECT	Resort Municipality of Whister - Spring/Fall 17	REPORTED	2017-04-10
PROJECT INFO	5104016.07		

General Comments:

CARO Analytical Services employs methods which are conducted according to procedures accepted by appropriate regulatory agencies, and/or are conducted 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 or Sample Requisition document. This analytical report must be reproduced in its entirety. 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.



Authorized By: **Jeffery Lopes, B.Sc.**
Account Manager

If you have any questions or concerns, please contact me at jlopes@caro.ca

Locations:

#110 4011 Viking Way
Richmond, BC V6V 2K9
Tel: 604-279-1499

#102 3677 Highway 97N
Kelowna, BC V1X 5C3
Tel: 250-765-9646

17225 109 Avenue
Edmonton, AB T5S 1H7
Tel: 780-489-9100

www.caro.ca

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Resort Municipality of Whister - Spring/Fall 17

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Analysis Description	Method Reference	Technique	Location
Alkalinity in Water	APHA 2320 B*	Titration with H2SO4	Kelowna
Ammonia, Total in Water	APHA 4500-NH3 G*	Automated Colorimetry (Phenate)	Kelowna
Anions by IC in Water	APHA 4110 B	Ion Chromatography with Chemical Suppression of Eluent Conductivity	Kelowna
BTEX in Water	EPA 5030B / EPA 8260B	Purge&Trap / GC-MS (SIM)	Richmond
Chemical Oxygen Demand in Water	APHA 5220 D*	Closed Reflux, Colorimetry	Kelowna
Conductivity in Water	APHA 2510 B	Conductivity Meter	Kelowna
Dissolved Metals by ICPMS in Water	APHA 3030 B / APHA 3125 B	0.45 µm Filtration / Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	Richmond
EPH in Water	EPA 3511* / BCMOE EPHw	Hexane MicroExtraction (Base/Neutral) / Gas Chromatography (GC-FID)	Richmond
Hardness (as CaCO3) in Water	APHA 2340 B	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	N/A
HEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
LEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
Mercury, dissolved by CVAFS in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
Mercury, total by CVAFS in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
Nitrate+Nitrite by Colorimetry in Water	APHA 4500-NO3- F	Automated Colorimetry (Cadmium Reduction)	Kelowna
Nitrite by Colorimetry in Water	APHA 4500-NO2 B	Colorimetry	Richmond
Nitrogen, Total Kjeldahl in Water	APHA 4500-Norg D*	Block Digestion and Flow Injection Analysis	Kelowna
pH in Water	APHA 4500-H+ B	Electrometry	Kelowna
pH in Water	APHA 4500-H+ B	Electrometry	Richmond
Phosphorus, Total by Colorimetry in Water	APHA 4500-P B.5* / APHA 4500-P F	Persulfate Digestion / Automated Colorimetry (Ascorbic Acid)	Kelowna
Polycyclic Aromatic Hydrocarbons in Water	EPA 3511* / EPA 8270D	Hexane MicroExtraction (Base/Neutral) / GC-MS (SIM)	Richmond
Solids, Total Suspended in Water	APHA 2540 D*	Gravimetry (Dried at 103-105C)	Kelowna
Total Metals by ICPMS in Water	APHA 3030 E* / APHA 3125 B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	Richmond
VH in Water	EPA 5030B / BCMOE VHw	Purge&Trap / Gas Chromatography (GC-FID)	Richmond
Volatile Organic Compounds in Water	EPA 5030B / EPA 8260B	Purge&Trap / GC-MS (SIM)	Richmond
VPHw in Water	BCMOE VPH	Calculation: VH - (Benzene + Toluene + Ethylbenzene + Xylenes + Styrene)	N/A

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Method Reference Descriptions:

APHA Standard Methods for the Examination of Water and Wastewater, 22nd Edition, American Public Health Association/American Water Works Association/Water Environment Federation
 BCMOE British Columbia Environmental Laboratory Manual, 2015, British Columbia Ministry of Environment
 EPA United States Environmental Protection Agency Test Methods

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Resort Municipality of Whister - Spring/Fall 17

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Glossary of Terms:

MRL Method Reporting Limit
< Less than the Reported Detection Limit (RDL) - the RDL may be higher than the MRL due to various factors such as dilutions, limited sample volume, high moisture, or interferences
mg/L Milligrams per litre
pH units pH < 7 = acidic, pH > 7 = basic
µg/L Micrograms per litre
µS/cm Microsiemens per centimetre

Standards / Guidelines Referenced in this Report:

BC CSR Schedule 4/5/6/10/11 Residential/Aquatic Water
Website: http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/375_96_00

Note: In some cases, the values displayed on the report represent the lowest guideline and are to be verified by the end user

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7040006
2017-04-10

Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: MW-2D (7040006-01) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	35.8	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.30	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	0.020	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	196	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	6.90	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	1070	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	10.7	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	11.4	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	278	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	278	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	24	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	168	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.171	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	397	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	11.4	N/A	0.500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.005	N/A	0.005	mg/L	N/A	2017-04-04	
Antimony, dissolved	< 0.0001	0.2	0.0001	mg/L	N/A	2017-04-04	
Arsenic, dissolved	0.0126	0.05	0.0005	mg/L	N/A	2017-04-04	
Barium, dissolved	0.033	5	0.005	mg/L	N/A	2017-04-04	
Beryllium, dissolved	< 0.0001	0.053	0.0001	mg/L	N/A	2017-04-04	
Bismuth, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Boron, dissolved	0.288	50	0.004	mg/L	N/A	2017-04-04	
Cadmium, dissolved	< 0.00001	0.0001	0.00001	mg/L	N/A	2017-04-04	
Calcium, dissolved	132	N/A	0.2	mg/L	N/A	2017-04-04	
Chromium, dissolved	< 0.0005	N/A	0.0005	mg/L	N/A	2017-04-04	
Cobalt, dissolved	0.0133	0.04	0.00005	mg/L	N/A	2017-04-04	
Copper, dissolved	0.0004	0.02	0.0002	mg/L	N/A	2017-04-04	
Iron, dissolved	56.2	N/A	0.010	mg/L	N/A	2017-04-04	
Lead, dissolved	< 0.0001	0.04	0.0001	mg/L	N/A	2017-04-04	
Lithium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Magnesium, dissolved	16.1	N/A	0.01	mg/L	N/A	2017-04-04	
Manganese, dissolved	3.61	N/A	0.0002	mg/L	N/A	2017-04-04	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-04-03	2017-04-04	
Molybdenum, dissolved	0.0141	10	0.0001	mg/L	N/A	2017-04-04	
Nickel, dissolved	0.0026	0.25	0.0002	mg/L	N/A	2017-04-04	
Phosphorus, dissolved	0.07	N/A	0.05	mg/L	N/A	2017-04-04	

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

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2017-04-10

Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: MW-2D (7040006-01) [Water] Sampled: 2017-03-30 00:00, Continued

Dissolved Metals, Continued

Potassium, dissolved	18.1	N/A	0.02	mg/L	N/A	2017-04-04	
Selenium, dissolved	< 0.0005	0.01	0.0005	mg/L	N/A	2017-04-04	
Silicon, dissolved	14.5	N/A	0.5	mg/L	N/A	2017-04-04	
Silver, dissolved	< 0.00005	0.0005	0.00005	mg/L	N/A	2017-04-04	
Sodium, dissolved	30.7	N/A	0.02	mg/L	N/A	2017-04-04	
Strontium, dissolved	0.523	N/A	0.001	mg/L	N/A	2017-04-04	
Sulfur, dissolved	79	N/A	1	mg/L	N/A	2017-04-04	
Tellurium, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Thallium, dissolved	< 0.00002	0.003	0.00002	mg/L	N/A	2017-04-04	
Thorium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Tin, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Titanium, dissolved	< 0.005	1	0.005	mg/L	N/A	2017-04-04	
Uranium, dissolved	0.00023	1	0.00002	mg/L	N/A	2017-04-04	
Vanadium, dissolved	< 0.001	N/A	0.001	mg/L	N/A	2017-04-04	
Zinc, dissolved	0.006	0.075	0.004	mg/L	N/A	2017-04-04	
Zirconium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-04-04	2017-04-06	
EPHw19-32	< 250	N/A	250	µg/L	2017-04-04	2017-04-06	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-04-03	
Surrogate: 2-Methylnonane	69		60-140	%	2017-04-04	2017-04-06	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-04-04	2017-04-07	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-04-04	2017-04-07	
Acridine	< 0.050	0.5	0.050	µg/L	2017-04-04	2017-04-07	
Anthracene	< 0.010	1	0.010	µg/L	2017-04-04	2017-04-07	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-04-04	2017-04-07	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-04-04	2017-04-07	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-04	2017-04-07	
Benzo(b+j)fluoranthene	< 0.100	N/A	0.100	µg/L	2017-04-04	2017-04-07	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-04-04	2017-04-07	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-04	2017-04-07	
Chrysene	< 0.050	1	0.050	µg/L	2017-04-04	2017-04-07	
Dibenz(a,h)anthracene	< 0.050	N/A	0.050	µg/L	2017-04-04	2017-04-07	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-04-04	2017-04-07	
Fluorene	< 0.050	120	0.050	µg/L	2017-04-04	2017-04-07	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-04-04	2017-04-07	
Naphthalene	< 0.200	10	0.200	µg/L	2017-04-04	2017-04-07	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-04-04	2017-04-07	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-04-04	2017-04-07	
Quinoline	< 0.050	34	0.050	µg/L	2017-04-04	2017-04-07	

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7040006
2017-04-10

Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: MW-2D (7040006-01) [Water] Sampled: 2017-03-30 00:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Surrogate: Acridine-d9	43		60-130	%	2017-04-04	2017-04-07	S02
Surrogate: Naphthalene-d8	91		60-130	%	2017-04-04	2017-04-07	
Surrogate: Perylene-d12	42		60-130	%	2017-04-04	2017-04-07	S09a

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-04-03	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-04-03	
Chlorobenzene	< 2.0	13	1.0	µg/L	N/A	2017-04-03	RA1
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-04-03	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-04-03	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-04-03	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-04-03	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-04-03	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-04-03	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	

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Sample ID: MW-2D (7040006-01) [Water] Sampled: 2017-03-30 00:00, Continued

Volatile Organic Compounds (VOC), Continued

Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
1,2-Dibromoethane	< 0.2	N/A	0.2	µg/L	N/A	2017-04-03	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-04-03	
Surrogate: Toluene-d8	102		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	95		70-130	%	N/A	2017-04-03	
Surrogate: Toluene-d8	102		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	95		70-130	%	N/A	2017-04-03	
Surrogate: 1,4-Dichlorobenzene-d4	78		70-130	%	N/A	2017-04-03	

Sample ID: MW-25 (7040006-02) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	18.8	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.27	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	0.011	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	79.9	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	6.89	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	470	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	6.34	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	6.33	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	118	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	118	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	19	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	58	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.086	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	138	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	6.34	N/A	0.500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.005	N/A	0.005	mg/L	N/A	2017-04-04	
Antimony, dissolved	< 0.0001	0.2	0.0001	mg/L	N/A	2017-04-04	
Arsenic, dissolved	0.0075	0.05	0.0005	mg/L	N/A	2017-04-04	
Barium, dissolved	0.111	5	0.005	mg/L	N/A	2017-04-04	
Beryllium, dissolved	< 0.0001	0.053	0.0001	mg/L	N/A	2017-04-04	
Bismuth, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	

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Sample ID: MW-25 (7040006-02) [Water] Sampled: 2017-03-30 00:00, Continued

Dissolved Metals, Continued

Boron, dissolved	0.143	50	0.004	mg/L	N/A	2017-04-04	
Cadmium, dissolved	< 0.00001	0.0001	0.00001	mg/L	N/A	2017-04-04	
Calcium, dissolved	43.9	N/A	0.2	mg/L	N/A	2017-04-04	
Chromium, dissolved	0.0007	N/A	0.0005	mg/L	N/A	2017-04-04	
Cobalt, dissolved	0.00187	0.04	0.00005	mg/L	N/A	2017-04-04	
Copper, dissolved	< 0.0002	0.02	0.0002	mg/L	N/A	2017-04-04	
Iron, dissolved	39.4	N/A	0.010	mg/L	N/A	2017-04-04	
Lead, dissolved	< 0.0001	0.04	0.0001	mg/L	N/A	2017-04-04	
Lithium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Magnesium, dissolved	6.84	N/A	0.01	mg/L	N/A	2017-04-04	
Manganese, dissolved	2.02	N/A	0.0002	mg/L	N/A	2017-04-04	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-04-03	2017-04-04	
Molybdenum, dissolved	0.0041	10	0.0001	mg/L	N/A	2017-04-04	
Nickel, dissolved	0.0010	0.25	0.0002	mg/L	N/A	2017-04-04	
Phosphorus, dissolved	< 0.05	N/A	0.05	mg/L	N/A	2017-04-04	
Potassium, dissolved	9.56	N/A	0.02	mg/L	N/A	2017-04-04	
Selenium, dissolved	< 0.0005	0.01	0.0005	mg/L	N/A	2017-04-04	
Silicon, dissolved	9.5	N/A	0.5	mg/L	N/A	2017-04-04	
Silver, dissolved	< 0.00005	0.0005	0.00005	mg/L	N/A	2017-04-04	
Sodium, dissolved	10.4	N/A	0.02	mg/L	N/A	2017-04-04	
Strontium, dissolved	0.252	N/A	0.001	mg/L	N/A	2017-04-04	
Sulfur, dissolved	24	N/A	1	mg/L	N/A	2017-04-04	
Tellurium, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Thallium, dissolved	< 0.00002	0.003	0.00002	mg/L	N/A	2017-04-04	
Thorium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Tin, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Titanium, dissolved	< 0.005	1	0.005	mg/L	N/A	2017-04-04	
Uranium, dissolved	0.00004	1	0.00002	mg/L	N/A	2017-04-04	
Vanadium, dissolved	< 0.001	N/A	0.001	mg/L	N/A	2017-04-04	
Zinc, dissolved	0.004	0.075	0.004	mg/L	N/A	2017-04-04	
Zirconium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-04-02	2017-04-03	
EPHw19-32	< 250	N/A	250	µg/L	2017-04-02	2017-04-03	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-04-03	
Surrogate: 2-Methylnonane	88		60-140	%	2017-04-02	2017-04-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-04-02	2017-04-03	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-04-02	2017-04-03	
Acridine	< 0.050	0.5	0.050	µg/L	2017-04-02	2017-04-03	
Anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	

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Sample ID: MW-25 (7040006-02) [Water] Sampled: 2017-03-30 00:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(b+j)fluoranthene	< 0.100	N/A	0.100	µg/L	2017-04-02	2017-04-03	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Chrysene	< 0.050	1	0.050	µg/L	2017-04-02	2017-04-03	
Dibenz(a,h)anthracene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-04-02	2017-04-03	
Fluorene	< 0.050	120	0.050	µg/L	2017-04-02	2017-04-03	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Naphthalene	< 0.200	10	0.200	µg/L	2017-04-02	2017-04-03	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-04-02	2017-04-03	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-04-02	2017-04-03	
Quinoline	< 0.050	34	0.050	µg/L	2017-04-02	2017-04-03	
Surrogate: Acridine-d9	80		60-130	%	2017-04-02	2017-04-03	
Surrogate: Naphthalene-d8	82		60-130	%	2017-04-02	2017-04-03	
Surrogate: Perylene-d12	96		60-130	%	2017-04-02	2017-04-03	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-04-03	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-04-03	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-04-03	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-04-03	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-04-03	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	

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Sample ID: MW-25 (7040006-02) [Water] Sampled: 2017-03-30 00:00, Continued

Volatile Organic Compounds (VOC), Continued

cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-04-03	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-04-03	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-04-03	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-04-03	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
1,2-Dibromoethane	< 0.2	N/A	0.2	µg/L	N/A	2017-04-03	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-04-03	
Surrogate: Toluene-d8	99		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	92		70-130	%	N/A	2017-04-03	
Surrogate: Toluene-d8	99		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	92		70-130	%	N/A	2017-04-03	
Surrogate: 1,4-Dichlorobenzene-d4	73		70-130	%	N/A	2017-04-03	

Sample ID: MW-3 (7040006-03) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	10.5	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.17	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	0.264	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	31.0	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	6.38	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	181	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	0.359	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	0.51	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	33	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	33	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	

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Sample ID: MW-3 (7040006-03) [Water] Sampled: 2017-03-30 00:00, Continued

General Parameters, Continued

Alkalinity, Hydroxide (as CaCO ₃)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	< 5	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	7	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.018	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO ₃)	44.9	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	0.770	N/A	0.0500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.040	N/A	0.005	mg/L	N/A	2017-04-04	
Antimony, dissolved	< 0.0001	0.2	0.0001	mg/L	N/A	2017-04-04	
Arsenic, dissolved	< 0.0005	0.05	0.0005	mg/L	N/A	2017-04-04	
Barium, dissolved	0.061	5	0.005	mg/L	N/A	2017-04-04	
Beryllium, dissolved	< 0.0001	0.053	0.0001	mg/L	N/A	2017-04-04	
Bismuth, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Boron, dissolved	0.019	50	0.004	mg/L	N/A	2017-04-04	
Cadmium, dissolved	0.00027	0.0001	0.00001	mg/L	N/A	2017-04-04	
Calcium, dissolved	13.7	N/A	0.2	mg/L	N/A	2017-04-04	
Chromium, dissolved	< 0.0005	N/A	0.0005	mg/L	N/A	2017-04-04	
Cobalt, dissolved	0.00800	0.04	0.00005	mg/L	N/A	2017-04-04	
Copper, dissolved	0.0055	0.02	0.0002	mg/L	N/A	2017-04-04	
Iron, dissolved	0.651	N/A	0.010	mg/L	N/A	2017-04-04	
Lead, dissolved	< 0.0001	0.04	0.0001	mg/L	N/A	2017-04-04	
Lithium, dissolved	0.0002	N/A	0.0001	mg/L	N/A	2017-04-04	
Magnesium, dissolved	2.58	N/A	0.01	mg/L	N/A	2017-04-04	
Manganese, dissolved	1.61	N/A	0.0002	mg/L	N/A	2017-04-04	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-04-03	2017-04-04	
Molybdenum, dissolved	0.0006	10	0.0001	mg/L	N/A	2017-04-04	
Nickel, dissolved	0.0018	0.25	0.0002	mg/L	N/A	2017-04-04	
Phosphorus, dissolved	< 0.05	N/A	0.05	mg/L	N/A	2017-04-04	
Potassium, dissolved	2.51	N/A	0.02	mg/L	N/A	2017-04-04	
Selenium, dissolved	< 0.0005	0.01	0.0005	mg/L	N/A	2017-04-04	
Silicon, dissolved	6.8	N/A	0.5	mg/L	N/A	2017-04-04	
Silver, dissolved	< 0.00005	0.0005	0.00005	mg/L	N/A	2017-04-04	
Sodium, dissolved	10.2	N/A	0.02	mg/L	N/A	2017-04-04	
Strontium, dissolved	0.104	N/A	0.001	mg/L	N/A	2017-04-04	
Sulfur, dissolved	8	N/A	1	mg/L	N/A	2017-04-04	
Tellurium, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Thallium, dissolved	0.00011	0.003	0.00002	mg/L	N/A	2017-04-04	
Thorium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Tin, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Titanium, dissolved	< 0.005	1	0.005	mg/L	N/A	2017-04-04	
Uranium, dissolved	< 0.00002	1	0.00002	mg/L	N/A	2017-04-04	
Vanadium, dissolved	< 0.001	N/A	0.001	mg/L	N/A	2017-04-04	
Zinc, dissolved	0.007	0.075	0.004	mg/L	N/A	2017-04-04	

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Sample ID: MW-3 (7040006-03) [Water] Sampled: 2017-03-30 00:00, Continued

Dissolved Metals, Continued

Zirconium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
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BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-04-02	2017-04-03	
EPHw19-32	< 250	N/A	250	µg/L	2017-04-02	2017-04-03	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-04-03	
Surrogate: 2-Methylnonane	87		60-140	%	2017-04-02	2017-04-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-04-02	2017-04-03	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-04-02	2017-04-03	
Acridine	< 0.050	0.5	0.050	µg/L	2017-04-02	2017-04-03	
Anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(b+j)fluoranthene	< 0.100	N/A	0.100	µg/L	2017-04-02	2017-04-03	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Chrysene	< 0.050	1	0.050	µg/L	2017-04-02	2017-04-03	
Dibenz(a,h)anthracene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-04-02	2017-04-03	
Fluorene	< 0.050	120	0.050	µg/L	2017-04-02	2017-04-03	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Naphthalene	< 0.200	10	0.200	µg/L	2017-04-02	2017-04-03	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-04-02	2017-04-03	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-04-02	2017-04-03	
Quinoline	< 0.050	34	0.050	µg/L	2017-04-02	2017-04-03	
Surrogate: Acridine-d9	79		60-130	%	2017-04-02	2017-04-03	
Surrogate: Naphthalene-d8	81		60-130	%	2017-04-02	2017-04-03	
Surrogate: Perylene-d12	91		60-130	%	2017-04-02	2017-04-03	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-04-03	

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Sample ID: MW-3 (7040006-03) [Water] Sampled: 2017-03-30 00:00, Continued

Volatile Organic Compounds (VOC), Continued							
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-04-03	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-04-03	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-04-03	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-04-03	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-04-03	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-04-03	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-04-03	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-04-03	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
1,2-Dibromoethane	< 0.2	N/A	0.2	µg/L	N/A	2017-04-03	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-04-03	
Surrogate: Toluene-d8	103		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	94		70-130	%	N/A	2017-04-03	
Surrogate: Toluene-d8	103		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	94		70-130	%	N/A	2017-04-03	
Surrogate: 1,4-Dichlorobenzene-d4	90		70-130	%	N/A	2017-04-03	

Sample ID: MW-4 (7040006-04) [Water] Sampled: 2017-03-30 00:00

Anions

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Sample ID: MW-4 (7040006-04) [Water] Sampled: 2017-03-30 00:00, Continued

Anions, Continued

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	17.0	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.13	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	0.017	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	44.9	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	6.69	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	374	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	1.96	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	2.48	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	130	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	130	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	12	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	572	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	1.03	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	144	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	2.49	N/A	0.500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.007	N/A	0.005	mg/L	N/A	2017-04-04	
Antimony, dissolved	< 0.0001	0.2	0.0001	mg/L	N/A	2017-04-04	
Arsenic, dissolved	0.0070	0.05	0.0005	mg/L	N/A	2017-04-04	
Barium, dissolved	0.195	5	0.005	mg/L	N/A	2017-04-04	
Beryllium, dissolved	< 0.0001	0.053	0.0001	mg/L	N/A	2017-04-04	
Bismuth, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Boron, dissolved	0.078	50	0.004	mg/L	N/A	2017-04-04	
Cadmium, dissolved	0.00038	0.0001	0.00001	mg/L	N/A	2017-04-04	
Calcium, dissolved	46.4	N/A	0.2	mg/L	N/A	2017-04-04	
Chromium, dissolved	< 0.0005	N/A	0.0005	mg/L	N/A	2017-04-04	
Cobalt, dissolved	0.0318	0.04	0.00005	mg/L	N/A	2017-04-04	
Copper, dissolved	0.0021	0.02	0.0002	mg/L	N/A	2017-04-04	
Iron, dissolved	44.7	N/A	0.010	mg/L	N/A	2017-04-04	
Lead, dissolved	< 0.0001	0.04	0.0001	mg/L	N/A	2017-04-04	
Lithium, dissolved	0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Magnesium, dissolved	6.77	N/A	0.01	mg/L	N/A	2017-04-04	
Manganese, dissolved	2.64	N/A	0.0002	mg/L	N/A	2017-04-04	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-04-03	2017-04-04	
Molybdenum, dissolved	0.0105	10	0.0001	mg/L	N/A	2017-04-04	
Nickel, dissolved	0.0051	0.25	0.0002	mg/L	N/A	2017-04-04	
Phosphorus, dissolved	< 0.05	N/A	0.05	mg/L	N/A	2017-04-04	

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Sample ID: MW-4 (7040006-04) [Water] Sampled: 2017-03-30 00:00, Continued

Dissolved Metals, Continued

Potassium, dissolved	6.04	N/A	0.02	mg/L	N/A	2017-04-04	
Selenium, dissolved	< 0.0005	0.01	0.0005	mg/L	N/A	2017-04-04	
Silicon, dissolved	11.5	N/A	0.5	mg/L	N/A	2017-04-04	
Silver, dissolved	< 0.00005	0.0005	0.00005	mg/L	N/A	2017-04-04	
Sodium, dissolved	18.3	N/A	0.02	mg/L	N/A	2017-04-04	
Strontium, dissolved	0.285	N/A	0.001	mg/L	N/A	2017-04-04	
Sulfur, dissolved	15	N/A	1	mg/L	N/A	2017-04-04	
Tellurium, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Thallium, dissolved	0.00003	0.003	0.00002	mg/L	N/A	2017-04-04	
Thorium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Tin, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Titanium, dissolved	< 0.005	1	0.005	mg/L	N/A	2017-04-04	
Uranium, dissolved	0.00021	1	0.00002	mg/L	N/A	2017-04-04	
Vanadium, dissolved	< 0.001	N/A	0.001	mg/L	N/A	2017-04-04	
Zinc, dissolved	0.011	0.075	0.004	mg/L	N/A	2017-04-04	
Zirconium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-04-02	2017-04-03	
EPHw19-32	< 250	N/A	250	µg/L	2017-04-02	2017-04-03	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-04-03	
Surrogate: 2-Methylnonane	86		60-140	%	2017-04-02	2017-04-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-04-02	2017-04-03	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-04-02	2017-04-03	
Acridine	< 0.050	0.5	0.050	µg/L	2017-04-02	2017-04-03	
Anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(b+j)fluoranthene	< 0.100	N/A	0.100	µg/L	2017-04-02	2017-04-03	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Chrysene	< 0.050	1	0.050	µg/L	2017-04-02	2017-04-03	
Dibenz(a,h)anthracene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-04-02	2017-04-03	
Fluorene	< 0.050	120	0.050	µg/L	2017-04-02	2017-04-03	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Naphthalene	< 0.200	10	0.200	µg/L	2017-04-02	2017-04-03	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-04-02	2017-04-03	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-04-02	2017-04-03	
Quinoline	< 0.050	34	0.050	µg/L	2017-04-02	2017-04-03	

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Sample ID: MW-4 (7040006-04) [Water] Sampled: 2017-03-30 00:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Surrogate: Acridine-d9	77		60-130	%	2017-04-02	2017-04-03	
Surrogate: Naphthalene-d8	80		60-130	%	2017-04-02	2017-04-03	
Surrogate: Perylene-d12	97		60-130	%	2017-04-02	2017-04-03	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-04-03	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-04-03	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-04-03	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-04-03	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-04-03	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-04-03	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-04-03	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,1,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-04-03	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-04-03	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	

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Sample ID: MW-4 (7040006-04) [Water] Sampled: 2017-03-30 00:00, Continued

Volatile Organic Compounds (VOC), Continued

Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
1,2-Dibromoethane	< 0.2	N/A	0.2	µg/L	N/A	2017-04-03	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-04-03	
Surrogate: Toluene-d8	101		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	93		70-130	%	N/A	2017-04-03	
Surrogate: Toluene-d8	101		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	93		70-130	%	N/A	2017-04-03	
Surrogate: 1,4-Dichlorobenzene-d4	81		70-130	%	N/A	2017-04-03	

Sample ID: Duplicate (7040006-06) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	5.01	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.32	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	2.37	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	109	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	0.009	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	4.01	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	380	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	0.211	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	0.87	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-09	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-09	
Alkalinity, Bicarbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-09	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-09	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-09	
Chemical Oxygen Demand	16	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	49	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.425	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	116	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	3.24	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	6.30	N/A	0.005	mg/L	2017-04-03	2017-04-04	
Antimony, total	< 0.0001	0.2	0.0001	mg/L	2017-04-03	2017-04-04	
Arsenic, total	0.0011	0.05	0.0005	mg/L	2017-04-03	2017-04-04	
Barium, total	0.017	5	0.005	mg/L	2017-04-03	2017-04-04	
Beryllium, total	0.0002	0.053	0.0001	mg/L	2017-04-03	2017-04-04	
Bismuth, total	0.0005	N/A	0.0001	mg/L	2017-04-03	2017-04-04	

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Sample ID: Duplicate (7040006-06) [Water] Sampled: 2017-03-30 00:00, Continued

Total Metals, Continued

Boron, total	0.027	50	0.004	mg/L	2017-04-03	2017-04-04	
Cadmium, total	0.00037	0.0001	0.00001	mg/L	2017-04-03	2017-04-04	
Calcium, total	37.4	N/A	0.2	mg/L	2017-04-03	2017-04-04	
Chromium, total	0.0023	N/A	0.0005	mg/L	2017-04-03	2017-04-04	
Cobalt, total	0.0319	0.04	0.00005	mg/L	2017-04-03	2017-04-04	
Copper, total	0.181	0.02	0.0002	mg/L	2017-04-03	2017-04-04	
Iron, total	18.8	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Lead, total	0.0001	0.04	0.0001	mg/L	2017-04-03	2017-04-04	
Lithium, total	0.0022	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Magnesium, total	5.39	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Manganese, total	0.522	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-04-04	2017-04-05	
Molybdenum, total	0.0004	10	0.0001	mg/L	2017-04-03	2017-04-04	
Nickel, total	0.0164	0.25	0.0002	mg/L	2017-04-03	2017-04-04	
Phosphorus, total	0.35	N/A	0.05	mg/L	2017-04-03	2017-04-04	
Potassium, total	2.50	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Selenium, total	< 0.0005	0.01	0.0005	mg/L	2017-04-03	2017-04-04	
Silicon, total	7.0	N/A	0.5	mg/L	2017-04-03	2017-04-04	
Silver, total	0.00014	0.0005	0.00005	mg/L	2017-04-03	2017-04-04	
Sodium, total	5.13	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Strontium, total	0.121	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Sulfur, total	47	N/A	1	mg/L	2017-04-03	2017-04-04	
Tellurium, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Thallium, total	< 0.00002	0.003	0.00002	mg/L	2017-04-03	2017-04-04	
Thorium, total	0.0015	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Tin, total	0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Titanium, total	0.007	1	0.005	mg/L	2017-04-03	2017-04-04	
Uranium, total	0.00047	1	0.00002	mg/L	2017-04-03	2017-04-04	
Vanadium, total	< 0.001	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Zinc, total	0.056	0.075	0.004	mg/L	2017-04-03	2017-04-04	
Zirconium, total	0.0009	N/A	0.0001	mg/L	2017-04-03	2017-04-04	

Sample ID: SFC-2 (7040006-07) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	15.4	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.19	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	0.524	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	82.6	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	6.45	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	303	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	0.180	1.31	0.02	mg/L	N/A	2017-04-06	

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Sample ID: SFC-2 (7040006-07) [Water] Sampled: 2017-03-30 00:00, Continued

General Parameters, Continued

Nitrogen, Total Kjeldahl	0.43	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	26	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	26	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	10	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	44	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.134	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	105	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	0.958	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	2.92	N/A	0.005	mg/L	2017-04-03	2017-04-04	
Antimony, total	< 0.0001	0.2	0.0001	mg/L	2017-04-03	2017-04-04	
Arsenic, total	< 0.0005	0.05	0.0005	mg/L	2017-04-03	2017-04-04	
Barium, total	0.029	5	0.005	mg/L	2017-04-03	2017-04-04	
Beryllium, total	< 0.0001	0.053	0.0001	mg/L	2017-04-03	2017-04-04	
Bismuth, total	< 0.0001	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Boron, total	0.018	50	0.004	mg/L	2017-04-03	2017-04-04	
Cadmium, total	0.00013	0.0001	0.00001	mg/L	2017-04-03	2017-04-04	
Calcium, total	35.9	N/A	0.2	mg/L	2017-04-03	2017-04-04	
Chromium, total	0.0011	N/A	0.0005	mg/L	2017-04-03	2017-04-04	
Cobalt, total	0.0130	0.04	0.00005	mg/L	2017-04-03	2017-04-04	
Copper, total	0.0718	0.02	0.0002	mg/L	2017-04-03	2017-04-04	
Iron, total	5.96	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Lead, total	< 0.0001	0.04	0.0001	mg/L	2017-04-03	2017-04-04	
Lithium, total	0.0008	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Magnesium, total	3.73	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Manganese, total	0.328	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-04-04	2017-04-05	
Molybdenum, total	0.0050	10	0.0001	mg/L	2017-04-03	2017-04-04	
Nickel, total	0.0065	0.25	0.0002	mg/L	2017-04-03	2017-04-04	
Phosphorus, total	0.10	N/A	0.05	mg/L	2017-04-03	2017-04-04	
Potassium, total	3.20	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Selenium, total	< 0.0005	0.01	0.0005	mg/L	2017-04-03	2017-04-04	
Silicon, total	4.5	N/A	0.5	mg/L	2017-04-03	2017-04-04	
Silver, total	< 0.00005	0.0005	0.00005	mg/L	2017-04-03	2017-04-04	
Sodium, total	10.2	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Strontium, total	0.160	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Sulfur, total	26	N/A	1	mg/L	2017-04-03	2017-04-04	
Tellurium, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Thallium, total	< 0.00002	0.003	0.00002	mg/L	2017-04-03	2017-04-04	
Thorium, total	0.0005	N/A	0.0001	mg/L	2017-04-03	2017-04-04	

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Sample ID: SFC-2 (7040006-07) [Water] Sampled: 2017-03-30 00:00, Continued

Total Metals, Continued

Tin, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Titanium, total	< 0.005	1	0.005	mg/L	2017-04-03	2017-04-04	
Uranium, total	0.00028	1	0.00002	mg/L	2017-04-03	2017-04-04	
Vanadium, total	< 0.001	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Zinc, total	0.026	0.075	0.004	mg/L	2017-04-03	2017-04-04	
Zirconium, total	0.0002	N/A	0.0001	mg/L	2017-04-03	2017-04-04	

Sample ID: SFC-2B (7040006-08) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	5.01	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.35	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	1.81	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	109	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	0.009	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	3.98	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	395	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	0.202	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	0.94	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	18	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	45	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.453	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	119	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	2.75	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	6.48	N/A	0.005	mg/L	2017-04-03	2017-04-04	
Antimony, total	< 0.0001	0.2	0.0001	mg/L	2017-04-03	2017-04-04	
Arsenic, total	0.0011	0.05	0.0005	mg/L	2017-04-03	2017-04-04	
Barium, total	0.017	5	0.005	mg/L	2017-04-03	2017-04-04	
Beryllium, total	0.0002	0.053	0.0001	mg/L	2017-04-03	2017-04-04	
Bismuth, total	< 0.0001	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Boron, total	0.018	50	0.004	mg/L	2017-04-03	2017-04-04	
Cadmium, total	0.00040	0.0001	0.00001	mg/L	2017-04-03	2017-04-04	
Calcium, total	38.5	N/A	0.2	mg/L	2017-04-03	2017-04-04	
Chromium, total	0.0027	N/A	0.0005	mg/L	2017-04-03	2017-04-04	
Cobalt, total	0.0334	0.04	0.00005	mg/L	2017-04-03	2017-04-04	

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Sample ID: SFC-2B (7040006-08) [Water] Sampled: 2017-03-30 00:00, Continued

Total Metals, Continued

Copper, total	0.187	0.02	0.0002	mg/L	2017-04-03	2017-04-04	
Iron, total	19.9	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Lead, total	< 0.0001	0.04	0.0001	mg/L	2017-04-03	2017-04-04	
Lithium, total	0.0022	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Magnesium, total	5.60	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Manganese, total	0.539	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-04-04	2017-04-05	
Molybdenum, total	0.0004	10	0.0001	mg/L	2017-04-03	2017-04-04	
Nickel, total	0.0171	0.25	0.0002	mg/L	2017-04-03	2017-04-04	
Phosphorus, total	0.40	N/A	0.05	mg/L	2017-04-03	2017-04-04	
Potassium, total	2.53	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Selenium, total	< 0.0005	0.01	0.0005	mg/L	2017-04-03	2017-04-04	
Silicon, total	7.1	N/A	0.5	mg/L	2017-04-03	2017-04-04	
Silver, total	< 0.00005	0.0005	0.00005	mg/L	2017-04-03	2017-04-04	
Sodium, total	5.20	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Strontium, total	0.125	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Sulfur, total	49	N/A	1	mg/L	2017-04-03	2017-04-04	
Tellurium, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Thallium, total	< 0.00002	0.003	0.00002	mg/L	2017-04-03	2017-04-04	
Thorium, total	0.0016	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Tin, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Titanium, total	0.007	1	0.005	mg/L	2017-04-03	2017-04-04	
Uranium, total	0.00047	1	0.00002	mg/L	2017-04-03	2017-04-04	
Vanadium, total	< 0.001	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Zinc, total	0.058	0.075	0.004	mg/L	2017-04-03	2017-04-04	
Zirconium, total	0.0002	N/A	0.0001	mg/L	2017-04-03	2017-04-04	

Sample ID: SFC-3 (7040006-09) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	43.8	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.11	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	0.193	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	21.6	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	6.87	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	288	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	0.059	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	0.14	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	21	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	21	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	

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Sample ID: SFC-3 (7040006-09) [Water] Sampled: 2017-03-30 00:00, Continued

General Parameters, Continued

Alkalinity, Hydroxide (as CaCO ₃)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	< 5	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	57	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.165	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO ₃)	54.8	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	0.328	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	3.91	N/A	0.005	mg/L	2017-04-03	2017-04-04	
Antimony, total	< 0.0001	0.2	0.0001	mg/L	2017-04-03	2017-04-04	
Arsenic, total	< 0.0005	0.05	0.0005	mg/L	2017-04-03	2017-04-04	
Barium, total	0.056	5	0.005	mg/L	2017-04-03	2017-04-04	
Beryllium, total	< 0.0001	0.053	0.0001	mg/L	2017-04-03	2017-04-04	
Bismuth, total	< 0.0001	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Boron, total	0.008	50	0.004	mg/L	2017-04-03	2017-04-04	
Cadmium, total	0.00010	0.0001	0.00001	mg/L	2017-04-03	2017-04-04	
Calcium, total	17.6	N/A	0.2	mg/L	2017-04-03	2017-04-04	
Chromium, total	0.0018	N/A	0.0005	mg/L	2017-04-03	2017-04-04	
Cobalt, total	0.00171	0.04	0.00005	mg/L	2017-04-03	2017-04-04	
Copper, total	0.0236	0.02	0.0002	mg/L	2017-04-03	2017-04-04	
Iron, total	2.50	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Lead, total	0.0011	0.04	0.0001	mg/L	2017-04-03	2017-04-04	
Lithium, total	0.0020	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Magnesium, total	2.62	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Manganese, total	0.104	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-04-04	2017-04-05	
Molybdenum, total	0.0020	10	0.0001	mg/L	2017-04-03	2017-04-04	
Nickel, total	0.0019	0.25	0.0002	mg/L	2017-04-03	2017-04-04	
Phosphorus, total	0.11	N/A	0.05	mg/L	2017-04-03	2017-04-04	
Potassium, total	2.40	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Selenium, total	< 0.0005	0.01	0.0005	mg/L	2017-04-03	2017-04-04	
Silicon, total	10.2	N/A	0.5	mg/L	2017-04-03	2017-04-04	
Silver, total	< 0.00005	0.0005	0.00005	mg/L	2017-04-03	2017-04-04	
Sodium, total	34.7	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Strontium, total	0.135	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Sulfur, total	6	N/A	1	mg/L	2017-04-03	2017-04-04	
Tellurium, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Thallium, total	< 0.00002	0.003	0.00002	mg/L	2017-04-03	2017-04-04	
Thorium, total	0.0002	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Tin, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Titanium, total	0.124	1	0.005	mg/L	2017-04-03	2017-04-04	
Uranium, total	0.00008	1	0.00002	mg/L	2017-04-03	2017-04-04	
Vanadium, total	0.005	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Zinc, total	0.022	0.075	0.004	mg/L	2017-04-03	2017-04-04	

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Sample ID: SFC-3 (7040006-09) [Water] Sampled: 2017-03-30 00:00, Continued

Total Metals, Continued

Zirconium, total	0.0008	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
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Sample ID: SFC-4B (7040006-10) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	20.7	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.15	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	0.304	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	28.3	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	7.07	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	189	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	0.054	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	0.15	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	17	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	17	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	7	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	30	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.098	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	53.7	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	0.450	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	2.82	N/A	0.005	mg/L	2017-04-03	2017-04-04	
Antimony, total	< 0.0001	0.2	0.0001	mg/L	2017-04-03	2017-04-04	
Arsenic, total	< 0.0005	0.05	0.0005	mg/L	2017-04-03	2017-04-04	
Barium, total	0.036	5	0.005	mg/L	2017-04-03	2017-04-04	
Beryllium, total	< 0.0001	0.053	0.0001	mg/L	2017-04-03	2017-04-04	
Bismuth, total	< 0.0001	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Boron, total	0.012	50	0.004	mg/L	2017-04-03	2017-04-04	
Cadmium, total	0.00005	0.0001	0.00001	mg/L	2017-04-03	2017-04-04	
Calcium, total	17.4	N/A	0.2	mg/L	2017-04-03	2017-04-04	
Chromium, total	0.0013	N/A	0.0005	mg/L	2017-04-03	2017-04-04	
Cobalt, total	0.00294	0.04	0.00005	mg/L	2017-04-03	2017-04-04	
Copper, total	0.0395	0.02	0.0002	mg/L	2017-04-03	2017-04-04	
Iron, total	2.69	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Lead, total	0.0008	0.04	0.0001	mg/L	2017-04-03	2017-04-04	
Lithium, total	0.0015	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Magnesium, total	2.49	N/A	0.01	mg/L	2017-04-03	2017-04-04	

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Sample ID: SFC-4B (7040006-10) [Water] Sampled: 2017-03-30 00:00, Continued

Total Metals, Continued

Manganese, total	0.186	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-04-04	2017-04-05	
Molybdenum, total	0.0015	10	0.0001	mg/L	2017-04-03	2017-04-04	
Nickel, total	0.0022	0.25	0.0002	mg/L	2017-04-03	2017-04-04	
Phosphorus, total	0.08	N/A	0.05	mg/L	2017-04-03	2017-04-04	
Potassium, total	1.80	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Selenium, total	< 0.0005	0.01	0.0005	mg/L	2017-04-03	2017-04-04	
Silicon, total	8.7	N/A	0.5	mg/L	2017-04-03	2017-04-04	
Silver, total	< 0.00005	0.0005	0.00005	mg/L	2017-04-03	2017-04-04	
Sodium, total	14.9	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Strontium, total	0.125	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Sulfur, total	9	N/A	1	mg/L	2017-04-03	2017-04-04	
Tellurium, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Thallium, total	< 0.00002	0.003	0.00002	mg/L	2017-04-03	2017-04-04	
Thorium, total	0.0002	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Tin, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Titanium, total	0.076	1	0.005	mg/L	2017-04-03	2017-04-04	
Uranium, total	0.00009	1	0.00002	mg/L	2017-04-03	2017-04-04	
Vanadium, total	0.003	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Zinc, total	0.020	0.075	0.004	mg/L	2017-04-03	2017-04-04	
Zirconium, total	0.0007	N/A	0.0001	mg/L	2017-04-03	2017-04-04	

Sample ID: SFC-11 (7040006-11) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	7.33	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.15	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	0.273	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	6.5	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	7.05	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	76.1	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	0.023	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	0.13	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	15	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	15	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	< 5	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	235	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.489	N/A	0.002	mg/L	2017-04-04	2017-04-04	

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Sample ID: SFC-11 (7040006-11) [Water] Sampled: 2017-03-30 00:00, Continued

Calculated Parameters							
Hardness, Total (as CaCO3)	48.9	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	0.399	N/A	0.0500	mg/L	N/A	N/A	
Total Metals							
Aluminum, total	13.8	N/A	0.005	mg/L	2017-04-03	2017-04-04	
Antimony, total	< 0.0001	0.2	0.0001	mg/L	2017-04-03	2017-04-04	
Arsenic, total	0.0010	0.05	0.0005	mg/L	2017-04-03	2017-04-04	
Barium, total	0.119	5	0.005	mg/L	2017-04-03	2017-04-04	
Beryllium, total	0.0002	0.053	0.0001	mg/L	2017-04-03	2017-04-04	
Bismuth, total	< 0.0001	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Boron, total	0.005	50	0.004	mg/L	2017-04-03	2017-04-04	
Cadmium, total	0.00008	0.0001	0.00001	mg/L	2017-04-03	2017-04-04	
Calcium, total	11.4	N/A	0.2	mg/L	2017-04-03	2017-04-04	
Chromium, total	0.0053	N/A	0.0005	mg/L	2017-04-03	2017-04-04	
Cobalt, total	0.00484	0.04	0.00005	mg/L	2017-04-03	2017-04-04	
Copper, total	0.0719	0.02	0.0002	mg/L	2017-04-03	2017-04-04	
Iron, total	8.68	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Lead, total	0.0039	0.04	0.0001	mg/L	2017-04-03	2017-04-04	
Lithium, total	0.0070	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Magnesium, total	4.94	N/A	0.01	mg/L	2017-04-03	2017-04-04	
Manganese, total	0.236	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-04-04	2017-04-05	
Molybdenum, total	0.0006	10	0.0001	mg/L	2017-04-03	2017-04-04	
Nickel, total	0.0050	0.25	0.0002	mg/L	2017-04-03	2017-04-04	
Phosphorus, total	0.41	N/A	0.05	mg/L	2017-04-03	2017-04-04	
Potassium, total	2.57	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Selenium, total	< 0.0005	0.01	0.0005	mg/L	2017-04-03	2017-04-04	
Silicon, total	24.2	N/A	0.5	mg/L	2017-04-03	2017-04-04	
Silver, total	< 0.00005	0.0005	0.00005	mg/L	2017-04-03	2017-04-04	
Sodium, total	9.86	N/A	0.02	mg/L	2017-04-03	2017-04-04	
Strontium, total	0.160	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Sulfur, total	1	N/A	1	mg/L	2017-04-03	2017-04-04	
Tellurium, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Thallium, total	0.00007	0.003	0.00002	mg/L	2017-04-03	2017-04-04	
Thorium, total	0.0006	N/A	0.0001	mg/L	2017-04-03	2017-04-04	
Tin, total	< 0.0002	N/A	0.0002	mg/L	2017-04-03	2017-04-04	
Titanium, total	0.448	1	0.005	mg/L	2017-04-03	2017-04-04	
Uranium, total	0.00022	1	0.00002	mg/L	2017-04-03	2017-04-04	
Vanadium, total	0.017	N/A	0.001	mg/L	2017-04-03	2017-04-04	
Zinc, total	0.031	0.075	0.004	mg/L	2017-04-03	2017-04-04	
Zirconium, total	0.0018	N/A	0.0001	mg/L	2017-04-03	2017-04-04	

Sample ID: L1 (7040006-12) [Water] Sampled: 2017-03-30 00:00

Anions							
Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	

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Sample ID: L1 (7040006-12) [Water] Sampled: 2017-03-30 00:00, Continued

Anions, Continued

Chloride	2.77	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.17	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	2.33	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	28.6	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	6.77	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	230	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	0.034	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	0.91	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	41	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	41	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	22	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	3	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.075	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	94.4	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	3.24	N/A	0.0500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.037	N/A	0.005	mg/L	N/A	2017-04-04	
Antimony, dissolved	< 0.0001	0.2	0.0001	mg/L	N/A	2017-04-04	
Arsenic, dissolved	< 0.0005	0.05	0.0005	mg/L	N/A	2017-04-04	
Barium, dissolved	0.016	5	0.005	mg/L	N/A	2017-04-04	
Beryllium, dissolved	< 0.0001	0.053	0.0001	mg/L	N/A	2017-04-04	
Bismuth, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Boron, dissolved	0.023	50	0.004	mg/L	N/A	2017-04-04	
Cadmium, dissolved	0.00003	0.0001	0.00001	mg/L	N/A	2017-04-04	
Calcium, dissolved	33.6	N/A	0.2	mg/L	N/A	2017-04-04	
Chromium, dissolved	0.0008	N/A	0.0005	mg/L	N/A	2017-04-04	
Cobalt, dissolved	0.00023	0.04	0.00005	mg/L	N/A	2017-04-04	
Copper, dissolved	0.0329	0.02	0.0002	mg/L	N/A	2017-04-04	
Iron, dissolved	0.047	N/A	0.010	mg/L	N/A	2017-04-04	
Lead, dissolved	< 0.0001	0.04	0.0001	mg/L	N/A	2017-04-04	
Lithium, dissolved	0.0002	N/A	0.0001	mg/L	N/A	2017-04-04	
Magnesium, dissolved	2.52	N/A	0.01	mg/L	N/A	2017-04-04	
Manganese, dissolved	0.0042	N/A	0.0002	mg/L	N/A	2017-04-04	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-04-03	2017-04-04	
Molybdenum, dissolved	0.0003	10	0.0001	mg/L	N/A	2017-04-04	
Nickel, dissolved	0.0018	0.25	0.0002	mg/L	N/A	2017-04-04	
Phosphorus, dissolved	< 0.05	N/A	0.05	mg/L	N/A	2017-04-04	
Potassium, dissolved	1.78	N/A	0.02	mg/L	N/A	2017-04-04	

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Dissolved Metals, Continued

Selenium, dissolved	< 0.0005	0.01	0.0005	mg/L	N/A	2017-04-04	
Silicon, dissolved	6.3	N/A	0.5	mg/L	N/A	2017-04-04	
Silver, dissolved	< 0.00005	0.0005	0.00005	mg/L	N/A	2017-04-04	
Sodium, dissolved	3.58	N/A	0.02	mg/L	N/A	2017-04-04	
Strontium, dissolved	0.114	N/A	0.001	mg/L	N/A	2017-04-04	
Sulfur, dissolved	8	N/A	1	mg/L	N/A	2017-04-04	
Tellurium, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Thallium, dissolved	< 0.00002	0.003	0.00002	mg/L	N/A	2017-04-04	
Thorium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Tin, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Titanium, dissolved	< 0.005	1	0.005	mg/L	N/A	2017-04-04	
Uranium, dissolved	< 0.00002	1	0.00002	mg/L	N/A	2017-04-04	
Vanadium, dissolved	< 0.001	N/A	0.001	mg/L	N/A	2017-04-04	
Zinc, dissolved	0.027	0.075	0.004	mg/L	N/A	2017-04-04	
Zirconium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-04-02	2017-04-03	
EPHw19-32	< 250	N/A	250	µg/L	2017-04-02	2017-04-03	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-04-03	
<i>Surrogate: 2-Methylnonane</i>	89		60-140	%	<i>2017-04-02</i>	<i>2017-04-03</i>	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-04-02	2017-04-03	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-04-02	2017-04-03	
Acridine	< 0.050	0.5	0.050	µg/L	2017-04-02	2017-04-03	
Anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(b+j)fluoranthene	< 0.100	N/A	0.100	µg/L	2017-04-02	2017-04-03	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Chrysene	< 0.050	1	0.050	µg/L	2017-04-02	2017-04-03	
Dibenz(a,h)anthracene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-04-02	2017-04-03	
Fluorene	< 0.050	120	0.050	µg/L	2017-04-02	2017-04-03	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Naphthalene	< 0.200	10	0.200	µg/L	2017-04-02	2017-04-03	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-04-02	2017-04-03	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-04-02	2017-04-03	
Quinoline	< 0.050	34	0.050	µg/L	2017-04-02	2017-04-03	
<i>Surrogate: Acridine-d9</i>	83		60-130	%	<i>2017-04-02</i>	<i>2017-04-03</i>	

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Sample ID: L1 (7040006-12) [Water] Sampled: 2017-03-30 00:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Surrogate: Naphthalene-d8	83		60-130	%	2017-04-02	2017-04-03	
Surrogate: Perylene-d12	94		60-130	%	2017-04-02	2017-04-03	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-04-03	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-04-03	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-04-03	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-04-03	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-04-03	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-04-03	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-04-03	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-04-03	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-04-03	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	

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Sample ID: L1 (7040006-12) [Water] Sampled: 2017-03-30 00:00, Continued

Volatile Organic Compounds (VOC), Continued

m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
1,2-Dibromoethane	< 0.2	N/A	0.2	µg/L	N/A	2017-04-03	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-04-03	
Surrogate: Toluene-d8	101		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	92		70-130	%	N/A	2017-04-03	
Surrogate: Toluene-d8	101		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	92		70-130	%	N/A	2017-04-03	
Surrogate: 1,4-Dichlorobenzene-d4	81		70-130	%	N/A	2017-04-03	

Sample ID: GW Int. (7040006-13) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	44.3	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	0.32	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	0.006	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	261	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	6.63	N/A	0.01	pH units	N/A	2017-04-04	HT2
Conductivity (EC)	1050	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	2.25	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	2.51	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	148	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	148	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Chemical Oxygen Demand	14	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	26	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	0.065	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	453	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	2.51	N/A	0.500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.137	N/A	0.005	mg/L	N/A	2017-04-04	
Antimony, dissolved	< 0.0001	0.2	0.0001	mg/L	N/A	2017-04-04	
Arsenic, dissolved	0.0006	0.05	0.0005	mg/L	N/A	2017-04-04	
Barium, dissolved	0.088	5	0.005	mg/L	N/A	2017-04-04	
Beryllium, dissolved	< 0.0001	0.053	0.0001	mg/L	N/A	2017-04-04	
Bismuth, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Boron, dissolved	0.335	50	0.004	mg/L	N/A	2017-04-04	

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Sample ID: GW Int. (7040006-13) [Water] Sampled: 2017-03-30 00:00, Continued

Dissolved Metals, Continued

Cadmium, dissolved	0.00006	0.0001	0.00001	mg/L	N/A	2017-04-04	
Calcium, dissolved	155	N/A	0.2	mg/L	N/A	2017-04-04	
Chromium, dissolved	0.0010	N/A	0.0005	mg/L	N/A	2017-04-04	
Cobalt, dissolved	0.0255	0.04	0.00005	mg/L	N/A	2017-04-04	
Copper, dissolved	0.0007	0.02	0.0002	mg/L	N/A	2017-04-04	
Iron, dissolved	25.3	N/A	0.010	mg/L	N/A	2017-04-04	
Lead, dissolved	< 0.0001	0.04	0.0001	mg/L	N/A	2017-04-04	
Lithium, dissolved	0.0016	N/A	0.0001	mg/L	N/A	2017-04-04	
Magnesium, dissolved	15.9	N/A	0.01	mg/L	N/A	2017-04-04	
Manganese, dissolved	2.87	N/A	0.0002	mg/L	N/A	2017-04-04	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-04-03	2017-04-04	
Molybdenum, dissolved	0.0002	10	0.0001	mg/L	N/A	2017-04-04	
Nickel, dissolved	0.0144	0.25	0.0002	mg/L	N/A	2017-04-04	
Phosphorus, dissolved	< 0.05	N/A	0.05	mg/L	N/A	2017-04-04	
Potassium, dissolved	6.59	N/A	0.02	mg/L	N/A	2017-04-04	
Selenium, dissolved	< 0.0005	0.01	0.0005	mg/L	N/A	2017-04-04	
Silicon, dissolved	11.5	N/A	0.5	mg/L	N/A	2017-04-04	
Silver, dissolved	< 0.00005	0.0005	0.00005	mg/L	N/A	2017-04-04	
Sodium, dissolved	34.1	N/A	0.02	mg/L	N/A	2017-04-04	
Strontium, dissolved	0.854	N/A	0.001	mg/L	N/A	2017-04-04	
Sulfur, dissolved	107	N/A	1	mg/L	N/A	2017-04-04	
Tellurium, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Thallium, dissolved	< 0.00002	0.003	0.00002	mg/L	N/A	2017-04-04	
Thorium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Tin, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Titanium, dissolved	< 0.005	1	0.005	mg/L	N/A	2017-04-04	
Uranium, dissolved	< 0.00002	1	0.00002	mg/L	N/A	2017-04-04	
Vanadium, dissolved	< 0.001	N/A	0.001	mg/L	N/A	2017-04-04	
Zinc, dissolved	0.258	0.075	0.004	mg/L	N/A	2017-04-04	
Zirconium, dissolved	0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-04-02	2017-04-03	
EPHw19-32	< 250	N/A	250	µg/L	2017-04-02	2017-04-03	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-04-03	
Surrogate: 2-Methylnonane	93		60-140	%	2017-04-02	2017-04-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	0.538	60	0.050	µg/L	2017-04-02	2017-04-03	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-04-02	2017-04-03	
Acridine	< 0.050	0.5	0.050	µg/L	2017-04-02	2017-04-03	
Anthracene	0.024	1	0.010	µg/L	2017-04-02	2017-04-03	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	

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Polycyclic Aromatic Hydrocarbons (PAH), Continued

Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(b+j)fluoranthene	< 0.100	N/A	0.100	µg/L	2017-04-02	2017-04-03	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Chrysene	< 0.050	1	0.050	µg/L	2017-04-02	2017-04-03	
Dibenz(a,h)anthracene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Fluoranthene	0.109	2	0.030	µg/L	2017-04-02	2017-04-03	
Fluorene	0.232	120	0.050	µg/L	2017-04-02	2017-04-03	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Naphthalene	< 0.200	10	0.200	µg/L	2017-04-02	2017-04-03	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-04-02	2017-04-03	
Pyrene	0.060	0.2	0.020	µg/L	2017-04-02	2017-04-03	
Quinoline	< 0.050	34	0.050	µg/L	2017-04-02	2017-04-03	
Surrogate: Acridine-d9	84		60-130	%	2017-04-02	2017-04-03	
Surrogate: Naphthalene-d8	88		60-130	%	2017-04-02	2017-04-03	
Surrogate: Perylene-d12	101		60-130	%	2017-04-02	2017-04-03	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-04-03	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-04-03	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-04-03	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-04-03	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-04-03	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	

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Sample ID: GW Int. (7040006-13) [Water] Sampled: 2017-03-30 00:00, Continued

Volatile Organic Compounds (VOC), Continued

trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-04-03	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-04-03	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-04-03	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-04-03	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
1,2-Dibromoethane	< 0.2	N/A	0.2	µg/L	N/A	2017-04-03	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-04-03	
Surrogate: Toluene-d8	102		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	93		70-130	%	N/A	2017-04-03	
Surrogate: Toluene-d8	102		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	93		70-130	%	N/A	2017-04-03	
Surrogate: 1,4-Dichlorobenzene-d4	85		70-130	%	N/A	2017-04-03	

Sample ID: Trip Blank (7040006-14) [Water] Sampled: 2017-03-30 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-04-04	
Chloride	0.17	1500	0.10	mg/L	N/A	2017-04-04	
Fluoride	< 0.10	2	0.1	mg/L	N/A	2017-04-04	
Nitrate+Nitrite (as N)	< 0.005	400	0.005	mg/L	N/A	2017-04-07	
Sulfate	1.2	1000	1.0	mg/L	N/A	2017-04-04	
Nitrite (as N)	< 0.005	0.2	0.005	mg/L	N/A	2017-04-01	

General Parameters

pH	5.72	N/A	0.01	pH units	N/A	2017-04-06	HT2
Conductivity (EC)	< 2.0	N/A	2.0	µS/cm	N/A	2017-04-04	
Ammonia, Total (as N)	< 0.020	1.31	0.02	mg/L	N/A	2017-04-06	
Nitrogen, Total Kjeldahl	< 0.05	N/A	0.05	mg/L	2017-04-04	2017-04-05	
Alkalinity, Total (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Bicarbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Carbonate (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	
Alkalinity, Hydroxide (as CaCO3)	< 1	N/A	2	mg/L	N/A	2017-04-04	

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Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: Trip Blank (7040006-14) [Water] Sampled: 2017-03-30 00:00, Continued

General Parameters, Continued

Chemical Oxygen Demand	< 5	N/A	20	mg/L	N/A	2017-04-04	
Solids, Total Suspended	< 2	N/A	2	mg/L	N/A	2017-04-04	
Phosphorus, Total (as P)	< 0.002	N/A	0.002	mg/L	2017-04-04	2017-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	< 0.500	N/A	0.500	mg/L	N/A	N/A	
Nitrogen, Total	< 0.0500	N/A	0.0500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.005	N/A	0.005	mg/L	N/A	2017-04-04	
Antimony, dissolved	< 0.0001	0.2	0.0001	mg/L	N/A	2017-04-04	
Arsenic, dissolved	< 0.0005	0.05	0.0005	mg/L	N/A	2017-04-04	
Barium, dissolved	< 0.005	5	0.005	mg/L	N/A	2017-04-04	
Beryllium, dissolved	< 0.0001	0.053	0.0001	mg/L	N/A	2017-04-04	
Bismuth, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Boron, dissolved	< 0.004	50	0.004	mg/L	N/A	2017-04-04	
Cadmium, dissolved	< 0.00001	0.0001	0.00001	mg/L	N/A	2017-04-04	
Calcium, dissolved	< 0.2	N/A	0.2	mg/L	N/A	2017-04-04	
Chromium, dissolved	0.0012	N/A	0.0005	mg/L	N/A	2017-04-04	
Cobalt, dissolved	< 0.00005	0.04	0.00005	mg/L	N/A	2017-04-04	
Copper, dissolved	< 0.0002	0.02	0.0002	mg/L	N/A	2017-04-04	
Iron, dissolved	< 0.010	N/A	0.010	mg/L	N/A	2017-04-04	
Lead, dissolved	< 0.0001	0.04	0.0001	mg/L	N/A	2017-04-04	
Lithium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Magnesium, dissolved	< 0.01	N/A	0.01	mg/L	N/A	2017-04-04	
Manganese, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-04-03	2017-04-04	
Molybdenum, dissolved	< 0.0001	10	0.0001	mg/L	N/A	2017-04-04	
Nickel, dissolved	0.0004	0.25	0.0002	mg/L	N/A	2017-04-04	
Phosphorus, dissolved	< 0.05	N/A	0.05	mg/L	N/A	2017-04-04	
Potassium, dissolved	< 0.02	N/A	0.02	mg/L	N/A	2017-04-04	
Selenium, dissolved	< 0.0005	0.01	0.0005	mg/L	N/A	2017-04-04	
Silicon, dissolved	< 0.5	N/A	0.5	mg/L	N/A	2017-04-04	
Silver, dissolved	< 0.00005	0.0005	0.00005	mg/L	N/A	2017-04-04	
Sodium, dissolved	< 0.02	N/A	0.02	mg/L	N/A	2017-04-04	
Strontium, dissolved	< 0.001	N/A	0.001	mg/L	N/A	2017-04-04	
Sulfur, dissolved	< 1	N/A	1	mg/L	N/A	2017-04-04	
Tellurium, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Thallium, dissolved	< 0.00002	0.003	0.00002	mg/L	N/A	2017-04-04	
Thorium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	
Tin, dissolved	< 0.0002	N/A	0.0002	mg/L	N/A	2017-04-04	
Titanium, dissolved	< 0.005	1	0.005	mg/L	N/A	2017-04-04	
Uranium, dissolved	< 0.00002	1	0.00002	mg/L	N/A	2017-04-04	
Vanadium, dissolved	< 0.001	N/A	0.001	mg/L	N/A	2017-04-04	
Zinc, dissolved	< 0.004	0.075	0.004	mg/L	N/A	2017-04-04	
Zirconium, dissolved	< 0.0001	N/A	0.0001	mg/L	N/A	2017-04-04	

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Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: Trip Blank (7040006-14) [Water] Sampled: 2017-03-30 00:00, Continued

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-04-02	2017-04-03	
EPHw19-32	< 250	N/A	250	µg/L	2017-04-02	2017-04-03	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-04-03	
<i>Surrogate: 2-Methylnonane</i>	83		60-140	%	2017-04-02	2017-04-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-04-02	2017-04-03	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-04-02	2017-04-03	
Acridine	< 0.050	0.5	0.050	µg/L	2017-04-02	2017-04-03	
Anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-04-02	2017-04-03	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(b+j)fluoranthene	< 0.100	N/A	0.100	µg/L	2017-04-02	2017-04-03	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Chrysene	< 0.050	1	0.050	µg/L	2017-04-02	2017-04-03	
Dibenz(a,h)anthracene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-04-02	2017-04-03	
Fluorene	< 0.050	120	0.050	µg/L	2017-04-02	2017-04-03	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-04-02	2017-04-03	
Naphthalene	< 0.200	10	0.200	µg/L	2017-04-02	2017-04-03	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-04-02	2017-04-03	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-04-02	2017-04-03	
Quinoline	< 0.050	34	0.050	µg/L	2017-04-02	2017-04-03	
<i>Surrogate: Acridine-d9</i>	78		60-130	%	2017-04-02	2017-04-03	
<i>Surrogate: Naphthalene-d8</i>	80		60-130	%	2017-04-02	2017-04-03	
<i>Surrogate: Perylene-d12</i>	95		60-130	%	2017-04-02	2017-04-03	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-04-03	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-04-03	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-04-03	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-04-03	

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Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: Trip Blank (7040006-14) [Water] Sampled: 2017-03-30 00:00, Continued

Volatile Organic Compounds (VOC), Continued

Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-04-03	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-04-03	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-04-03	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-04-03	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-04-03	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-04-03	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-04-03	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-04-03	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-04-03	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-04-03	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-04-03	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-04-03	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-04-03	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-04-03	
1,2-Dibromoethane	< 0.2	N/A	0.2	µg/L	N/A	2017-04-03	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-04-03	
Surrogate: Toluene-d8	101		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	92		70-130	%	N/A	2017-04-03	
Surrogate: Toluene-d8	101		70-130	%	N/A	2017-04-03	
Surrogate: 4-Bromofluorobenzene	92		70-130	%	N/A	2017-04-03	
Surrogate: 1,4-Dichlorobenzene-d4	77		70-130	%	N/A	2017-04-03	

REPORTED TO Morrison Hershfield Limited - Burnaby
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WORK ORDER 7040006
REPORTED 2017-04-10

Sample / Analysis Qualifiers:

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

RA1 The Reported Detection Limit (RDL) has been raised due to matrix interference.

S02 Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.

S09a The surrogate recovery for this sample is outside of established control limits due to sample matrix effect

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The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC 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.

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	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Anions, Batch B7D0008									
Blank (B7D0008-BLK1)			Prepared: 2017-04-01, Analyzed: 2017-04-01						
Nitrite (as N)	< 0.005	0.005 mg/L							
LCS (B7D0008-BS1)			Prepared: 2017-04-01, Analyzed: 2017-04-01						
Nitrite (as N)	0.050	0.005 mg/L	0.0500		101	90-110			
Duplicate (B7D0008-DUP1)			Source: 7040006-04 Prepared: 2017-04-01, Analyzed: 2017-04-01						
Nitrite (as N)	< 0.005	0.005 mg/L		< 0.005				20	
Matrix Spike (B7D0008-MS1)			Source: 7040006-10 Prepared: 2017-04-01, Analyzed: 2017-04-01						
Nitrite (as N)	0.050	0.005 mg/L	0.0500	< 0.005	97	80-120			
Anions, Batch B7D0118									
Blank (B7D0118-BLK1)			Prepared: 2017-04-07, Analyzed: 2017-04-07						
Nitrate+Nitrite (as N)	< 0.005	0.005 mg/L							
Blank (B7D0118-BLK2)			Prepared: 2017-04-07, Analyzed: 2017-04-07						
Nitrate+Nitrite (as N)	< 0.005	0.005 mg/L							
Blank (B7D0118-BLK3)			Prepared: 2017-04-07, Analyzed: 2017-04-07						
Nitrate+Nitrite (as N)	< 0.005	0.005 mg/L							
LCS (B7D0118-BS1)			Prepared: 2017-04-07, Analyzed: 2017-04-07						
Nitrate+Nitrite (as N)	0.510	0.005 mg/L	0.500		102	91-108			
LCS (B7D0118-BS2)			Prepared: 2017-04-07, Analyzed: 2017-04-07						
Nitrate+Nitrite (as N)	0.516	0.005 mg/L	0.500		103	91-108			
LCS (B7D0118-BS3)			Prepared: 2017-04-07, Analyzed: 2017-04-07						
Nitrate+Nitrite (as N)	0.502	0.005 mg/L	0.500		100	91-108			
Duplicate (B7D0118-DUP1)			Source: 7040006-04 Prepared: 2017-04-07, Analyzed: 2017-04-07						
Nitrate+Nitrite (as N)	0.018	0.005 mg/L		0.017				15	

APPENDIX 1: QUALITY CONTROL DATA

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Anions, Batch B7D0118, Continued									
Matrix Spike (B7D0118-MS1)		Source: 7040006-04		Prepared: 2017-04-07, Analyzed: 2017-04-07					
Nitrate+Nitrite (as N)	0.119	0.005 mg/L	0.125	0.017	82	81-118			
Anions, Batch B7D0132									
Blank (B7D0132-BLK1)		Prepared: 2017-04-04, Analyzed: 2017-04-04							
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.01 mg/L							
Sulfate	< 1.0	1.0 mg/L							
Blank (B7D0132-BLK2)		Prepared: 2017-04-04, Analyzed: 2017-04-04							
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.01 mg/L							
Sulfate	< 1.0	1.0 mg/L							
LCS (B7D0132-BS1)		Prepared: 2017-04-04, Analyzed: 2017-04-04							
Bromide	3.82	0.10 mg/L	4.00		96	85-115			
Chloride	15.1	0.10 mg/L	16.0		94	90-110			
Fluoride	3.70	0.01 mg/L	4.00		93	88-108			
Sulfate	15.5	1.0 mg/L	16.0		97	91-109			
LCS (B7D0132-BS2)		Prepared: 2017-04-04, Analyzed: 2017-04-04							
Bromide	3.83	0.10 mg/L	4.00		96	85-115			
Chloride	15.1	0.10 mg/L	16.0		94	90-110			
Fluoride	3.73	0.01 mg/L	4.00		93	88-108			
Sulfate	14.9	1.0 mg/L	16.0		93	91-109			
BCMOE Aggregate Hydrocarbons, Batch B7D0019									
Blank (B7D0019-BLK1)		Prepared: 2017-04-02, Analyzed: 2017-04-03							
EPHw10-19	< 250	250 µg/L							
EPHw19-32	< 250	250 µg/L							
Surrogate: 2-Methylnonane	383	µg/L	444		86	60-140			
LCS (B7D0019-BS2)		Prepared: 2017-04-02, Analyzed: 2017-04-03							
EPHw10-19	15600	250 µg/L	15500		101	70-130			
EPHw19-32	21500	250 µg/L	22000		98	70-130			
Surrogate: 2-Methylnonane	449	µg/L	444		101	60-140			
BCMOE Aggregate Hydrocarbons, Batch B7D0022									
Blank (B7D0022-BLK1)		Prepared: 2017-04-03, Analyzed: 2017-04-03							
VHw (6-10)	< 100	100 µg/L							
LCS (B7D0022-BS2)		Prepared: 2017-04-03, Analyzed: 2017-04-03							
VHw (6-10)	3880	100 µg/L	3300		118	80-120			
Duplicate (B7D0022-DUP1)		Source: 7040006-04		Prepared: 2017-04-03, Analyzed: 2017-04-03					
VHw (6-10)	< 100	100 µg/L		< 100				27	
BCMOE Aggregate Hydrocarbons, Batch B7D0165									
Blank (B7D0165-BLK1)		Prepared: 2017-04-04, Analyzed: 2017-04-04							
EPHw10-19	< 250	250 µg/L							S09

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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BCMOE Aggregate Hydrocarbons, Batch B7D0165, Continued

Blank (B7D0165-BLK1), Continued			Prepared: 2017-04-04, Analyzed: 2017-04-04				S09	
EPHw19-32	< 250	250 µg/L						
Surrogate: 2-Methylnonane	260	µg/L	445		58	60-140		
LCS (B7D0165-BS2)			Prepared: 2017-04-04, Analyzed: 2017-04-04					
EPHw10-19	14200	250 µg/L	15700		91	70-130		
EPHw19-32	19800	250 µg/L	22300		89	70-130		
Surrogate: 2-Methylnonane	401	µg/L	450		89	60-140		

Dissolved Metals, Batch B7D0094

Blank (B7D0094-BLK1)			Prepared: 2017-04-03, Analyzed: 2017-04-04					
Mercury, dissolved	< 0.00002	0.00002 mg/L						
Reference (B7D0094-SRM1)			Prepared: 2017-04-03, Analyzed: 2017-04-04					
Mercury, dissolved	0.00494	0.00002 mg/L	0.00489		101	50-150		

Dissolved Metals, Batch B7D0098

Blank (B7D0098-BLK1)			Prepared: 2017-04-04, Analyzed: 2017-04-04					
Aluminum, dissolved	< 0.005	0.005 mg/L						
Antimony, dissolved	< 0.0001	0.0001 mg/L						
Arsenic, dissolved	< 0.0005	0.0005 mg/L						
Barium, dissolved	< 0.005	0.005 mg/L						
Beryllium, dissolved	< 0.0001	0.0001 mg/L						
Bismuth, dissolved	< 0.0001	0.0001 mg/L						
Boron, dissolved	< 0.004	0.004 mg/L						
Cadmium, dissolved	< 0.00001	0.00001 mg/L						
Calcium, dissolved	< 0.2	0.2 mg/L						
Chromium, dissolved	< 0.0005	0.0005 mg/L						
Cobalt, dissolved	< 0.00005	0.00005 mg/L						
Copper, dissolved	< 0.0002	0.0002 mg/L						
Iron, dissolved	< 0.010	0.010 mg/L						
Lead, dissolved	< 0.0001	0.0001 mg/L						
Lithium, dissolved	< 0.0001	0.0001 mg/L						
Magnesium, dissolved	< 0.01	0.01 mg/L						
Manganese, dissolved	< 0.0002	0.0002 mg/L						
Molybdenum, dissolved	< 0.0001	0.0001 mg/L						
Nickel, dissolved	< 0.0002	0.0002 mg/L						
Phosphorus, dissolved	< 0.05	0.05 mg/L						
Potassium, dissolved	< 0.02	0.02 mg/L						
Selenium, dissolved	< 0.0005	0.0005 mg/L						
Silicon, dissolved	< 0.5	0.5 mg/L						
Silver, dissolved	< 0.00005	0.00005 mg/L						
Sodium, dissolved	< 0.02	0.02 mg/L						
Strontium, dissolved	< 0.001	0.001 mg/L						
Sulfur, dissolved	< 1	1 mg/L						
Tellurium, dissolved	< 0.0002	0.0002 mg/L						
Thallium, dissolved	< 0.00002	0.00002 mg/L						
Thorium, dissolved	< 0.0001	0.0001 mg/L						
Tin, dissolved	< 0.0002	0.0002 mg/L						
Titanium, dissolved	< 0.005	0.005 mg/L						
Uranium, dissolved	< 0.00002	0.00002 mg/L						
Vanadium, dissolved	< 0.001	0.001 mg/L						
Zinc, dissolved	< 0.004	0.004 mg/L						
Zirconium, dissolved	< 0.0001	0.0001 mg/L						

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Dissolved Metals, Batch B7D0098, Continued

Reference (B7D0098-SRM1)

Prepared: 2017-04-04, Analyzed: 2017-04-04

Aluminum, dissolved	0.225	0.005 mg/L	0.233		96	58-142			
Antimony, dissolved	0.0448	0.0001 mg/L	0.0430		104	75-125			
Arsenic, dissolved	0.430	0.0005 mg/L	0.438		98	81-119			
Barium, dissolved	3.36	0.005 mg/L	3.35		100	83-117			
Beryllium, dissolved	0.212	0.0001 mg/L	0.213		100	80-120			
Boron, dissolved	1.69	0.004 mg/L	1.74		97	74-117			
Cadmium, dissolved	0.221	0.00001 mg/L	0.224		99	83-117			
Calcium, dissolved	7.8	0.2 mg/L	7.69		102	76-124			
Chromium, dissolved	0.453	0.0005 mg/L	0.437		104	81-119			
Cobalt, dissolved	0.132	0.00005 mg/L	0.128		103	76-124			
Copper, dissolved	0.871	0.0002 mg/L	0.844		103	84-116			
Iron, dissolved	1.30	0.010 mg/L	1.29		101	74-126			
Lead, dissolved	0.114	0.0001 mg/L	0.112		101	72-128			
Lithium, dissolved	0.104	0.0001 mg/L	0.104		100	60-140			
Magnesium, dissolved	6.82	0.01 mg/L	6.92		99	81-119			
Manganese, dissolved	0.352	0.0002 mg/L	0.345		102	84-116			
Molybdenum, dissolved	0.417	0.0001 mg/L	0.426		98	83-117			
Nickel, dissolved	0.857	0.0002 mg/L	0.840		102	74-126			
Phosphorus, dissolved	0.49	0.05 mg/L	0.495		99	68-132			
Potassium, dissolved	3.20	0.02 mg/L	3.19		100	74-126			
Selenium, dissolved	0.0333	0.0005 mg/L	0.0331		101	70-130			
Sodium, dissolved	18.9	0.02 mg/L	19.1		99	72-128			
Strontium, dissolved	0.895	0.001 mg/L	0.916		98	84-113			
Thallium, dissolved	0.0398	0.00002 mg/L	0.0393		101	57-143			
Uranium, dissolved	0.265	0.00002 mg/L	0.266		99	85-115			
Vanadium, dissolved	0.867	0.001 mg/L	0.869		100	87-113			
Zinc, dissolved	0.867	0.004 mg/L	0.881		98	72-128			

General Parameters, Batch B7D0055

Blank (B7D0055-BLK1)

Prepared: 2017-04-04, Analyzed: 2017-04-04

Conductivity (EC)	< 2.0	2.0 µS/cm							
Alkalinity, Total (as CaCO3)	< 1	2 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1	2 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1	2 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1	2 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1	2 mg/L							

Blank (B7D0055-BLK2)

Prepared: 2017-04-04, Analyzed: 2017-04-04

Conductivity (EC)	< 2.0	2.0 µS/cm							
Alkalinity, Total (as CaCO3)	< 1	2 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1	2 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1	2 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1	2 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1	2 mg/L							

LCS (B7D0055-BS1)

Prepared: 2017-04-04, Analyzed: 2017-04-04

Alkalinity, Total (as CaCO3)	103	2 mg/L	100		103	92-106			
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LCS (B7D0055-BS2)

Prepared: 2017-04-04, Analyzed: 2017-04-04

Alkalinity, Total (as CaCO3)	102	2 mg/L	100		102	92-106			
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LCS (B7D0055-BS3)

Prepared: 2017-04-04, Analyzed: 2017-04-04

Conductivity (EC)	1400	2.0 µS/cm	1410		99	95-104			
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LCS (B7D0055-BS4)

Prepared: 2017-04-04, Analyzed: 2017-04-04

Conductivity (EC)	1410	2.0 µS/cm	1410		100	95-104			
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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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General Parameters, Batch B7D0055, Continued

Duplicate (B7D0055-DUP2)		Source: 7040006-13		Prepared: 2017-04-04, Analyzed: 2017-04-04					
pH	6.63	0.01	pH units	6.63			< 1	4	HT2
Conductivity (EC)	1060	2.0	µS/cm	1050			< 1	5	
Alkalinity, Total (as CaCO3)	148	2	mg/L	148			< 1	10	
Alkalinity, Phenolphthalein (as CaCO3)	< 1	2	mg/L	< 1				10	
Alkalinity, Bicarbonate (as CaCO3)	148	2	mg/L	148			< 1	10	
Alkalinity, Carbonate (as CaCO3)	< 1	2	mg/L	< 1				10	
Alkalinity, Hydroxide (as CaCO3)	< 1	2	mg/L	< 1				10	
Reference (B7D0055-SRM1)				Prepared: 2017-04-04, Analyzed: 2017-04-04					
pH	6.99	0.01	pH units	7.00	100	98-102			HT2
Reference (B7D0055-SRM2)				Prepared: 2017-04-04, Analyzed: 2017-04-04					
pH	7.00	0.01	pH units	7.00	100	98-102			HT2

General Parameters, Batch B7D0122

Blank (B7D0122-BLK1)				Prepared: 2017-04-06, Analyzed: 2017-04-06					
Ammonia, Total (as N)	< 0.020	0.005	mg/L						
Blank (B7D0122-BLK2)				Prepared: 2017-04-06, Analyzed: 2017-04-06					
Ammonia, Total (as N)	< 0.020	0.005	mg/L						
Blank (B7D0122-BLK3)				Prepared: 2017-04-06, Analyzed: 2017-04-06					
Ammonia, Total (as N)	< 0.020	0.005	mg/L						
LCS (B7D0122-BS1)				Prepared: 2017-04-06, Analyzed: 2017-04-06					
Ammonia, Total (as N)	1.03	0.005	mg/L	1.00	103	86-111			
LCS (B7D0122-BS2)				Prepared: 2017-04-06, Analyzed: 2017-04-06					
Ammonia, Total (as N)	1.03	0.005	mg/L	1.00	103	86-111			
LCS (B7D0122-BS3)				Prepared: 2017-04-06, Analyzed: 2017-04-06					
Ammonia, Total (as N)	1.02	0.005	mg/L	1.00	102	86-111			
Duplicate (B7D0122-DUP1)		Source: 7040006-03		Prepared: 2017-04-06, Analyzed: 2017-04-06					
Ammonia, Total (as N)	0.364	0.005	mg/L	0.359			1	15	
Matrix Spike (B7D0122-MS1)		Source: 7040006-03		Prepared: 2017-04-06, Analyzed: 2017-04-06					
Ammonia, Total (as N)	0.555	0.005	mg/L	0.250	0.359	78	76-121		

General Parameters, Batch B7D0136

Blank (B7D0136-BLK1)				Prepared: 2017-04-04, Analyzed: 2017-04-04					
Phosphorus, Total (as P)	< 0.002	0.002	mg/L						
LCS (B7D0136-BS1)				Prepared: 2017-04-04, Analyzed: 2017-04-04					
Phosphorus, Total (as P)	0.093	0.002	mg/L	0.100	93	80-112			

General Parameters, Batch B7D0153

Blank (B7D0153-BLK1)				Prepared: 2017-04-04, Analyzed: 2017-04-04					
Solids, Total Suspended	< 1	2	mg/L						
LCS (B7D0153-BS1)				Prepared: 2017-04-04, Analyzed: 2017-04-04					
Solids, Total Suspended	50	2	mg/L	50.0	100	91-106			

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
General Parameters, Batch B7D0153, Continued									
Reference (B7D0153-SRM1)			Prepared: 2017-04-04, Analyzed: 2017-04-04						
Solids, Total Suspended	392	2 mg/L	382		103	80-120			
General Parameters, Batch B7D0163									
Blank (B7D0163-BLK1)			Prepared: 2017-04-04, Analyzed: 2017-04-04						
Chemical Oxygen Demand	< 5	20 mg/L							
LCS (B7D0163-BS1)			Prepared: 2017-04-04, Analyzed: 2017-04-04						
Chemical Oxygen Demand	51	20 mg/L	50.0		103	89-115			
Duplicate (B7D0163-DUP1)			Source: 7040006-03		Prepared: 2017-04-04, Analyzed: 2017-04-04				
Chemical Oxygen Demand	6	20 mg/L		< 5				14	
Matrix Spike (B7D0163-MS1)			Source: 7040006-03		Prepared: 2017-04-04, Analyzed: 2017-04-04				
Chemical Oxygen Demand	201	20 mg/L	200	< 5	98	75-125			
General Parameters, Batch B7D0175									
Blank (B7D0175-BLK1)			Prepared: 2017-04-04, Analyzed: 2017-04-05						
Nitrogen, Total Kjeldahl	< 0.05	0.05 mg/L							
Blank (B7D0175-BLK2)			Prepared: 2017-04-04, Analyzed: 2017-04-05						
Nitrogen, Total Kjeldahl	< 0.05	0.05 mg/L							
LCS (B7D0175-BS1)			Prepared: 2017-04-04, Analyzed: 2017-04-05						
Nitrogen, Total Kjeldahl	10.5	0.05 mg/L	10.0		105	84-121			
LCS (B7D0175-BS2)			Prepared: 2017-04-04, Analyzed: 2017-04-05						
Nitrogen, Total Kjeldahl	10.5	0.05 mg/L	10.0		105	84-121			
General Parameters, Batch B7D0312									
Reference (B7D0312-SRM1)			Prepared: 2017-04-06, Analyzed: 2017-04-06						
pH	7.03	0.01 pH units	7.02		100	98-102			
General Parameters, Batch B7D0494									
Blank (B7D0494-BLK1)			Prepared: 2017-04-09, Analyzed: 2017-04-09						
Alkalinity, Total (as CaCO ₃)	< 1	2 mg/L							
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1	2 mg/L							
Alkalinity, Bicarbonate (as CaCO ₃)	< 1	2 mg/L							
Alkalinity, Carbonate (as CaCO ₃)	< 1	2 mg/L							
Alkalinity, Hydroxide (as CaCO ₃)	< 1	2 mg/L							
Blank (B7D0494-BLK2)			Prepared: 2017-04-09, Analyzed: 2017-04-09						
Alkalinity, Total (as CaCO ₃)	< 1	2 mg/L							
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1	2 mg/L							
Alkalinity, Bicarbonate (as CaCO ₃)	< 1	2 mg/L							
Alkalinity, Carbonate (as CaCO ₃)	< 1	2 mg/L							
Alkalinity, Hydroxide (as CaCO ₃)	< 1	2 mg/L							
LCS (B7D0494-BS1)			Prepared: 2017-04-09, Analyzed: 2017-04-09						
Alkalinity, Total (as CaCO ₃)	103	2 mg/L	100		103	92-106			
LCS (B7D0494-BS3)			Prepared: 2017-04-09, Analyzed: 2017-04-09						
Alkalinity, Total (as CaCO ₃)	103	2 mg/L	100		103	92-106			

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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General Parameters, Batch B7D0494, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Batch B7D0019

Blank (B7D0019-BLK1)

Prepared: 2017-04-02, Analyzed: 2017-04-03

Acenaphthene	< 0.050	0.050 µg/L							
Acenaphthylene	< 0.200	0.200 µg/L							
Acridine	< 0.050	0.050 µg/L							
Anthracene	< 0.010	0.010 µg/L							
Benz(a)anthracene	< 0.010	0.010 µg/L							
Benzo(a)pyrene	< 0.010	0.010 µg/L							
Benzo(b)fluoranthene	< 0.050	0.050 µg/L							
Benzo(b+j)fluoranthene	< 0.100	0.100 µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050 µg/L							
Benzo(k)fluoranthene	< 0.050	0.050 µg/L							
Chrysene	< 0.050	0.050 µg/L							
Dibenz(a,h)anthracene	< 0.050	0.050 µg/L							
Fluoranthene	< 0.030	0.030 µg/L							
Fluorene	< 0.050	0.050 µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050 µg/L							
Naphthalene	< 0.200	0.200 µg/L							
Phenanthrene	< 0.100	0.100 µg/L							
Pyrene	< 0.020	0.020 µg/L							
Quinoline	< 0.050	0.050 µg/L							
Surrogate: Acridine-d9	3.70	µg/L	4.44		83	60-130			
Surrogate: Naphthalene-d8	3.63	µg/L	4.44		82	60-130			
Surrogate: Perylene-d12	4.27	µg/L	4.44		96	60-130			

LCS (B7D0019-BS1)

Prepared: 2017-04-02, Analyzed: 2017-04-03

Acenaphthene	3.75	0.050 µg/L	4.44		84	70-130			
Acenaphthylene	3.73	0.200 µg/L	4.44		84	70-130			
Acridine	3.56	0.050 µg/L	4.44		80	60-130			
Anthracene	4.20	0.010 µg/L	4.44		95	70-130			
Benz(a)anthracene	3.72	0.010 µg/L	4.44		84	70-130			
Benzo(a)pyrene	3.79	0.010 µg/L	4.44		85	70-130			
Benzo(b)fluoranthene	4.05	0.050 µg/L	4.44		91	70-130			
Benzo(b+j)fluoranthene	8.30	0.100 µg/L	8.89		93	70-130			
Benzo(g,h,i)perylene	4.10	0.050 µg/L	4.44		92	70-130			
Benzo(k)fluoranthene	4.01	0.050 µg/L	4.44		90	70-130			
Chrysene	3.74	0.050 µg/L	4.44		84	70-130			
Dibenz(a,h)anthracene	3.89	0.050 µg/L	4.44		88	70-130			
Fluoranthene	4.43	0.030 µg/L	4.44		100	70-130			
Fluorene	3.70	0.050 µg/L	4.44		83	70-130			
Indeno(1,2,3-cd)pyrene	4.08	0.050 µg/L	4.44		92	70-130			
Naphthalene	3.62	0.200 µg/L	4.44		81	70-130			
Phenanthrene	4.17	0.100 µg/L	4.44		94	70-130			
Pyrene	4.53	0.020 µg/L	4.44		102	70-130			
Quinoline	5.23	0.050 µg/L	4.44		118	70-130			
Surrogate: Acridine-d9	3.61	µg/L	4.44		81	60-130			
Surrogate: Naphthalene-d8	3.62	µg/L	4.44		81	60-130			
Surrogate: Perylene-d12	4.12	µg/L	4.44		93	60-130			

LCS Dup (B7D0019-BSD1)

Prepared: 2017-04-02, Analyzed: 2017-04-03

Acenaphthene	3.80	0.050 µg/L	4.44		85	70-130	1	20	
Acenaphthylene	3.79	0.200 µg/L	4.44		85	70-130	1	20	
Acridine	3.57	0.050 µg/L	4.44		80	60-130	< 1	20	
Anthracene	4.28	0.010 µg/L	4.44		96	70-130	2	20	
Benz(a)anthracene	3.75	0.010 µg/L	4.44		84	70-130	< 1	20	
Benzo(a)pyrene	3.69	0.010 µg/L	4.44		83	70-130	3	20	

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Polycyclic Aromatic Hydrocarbons (PAH), Batch B7D0019, Continued

LCS Dup (B7D0019-BSD1), Continued

Prepared: 2017-04-02, Analyzed: 2017-04-03

Benzo(b)fluoranthene	3.97	0.050 µg/L	4.44		89	70-130	2	20	
Benzo(b+j)fluoranthene	8.14	0.100 µg/L	8.89		92	70-130	2	20	
Benzo(g,h,i)perylene	4.25	0.050 µg/L	4.44		96	70-130	3	20	
Benzo(k)fluoranthene	4.03	0.050 µg/L	4.44		91	70-130	< 1	20	
Chrysene	3.79	0.050 µg/L	4.44		85	70-130	1	20	
Dibenz(a,h)anthracene	3.83	0.050 µg/L	4.44		86	70-130	2	20	
Fluoranthene	4.57	0.030 µg/L	4.44		103	70-130	3	20	
Fluorene	3.76	0.050 µg/L	4.44		85	70-130	2	20	
Indeno(1,2,3-cd)pyrene	4.05	0.050 µg/L	4.44		91	70-130	< 1	20	
Naphthalene	3.56	0.200 µg/L	4.44		80	70-130	2	20	
Phenanthrene	4.24	0.100 µg/L	4.44		95	70-130	2	20	
Pyrene	4.60	0.020 µg/L	4.44		104	70-130	1	20	
Quinoline	5.30	0.050 µg/L	4.44		119	70-130	1	20	
Surrogate: Acridine-d9	3.60	µg/L	4.44		81	60-130			
Surrogate: Naphthalene-d8	3.74	µg/L	4.44		84	60-130			
Surrogate: Perylene-d12	4.22	µg/L	4.44		95	60-130			

Polycyclic Aromatic Hydrocarbons (PAH), Batch B7D0165

Blank (B7D0165-BLK1)

Prepared: 2017-04-04, Analyzed: 2017-04-05

Acenaphthene	< 0.050	0.050 µg/L							
Acenaphthylene	< 0.200	0.200 µg/L							
Acridine	< 0.050	0.050 µg/L							
Anthracene	< 0.010	0.010 µg/L							
Benz(a)anthracene	< 0.010	0.010 µg/L							
Benzo(a)pyrene	< 0.010	0.010 µg/L							
Benzo(b)fluoranthene	< 0.050	0.050 µg/L							
Benzo(b+j)fluoranthene	< 0.100	0.100 µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050 µg/L							
Benzo(k)fluoranthene	< 0.050	0.050 µg/L							
Chrysene	< 0.050	0.050 µg/L							
Dibenz(a,h)anthracene	< 0.050	0.050 µg/L							
Fluoranthene	< 0.030	0.030 µg/L							
Fluorene	< 0.050	0.050 µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050 µg/L							
Naphthalene	< 0.200	0.200 µg/L							
Phenanthrene	< 0.100	0.100 µg/L							
Pyrene	< 0.020	0.020 µg/L							
Quinoline	< 0.050	0.050 µg/L							
Surrogate: Acridine-d9	3.66	µg/L	4.45		82	60-130			
Surrogate: Naphthalene-d8	3.70	µg/L	4.45		83	60-130			
Surrogate: Perylene-d12	4.58	µg/L	4.45		103	60-130			

LCS (B7D0165-BS1)

Prepared: 2017-04-04, Analyzed: 2017-04-04

Acenaphthene	3.57	0.050 µg/L	4.38		82	70-130			
Acenaphthylene	3.55	0.200 µg/L	4.38		81	70-130			
Acridine	3.36	0.050 µg/L	4.38		77	60-130			
Anthracene	4.03	0.010 µg/L	4.38		92	70-130			
Benz(a)anthracene	3.62	0.010 µg/L	4.38		83	70-130			
Benzo(a)pyrene	3.59	0.010 µg/L	4.38		82	70-130			
Benzo(b)fluoranthene	3.84	0.050 µg/L	4.38		88	70-130			
Benzo(b+j)fluoranthene	7.91	0.100 µg/L	8.77		90	70-130			
Benzo(g,h,i)perylene	3.96	0.050 µg/L	4.38		90	70-130			
Benzo(k)fluoranthene	3.88	0.050 µg/L	4.38		89	70-130			
Chrysene	3.66	0.050 µg/L	4.38		83	70-130			
Dibenz(a,h)anthracene	3.59	0.050 µg/L	4.38		82	70-130			

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REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Polycyclic Aromatic Hydrocarbons (PAH), Batch B7D0165, Continued

LCS (B7D0165-BS1), Continued

Prepared: 2017-04-04, Analyzed: 2017-04-04

Fluoranthene	4.47	0.030 µg/L	4.38		102	70-130			
Fluorene	3.53	0.050 µg/L	4.38		81	70-130			
Indeno(1,2,3-cd)pyrene	3.82	0.050 µg/L	4.38		87	70-130			
Naphthalene	3.39	0.200 µg/L	4.38		77	70-130			
Phenanthrene	4.03	0.100 µg/L	4.38		92	70-130			
Pyrene	4.49	0.020 µg/L	4.38		102	70-130			
Quinoline	5.04	0.050 µg/L	4.38		115	70-130			
Surrogate: Acridine-d9	3.60	µg/L	4.38		82	60-130			
Surrogate: Naphthalene-d8	3.58	µg/L	4.38		82	60-130			
Surrogate: Perylene-d12	4.30	µg/L	4.38		98	60-130			

LCS Dup (B7D0165-BSD1)

Prepared: 2017-04-04, Analyzed: 2017-04-04

Acenaphthene	3.79	0.050 µg/L	4.48		85	70-130	6	20	
Acenaphthylene	3.83	0.200 µg/L	4.48		86	70-130	8	20	
Acridine	3.60	0.050 µg/L	4.48		80	60-130	7	20	
Anthracene	4.28	0.010 µg/L	4.48		96	70-130	6	20	
Benz(a)anthracene	3.83	0.010 µg/L	4.48		86	70-130	6	20	
Benzo(a)pyrene	3.75	0.010 µg/L	4.48		84	70-130	4	20	
Benzo(b)fluoranthene	4.01	0.050 µg/L	4.48		90	70-130	4	20	
Benzo(b+j)fluoranthene	8.16	0.100 µg/L	8.96		91	70-130	3	20	
Benzo(g,h,i)perylene	4.16	0.050 µg/L	4.48		93	70-130	5	20	
Benzo(k)fluoranthene	4.04	0.050 µg/L	4.48		90	70-130	4	20	
Chrysene	3.90	0.050 µg/L	4.48		87	70-130	7	20	
Dibenz(a,h)anthracene	3.78	0.050 µg/L	4.48		84	70-130	5	20	
Fluoranthene	4.65	0.030 µg/L	4.48		104	70-130	4	20	
Fluorene	3.79	0.050 µg/L	4.48		85	70-130	7	20	
Indeno(1,2,3-cd)pyrene	4.00	0.050 µg/L	4.48		89	70-130	5	20	
Naphthalene	3.61	0.200 µg/L	4.48		81	70-130	6	20	
Phenanthrene	4.27	0.100 µg/L	4.48		95	70-130	6	20	
Pyrene	4.66	0.020 µg/L	4.48		104	70-130	4	20	
Quinoline	5.29	0.050 µg/L	4.48		118	70-130	5	20	
Surrogate: Acridine-d9	3.83	µg/L	4.48		85	60-130			
Surrogate: Naphthalene-d8	3.77	µg/L	4.48		84	60-130			
Surrogate: Perylene-d12	4.37	µg/L	4.48		98	60-130			

Total Metals, Batch B7D0092

Blank (B7D0092-BLK1)

Prepared: 2017-04-03, Analyzed: 2017-04-04

Aluminum, total	< 0.005	0.005 mg/L							
Antimony, total	< 0.0001	0.0001 mg/L							
Arsenic, total	< 0.0005	0.0005 mg/L							
Barium, total	< 0.005	0.005 mg/L							
Beryllium, total	< 0.0001	0.0001 mg/L							
Bismuth, total	< 0.0001	0.0001 mg/L							
Boron, total	< 0.004	0.004 mg/L							
Cadmium, total	< 0.00001	0.00001 mg/L							
Calcium, total	< 0.2	0.2 mg/L							
Chromium, total	< 0.0005	0.0005 mg/L							
Cobalt, total	< 0.00005	0.00005 mg/L							
Copper, total	< 0.0002	0.0002 mg/L							
Iron, total	< 0.01	0.01 mg/L							
Lead, total	< 0.0001	0.0001 mg/L							
Lithium, total	< 0.0001	0.0001 mg/L							
Magnesium, total	< 0.01	0.01 mg/L							
Manganese, total	< 0.0002	0.0002 mg/L							
Molybdenum, total	< 0.0001	0.0001 mg/L							

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Resort Municipality of Whister - Spring/Fall 17

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Total Metals, Batch B7D0092, Continued

Blank (B7D0092-BLK1), Continued

Prepared: 2017-04-03, Analyzed: 2017-04-04

Nickel, total	< 0.0002	0.0002 mg/L							
Phosphorus, total	< 0.05	0.05 mg/L							
Potassium, total	< 0.02	0.02 mg/L							
Selenium, total	< 0.0005	0.0005 mg/L							
Silicon, total	< 0.5	0.5 mg/L							
Silver, total	< 0.00005	0.00005 mg/L							
Sodium, total	< 0.02	0.02 mg/L							
Strontium, total	< 0.001	0.001 mg/L							
Sulfur, total	< 1	1 mg/L							
Tellurium, total	< 0.0002	0.0002 mg/L							
Thallium, total	< 0.00002	0.00002 mg/L							
Thorium, total	< 0.0001	0.0001 mg/L							
Tin, total	< 0.0002	0.0002 mg/L							
Titanium, total	< 0.005	0.005 mg/L							
Uranium, total	< 0.00002	0.00002 mg/L							
Vanadium, total	< 0.001	0.001 mg/L							
Zinc, total	< 0.004	0.004 mg/L							
Zirconium, total	< 0.0001	0.0001 mg/L							

Reference (B7D0092-SRM1)

Prepared: 2017-04-03, Analyzed: 2017-04-04

Aluminum, total	0.285	0.005 mg/L	0.303		94	81-129			
Antimony, total	0.0504	0.0001 mg/L	0.0511		99	88-114			
Arsenic, total	0.112	0.0005 mg/L	0.118		95	88-114			
Barium, total	0.768	0.005 mg/L	0.823		93	72-104			
Beryllium, total	0.0484	0.0001 mg/L	0.0496		98	76-131			
Boron, total	3.36	0.004 mg/L	3.45		97	75-121			
Cadmium, total	0.0476	0.00001 mg/L	0.0495		96	89-111			
Calcium, total	11.7	0.2 mg/L	11.6		101	86-121			
Chromium, total	0.244	0.0005 mg/L	0.250		98	89-114			
Cobalt, total	0.0390	0.00005 mg/L	0.0377		103	91-113			
Copper, total	0.509	0.0002 mg/L	0.486		105	91-115			
Iron, total	0.49	0.01 mg/L	0.488		101	77-124			
Lead, total	0.201	0.0001 mg/L	0.204		99	92-113			
Lithium, total	0.395	0.0001 mg/L	0.403		98	85-115			
Magnesium, total	3.92	0.01 mg/L	3.79		103	78-120			
Manganese, total	0.106	0.0002 mg/L	0.109		97	90-114			
Molybdenum, total	0.197	0.0001 mg/L	0.198		100	90-111			
Nickel, total	0.253	0.0002 mg/L	0.249		102	90-111			
Phosphorus, total	0.19	0.05 mg/L	0.227		85	85-115			
Potassium, total	7.51	0.02 mg/L	7.21		104	84-113			
Selenium, total	0.122	0.0005 mg/L	0.121		101	85-115			
Sodium, total	7.78	0.02 mg/L	7.54		103	82-123			
Strontium, total	0.375	0.001 mg/L	0.375		100	88-112			
Thallium, total	0.0824	0.00002 mg/L	0.0805		102	91-114			
Uranium, total	0.0309	0.00002 mg/L	0.0306		101	85-120			
Vanadium, total	0.379	0.001 mg/L	0.386		98	86-111			
Zinc, total	2.38	0.004 mg/L	2.49		96	85-111			

Total Metals, Batch B7D0170

Blank (B7D0170-BLK1)

Prepared: 2017-04-04, Analyzed: 2017-04-05

Mercury, total	< 0.00002	0.00002 mg/L							
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Blank (B7D0170-BLK2)

Prepared: 2017-04-04, Analyzed: 2017-04-05

Mercury, total	< 0.00002	0.00002 mg/L							
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Resort Municipality of Whister - Spring/Fall 17

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Total Metals, Batch B7D0170, Continued

Reference (B7D0170-SRM1)

Prepared: 2017-04-04, Analyzed: 2017-04-05

Mercury, total	0.00486	0.00002 mg/L	0.00489	99	50-150
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Reference (B7D0170-SRM2)

Prepared: 2017-04-04, Analyzed: 2017-04-05

Mercury, total	0.00417	0.00002 mg/L	0.00489	85	50-150
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Volatile Organic Compounds (VOC), Batch B7D0022

Blank (B7D0022-BLK1)

Prepared: 2017-04-03, Analyzed: 2017-04-03

Benzene	< 0.5	0.5 µg/L			
Ethylbenzene	< 1.0	1.0 µg/L			
Methyl tert-butyl ether	< 1.0	1.0 µg/L			
Toluene	< 1.0	1.0 µg/L			
Xylenes (total)	< 2.0	2.0 µg/L			
Acetone	< 10.0	10.0 µg/L			
Benzene	< 0.5	0.5 µg/L			
Bromodichloromethane	< 1.0	1.0 µg/L			
Bromoform	< 1.0	1.0 µg/L			
Bromomethane	< 2.0	2.0 µg/L			
2-Butanone (MEK)	< 5.0	5.0 µg/L			
Carbon tetrachloride	< 0.5	0.5 µg/L			
Chlorobenzene	< 1.0	1.0 µg/L			
Chloroethane	< 2.0	2.0 µg/L			
Chloroform	< 1.0	1.0 µg/L			
Chloromethane	< 2.0	2.0 µg/L			
Dibromochloromethane	< 1.0	1.0 µg/L			
Dibromomethane	< 1.0	1.0 µg/L			
1,3-Dichlorobenzene	< 1.0	1.0 µg/L			
1,4-Dichlorobenzene	< 1.0	1.0 µg/L			
1,1-Dichloroethane	< 1.0	1.0 µg/L			
1,2-Dichloroethane	< 1.0	1.0 µg/L			
1,1-Dichloroethylene	< 1.0	1.0 µg/L			
cis-1,2-Dichloroethylene	< 1.0	1.0 µg/L			
trans-1,2-Dichloroethylene	< 1.0	1.0 µg/L			
1,2-Dichloropropane	< 1.0	1.0 µg/L			
cis-1,3-Dichloropropene	< 1.0	1.0 µg/L			
trans-1,3-Dichloropropene	< 1.0	1.0 µg/L			
Ethylbenzene	< 1.0	1.0 µg/L			
Methyl tert-butyl ether	< 1.0	1.0 µg/L			
Dichloromethane	< 3.0	3.0 µg/L			
4-Methyl-2-Pentanone (MIBK)	< 10.0	10.0 µg/L			
Styrene	< 1.0	1.0 µg/L			
1,1,1,2-Tetrachloroethane	< 1.0	1.0 µg/L			
1,1,2,2-Tetrachloroethane	< 0.5	0.5 µg/L			
Tetrachloroethylene	< 1.0	1.0 µg/L			
Toluene	< 1.0	1.0 µg/L			
1,1,1-Trichloroethane	< 1.0	1.0 µg/L			
1,1,2-Trichloroethane	< 1.0	1.0 µg/L			
Trichloroethylene	< 1.0	1.0 µg/L			
Trichlorofluoromethane	< 1.0	1.0 µg/L			
Vinyl chloride	< 1.0	1.0 µg/L			
m,p-Xylene	< 1.0	1.0 µg/L			
o-Xylene	< 1.0	1.0 µg/L			
Xylenes (total)	< 2.0	2.0 µg/L			
1,2-Dibromoethane	< 0.2	0.2 µg/L			
1,2-Dichlorobenzene	< 0.5	0.5 µg/L			
Surrogate: Toluene-d8	27.2	µg/L	25.0	109	70-130

APPENDIX 1: QUALITY CONTROL DATA

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Blank (B7D0022-BLK1), Continued									
					Prepared: 2017-04-03, Analyzed: 2017-04-03				
Surrogate: 4-Bromofluorobenzene	25.9	µg/L	25.0		104	70-130			
Surrogate: Toluene-d8	27.2	µg/L	25.0		109	70-130			
Surrogate: 4-Bromofluorobenzene	25.9	µg/L	25.0		104	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	21.7	µg/L	25.0		87	70-130			
LCS (B7D0022-BS1)									
					Prepared: 2017-04-03, Analyzed: 2017-04-03				
Benzene	20.9	0.5 µg/L	20.0		104	70-130			
Ethylbenzene	20.4	1.0 µg/L	20.0		102	70-130			
Methyl tert-butyl ether	16.9	1.0 µg/L	20.0		85	70-130			
Toluene	19.9	1.0 µg/L	20.0		100	70-130			
Xylenes (total)	60.1	2.0 µg/L	60.0		100	70-130			
Acetone	11.2	10.0 µg/L	20.0		56	70-130			SPK
Benzene	20.9	0.5 µg/L	20.0		104	70-130			
Bromodichloromethane	20.2	1.0 µg/L	20.0		101	70-130			
Bromoform	20.0	1.0 µg/L	20.0		100	70-130			
Bromomethane	20.9	2.0 µg/L	20.0		104	70-130			
2-Butanone (MEK)	26.8	5.0 µg/L	20.0		134	70-130			SPK
Carbon tetrachloride	19.9	0.5 µg/L	20.0		99	70-130			
Chlorobenzene	20.5	1.0 µg/L	20.0		102	70-130			
Chloroethane	19.8	2.0 µg/L	20.0		99	70-130			
Chloroform	20.9	1.0 µg/L	20.0		105	70-130			
Chloromethane	21.7	2.0 µg/L	20.0		109	70-130			
Dibromochloromethane	19.5	1.0 µg/L	20.0		97	70-130			
Dibromomethane	20.2	1.0 µg/L	20.0		101	70-130			
1,3-Dichlorobenzene	21.2	1.0 µg/L	20.0		106	70-130			
1,4-Dichlorobenzene	20.9	1.0 µg/L	20.0		104	70-130			
1,1-Dichloroethane	19.8	1.0 µg/L	20.0		99	70-130			
1,2-Dichloroethane	19.4	1.0 µg/L	20.0		97	70-130			
1,1-Dichloroethylene	18.7	1.0 µg/L	20.0		93	70-130			
cis-1,2-Dichloroethylene	20.6	1.0 µg/L	20.0		103	70-130			
trans-1,2-Dichloroethylene	19.4	1.0 µg/L	20.0		97	70-130			
1,2-Dichloropropane	20.5	1.0 µg/L	20.0		102	70-130			
cis-1,3-Dichloropropene	17.6	1.0 µg/L	20.0		88	70-130			
trans-1,3-Dichloropropene	16.8	1.0 µg/L	20.0		84	70-130			
Ethylbenzene	20.4	1.0 µg/L	20.0		102	70-130			
Methyl tert-butyl ether	16.9	1.0 µg/L	20.0		85	70-130			
Dichloromethane	20.0	3.0 µg/L	20.0		100	70-130			
4-Methyl-2-Pentanone (MIBK)	17.9	10.0 µg/L	20.0		89	70-130			
Styrene	20.3	1.0 µg/L	20.0		102	70-130			
1,1,1,2-Tetrachloroethane	19.4	1.0 µg/L	20.0		97	70-130			
1,1,2,2-Tetrachloroethane	19.8	0.5 µg/L	20.0		99	70-130			
Tetrachloroethylene	19.5	1.0 µg/L	20.0		98	70-130			
Toluene	19.9	1.0 µg/L	20.0		100	70-130			
1,1,1-Trichloroethane	19.6	1.0 µg/L	20.0		98	70-130			
1,1,2-Trichloroethane	20.3	1.0 µg/L	20.0		102	70-130			
Trichloroethylene	21.5	1.0 µg/L	20.0		107	70-130			
Trichlorofluoromethane	21.3	1.0 µg/L	20.0		106	70-130			
Vinyl chloride	18.6	1.0 µg/L	20.0		93	70-130			
m,p-Xylene	40.4	1.0 µg/L	40.0		101	70-130			
o-Xylene	19.8	1.0 µg/L	20.0		99	70-130			
Xylenes (total)	60.1	2.0 µg/L	60.0		100	70-130			
1,2-Dibromoethane	18.3	0.2 µg/L	20.0		91	70-130			
1,2-Dichlorobenzene	22.0	0.5 µg/L	20.0		110	70-130			
Surrogate: Toluene-d8	27.9	µg/L	25.0		112	70-130			
Surrogate: 4-Bromofluorobenzene	23.9	µg/L	25.0		96	70-130			
Surrogate: Toluene-d8	27.9	µg/L	25.0		112	70-130			

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Volatile Organic Compounds (VOC), Batch B7D0022, Continued									
LCS (B7D0022-BS1), Continued					Prepared: 2017-04-03, Analyzed: 2017-04-03				
Surrogate: 4-Bromofluorobenzene	23.9	µg/L	25.0		96	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	28.3	µg/L	25.0		113	70-130			
Duplicate (B7D0022-DUP1)					Source: 7040006-04 Prepared: 2017-04-03, Analyzed: 2017-04-03				
Benzene	< 0.5	0.5 µg/L		< 0.5				20	
Ethylbenzene	< 1.0	1.0 µg/L		< 1.0				20	
Methyl tert-butyl ether	< 1.0	1.0 µg/L		< 1.0				20	
Toluene	< 1.0	1.0 µg/L		< 1.0				20	
Xylenes (total)	< 2.0	2.0 µg/L		< 2.0				20	
Acetone	< 10.0	10.0 µg/L		< 10.0				20	
Benzene	< 0.5	0.5 µg/L		< 0.5				20	
Bromodichloromethane	< 1.0	1.0 µg/L		< 1.0				20	
Bromoform	< 1.0	1.0 µg/L		< 1.0				20	
Bromomethane	< 2.0	2.0 µg/L		< 2.0				20	
2-Butanone (MEK)	< 5.0	5.0 µg/L		< 5.0				20	
Carbon tetrachloride	< 0.5	0.5 µg/L		< 0.5				20	
Chlorobenzene	< 1.0	1.0 µg/L		< 1.0				20	
Chloroethane	< 2.0	2.0 µg/L		< 2.0				20	
Chloroform	< 1.0	1.0 µg/L		< 1.0				20	
Chloromethane	< 2.0	2.0 µg/L		< 2.0				20	
Dibromochloromethane	< 1.0	1.0 µg/L		< 1.0				20	
Dibromomethane	< 1.0	1.0 µg/L		< 1.0				20	
1,3-Dichlorobenzene	< 1.0	1.0 µg/L		< 1.0				20	
1,4-Dichlorobenzene	< 1.0	1.0 µg/L		< 1.0				20	
1,1-Dichloroethane	< 1.0	1.0 µg/L		< 1.0				20	
1,2-Dichloroethane	< 1.0	1.0 µg/L		< 1.0				20	
1,1-Dichloroethylene	< 1.0	1.0 µg/L		< 1.0				20	
cis-1,2-Dichloroethylene	< 1.0	1.0 µg/L		< 1.0				20	
trans-1,2-Dichloroethylene	< 1.0	1.0 µg/L		< 1.0				20	
1,2-Dichloropropane	< 1.0	1.0 µg/L		< 1.0				20	
cis-1,3-Dichloropropene	< 1.0	1.0 µg/L		< 1.0				20	
trans-1,3-Dichloropropene	< 1.0	1.0 µg/L		< 1.0				20	
Ethylbenzene	< 1.0	1.0 µg/L		< 1.0				20	
Methyl tert-butyl ether	< 1.0	1.0 µg/L		< 1.0				20	
Dichloromethane	< 3.0	3.0 µg/L		< 3.0				20	
4-Methyl-2-Pentanone (MIBK)	< 10.0	10.0 µg/L		< 10.0				20	
Styrene	< 1.0	1.0 µg/L		< 1.0				20	
1,1,1,2-Tetrachloroethane	< 1.0	1.0 µg/L		< 1.0				20	
1,1,2,2-Tetrachloroethane	< 0.5	0.5 µg/L		< 0.5				20	
Tetrachloroethylene	< 1.0	1.0 µg/L		< 1.0				20	
Toluene	< 1.0	1.0 µg/L		< 1.0				20	
1,1,1-Trichloroethane	< 1.0	1.0 µg/L		< 1.0				20	
1,1,2-Trichloroethane	< 1.0	1.0 µg/L		< 1.0				20	
Trichloroethylene	< 1.0	1.0 µg/L		< 1.0				20	
Trichlorofluoromethane	< 1.0	1.0 µg/L		< 1.0				20	
Vinyl chloride	< 1.0	1.0 µg/L		< 1.0				20	
m,p-Xylene	< 1.0	1.0 µg/L		< 1.0				20	
o-Xylene	< 1.0	1.0 µg/L		< 1.0				20	
Xylenes (total)	< 2.0	2.0 µg/L		< 2.0				20	
1,2-Dibromoethane	< 0.2	0.2 µg/L		< 0.2				20	
1,2-Dichlorobenzene	< 0.5	0.5 µg/L		< 0.5				20	
Surrogate: Toluene-d8	25.1	µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	23.2	µg/L	25.0		93	70-130			
Surrogate: Toluene-d8	25.1	µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	23.2	µg/L	25.0		93	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	19.6	µg/L	25.0		79	70-130			

APPENDIX 1: QUALITY CONTROL DATA

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7040006
2017-04-10

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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QC Qualifiers:

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

S09 The surrogate recovery for this sample is outside of established control limits .

SPK The recovery of this analyte was outside of established control limits.

REPORTED TO Morrison Hershfield Limited - Burnaby
310 - 4321 Still Creek Drive
Burnaby, BC V5C 6S7

TEL (604) 454-0402
FAX (604) 454-0403

ATTENTION Josie Gilson

WORK ORDER 7061782

PO NUMBER 721849

RECEIVED / TEMP 2017-06-20 15:30 / 3°C

PROJECT Whistler Landfill - Summer/Winter

REPORTED 2017-06-30

PROJECT INFO

General Comments:

CARO Analytical Services employs methods which are conducted according to procedures accepted by appropriate regulatory agencies, and/or are conducted 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 or Sample Requisition document. This analytical report must be reproduced in its entirety. 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.



Authorized By: **Jeffery Lopes, B.Sc.**
Account Manager

If you have any questions or concerns, please contact me at jlopes@caro.ca

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#110 4011 Viking Way
Richmond, BC V6V 2K9
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Kelowna, BC V1X 5C3
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17225 109 Avenue
Edmonton, AB T5S 1H7
Tel: 780-489-9100

www.caro.ca

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Whistler Landfill - Summer/Winter

WORK ORDER REPORTED 7061782
2017-06-30

Analysis Description	Method Reference	Technique	Location
Alkalinity in Water	APHA 2320 B*	Titration with H2SO4	Kelowna
Ammonia, Total in Water	APHA 4500-NH3 G*	Automated Colorimetry (Phenate)	Kelowna
Anions by IC in Water	APHA 4110 B	Ion Chromatography with Chemical Suppression of Eluent Conductivity	Kelowna
Chemical Oxygen Demand in Water	APHA 5220 D*	Closed Reflux, Colorimetry	Kelowna
Conductivity in Water	APHA 2510 B	Conductivity Meter	Kelowna
Dissolved Metals by ICPMS in Water	APHA 3030 B / APHA 3125 B	0.45 µm Filtration / Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	Richmond
EPH in Water	EPA 3511* / BCMOE EPHw	Hexane MicroExtraction (Base/Neutral) / Gas Chromatography (GC-FID)	Richmond
Hardness (as CaCO3) in Water	APHA 2340 B	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	N/A
HEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
LEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
Mercury, dissolved by CVAFS in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
Mercury, total by CVAFS in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
Nitrate+Nitrite by Colorimetry in Water	APHA 4500-NO3- F	Automated Colorimetry (Cadmium Reduction)	Kelowna
Nitrite by Colorimetry in Water	APHA 4500-NO3- F	Automated Colorimetry (Cadmium Reduction)	Kelowna
Nitrogen, Total Kjeldahl in Water	APHA 4500-Norg D*	Block Digestion and Flow Injection Analysis	Kelowna
pH in Water	APHA 4500-H+ B	Electrometry	Kelowna
Phosphorus, Total by Colorimetry in Water	APHA 4500-P B.5* / APHA 4500-P F	Persulfate Digestion / Automated Colorimetry (Ascorbic Acid)	Kelowna
Polycyclic Aromatic Hydrocarbons in Water	EPA 3511* / EPA 8270D	Hexane MicroExtraction (Base/Neutral) / GC-MS (SIM)	Richmond
Solids, Total Suspended in Water	APHA 2540 D*	Gravimetry (Dried at 103-105C)	Kelowna
Total Metals by ICPMS in Water	APHA 3030 E* / APHA 3125 B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	Richmond
Volatile Organic Compounds in Water	EPA 5030B / EPA 8260B	Purge&Trap / GC-MS (SIM)	Richmond

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Method Reference Descriptions:

APHA Standard Methods for the Examination of Water and Wastewater, 22nd Edition, American Public Health Association/American Water Works Association/Water Environment Federation
 BCMOE British Columbia Environmental Laboratory Manual, 2015, British Columbia Ministry of Environment
 EPA United States Environmental Protection Agency Test Methods

Glossary of Terms:

MRL Method Reporting Limit
 < Less than the Reported Detection Limit (RDL) - the RDL may be higher than the MRL due to various factors such as dilutions, limited sample volume, high moisture, or interferences
 mg/L Milligrams per litre
 pH units pH < 7 = acidic, pH > 7 = basic
 µg/L Micrograms per litre
 µS/cm Microsiemens per centimetre

REPORTED TO Morrison Hershfield Limited - Burnaby
PROJECT Whistler Landfill - Summer/Winter

WORK ORDER 7061782
REPORTED 2017-06-30

Standards / Guidelines Referenced in this Report:

BC CSR Schedule 4/5/6/10/11 Residential/Aquatic Water

Website: http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/375_96_00

Note: In some cases, the values displayed on the report represent the lowest guideline and are to be verified by the end user

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Whistler Landfill - Summer/Winter

WORK ORDER REPORTED 7061782
2017-06-30

Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: SFC-2 (7061782-01) [Water] Sampled: 2017-06-20 09:46

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-22	
Chloride	18.5	1500	0.10	mg/L	N/A	2017-06-22	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-06-22	
Nitrate+Nitrite (as N)	0.183	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	0.0058	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	55.5	1000	1.0	mg/L	N/A	2017-06-22	

General Parameters

Alkalinity, Total (as CaCO3)	65.4	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Bicarbonate (as CaCO3)	65.4	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Ammonia, Total (as N)	0.537	1.31	0.005	mg/L	N/A	2017-06-23	
Chemical Oxygen Demand	13	N/A	20	mg/L	N/A	2017-06-22	
Conductivity (EC)	301	N/A	2.0	µS/cm	N/A	2017-06-24	
Nitrogen, Total Kjeldahl	0.584	N/A	0.050	mg/L	2017-06-22	2017-06-25	
pH	6.80	N/A	0.01	pH units	N/A	2017-06-24	HT2
Phosphorus, Total (as P)	0.0426	N/A	0.0020	mg/L	2017-06-22	2017-06-23	
Solids, Total Suspended	12.6	N/A	2.0	mg/L	N/A	2017-06-22	

Calculated Parameters

Hardness, Total (as CaCO3)	109	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.177	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.767	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	0.605	N/A	0.0050	mg/L	2017-06-21	2017-06-21	
Antimony, total	< 0.00010	0.2	0.00010	mg/L	2017-06-21	2017-06-21	
Arsenic, total	< 0.00050	0.05	0.00050	mg/L	2017-06-21	2017-06-21	
Barium, total	0.0572	5	0.0050	mg/L	2017-06-21	2017-06-21	
Beryllium, total	< 0.00010	0.053	0.00010	mg/L	2017-06-21	2017-06-21	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Boron, total	0.044	50	0.004	mg/L	2017-06-21	2017-06-21	
Cadmium, total	0.000053	0.0001	0.000010	mg/L	2017-06-21	2017-06-21	
Calcium, total	37.6	N/A	0.20	mg/L	2017-06-21	2017-06-21	
Chromium, total	< 0.00050	N/A	0.00050	mg/L	2017-06-21	2017-06-21	
Cobalt, total	0.00666	0.04	0.00010	mg/L	2017-06-21	2017-06-21	
Copper, total	0.0119	0.02	0.00020	mg/L	2017-06-21	2017-06-21	
Iron, total	4.93	N/A	0.010	mg/L	2017-06-21	2017-06-21	
Lead, total	< 0.00010	0.04	0.00010	mg/L	2017-06-21	2017-06-21	
Lithium, total	0.00021	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Magnesium, total	3.73	N/A	0.010	mg/L	2017-06-21	2017-06-21	
Manganese, total	1.48	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-29	
Molybdenum, total	0.00281	10	0.00010	mg/L	2017-06-21	2017-06-21	
Nickel, total	0.00154	0.25	0.00020	mg/L	2017-06-21	2017-06-21	

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Whistler Landfill - Summer/Winter

WORK ORDER REPORTED 7061782
2017-06-30

Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: SFC-2 (7061782-01) [Water] Sampled: 2017-06-20 09:46, Continued

Total Metals, Continued

Phosphorus, total	< 0.050	N/A	0.050	mg/L	2017-06-21	2017-06-21	
Potassium, total	3.59	N/A	0.02	mg/L	2017-06-21	2017-06-21	
Selenium, total	< 0.00050	0.01	0.00050	mg/L	2017-06-21	2017-06-21	
Silicon, total	5.5	N/A	1.0	mg/L	2017-06-21	2017-06-21	
Silver, total	< 0.000050	0.0005	0.000050	mg/L	2017-06-21	2017-06-21	
Sodium, total	14.7	N/A	0.02	mg/L	2017-06-21	2017-06-21	
Strontium, total	0.239	N/A	0.0010	mg/L	2017-06-21	2017-06-21	
Sulfur, total	19.2	N/A	3.0	mg/L	2017-06-21	2017-06-21	
Tellurium, total	< 0.00020	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Thallium, total	< 0.000020	0.003	0.000020	mg/L	2017-06-21	2017-06-21	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Titanium, total	< 0.0050	1	0.0050	mg/L	2017-06-21	2017-06-21	
Uranium, total	0.000041	1	0.000020	mg/L	2017-06-21	2017-06-21	
Vanadium, total	< 0.0010	N/A	0.0010	mg/L	2017-06-21	2017-06-21	
Zinc, total	0.0231	0.075	0.0040	mg/L	2017-06-21	2017-06-21	
Zirconium, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	

Sample ID: SFC-2B (7061782-02) [Water] Sampled: 2017-06-20 09:46

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-22	
Chloride	14.3	1500	0.10	mg/L	N/A	2017-06-22	
Fluoride	0.77	2	0.02	mg/L	N/A	2017-06-22	
Nitrate+Nitrite (as N)	0.031	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	0.0162	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	613	1000	1.0	mg/L	N/A	2017-06-22	

General Parameters

Alkalinity, Total (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Ammonia, Total (as N)	2.14	1.31	0.005	mg/L	N/A	2017-06-23	
Chemical Oxygen Demand	23	N/A	20	mg/L	N/A	2017-06-22	
Conductivity (EC)	1260	N/A	2.0	µS/cm	N/A	2017-06-24	
Nitrogen, Total Kjeldahl	2.22	N/A	0.050	mg/L	2017-06-22	2017-06-25	
pH	3.06	N/A	0.01	pH units	N/A	2017-06-24	HT2
Phosphorus, Total (as P)	0.0764	N/A	0.0020	mg/L	2017-06-22	2017-06-23	
Solids, Total Suspended	30.6	N/A	2.0	mg/L	N/A	2017-06-22	

Calculated Parameters

Hardness, Total (as CaCO3)	355	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0151	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	2.25	N/A	0.250	mg/L	N/A	N/A	

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Whistler Landfill - Summer/Winter

WORK ORDER REPORTED 7061782
2017-06-30

Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: SFC-2B (7061782-02) [Water] Sampled: 2017-06-20 09:46, Continued

Total Metals							
Aluminum, total	25.1	N/A	0.0050	mg/L	2017-06-21	2017-06-21	
Antimony, total	0.00023	0.2	0.00010	mg/L	2017-06-21	2017-06-21	
Arsenic, total	0.00179	0.05	0.00050	mg/L	2017-06-21	2017-06-21	
Barium, total	0.0333	5	0.0050	mg/L	2017-06-21	2017-06-21	
Beryllium, total	0.00083	0.053	0.00010	mg/L	2017-06-21	2017-06-21	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Boron, total	0.029	50	0.004	mg/L	2017-06-21	2017-06-21	
Cadmium, total	0.000875	0.0001	0.000010	mg/L	2017-06-21	2017-06-21	
Calcium, total	92.5	N/A	0.20	mg/L	2017-06-21	2017-06-21	
Chromium, total	0.00280	N/A	0.00050	mg/L	2017-06-21	2017-06-21	
Cobalt, total	0.150	0.04	0.00010	mg/L	2017-06-21	2017-06-21	
Copper, total	0.345	0.02	0.00020	mg/L	2017-06-21	2017-06-21	
Iron, total	85.8	N/A	0.010	mg/L	2017-06-21	2017-06-21	
Lead, total	0.00014	0.04	0.00010	mg/L	2017-06-21	2017-06-21	
Lithium, total	0.00894	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Magnesium, total	30.0	N/A	0.010	mg/L	2017-06-21	2017-06-21	
Manganese, total	7.40	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-29	
Molybdenum, total	0.00028	10	0.00010	mg/L	2017-06-21	2017-06-21	
Nickel, total	0.0611	0.25	0.00020	mg/L	2017-06-21	2017-06-21	
Phosphorus, total	0.055	N/A	0.050	mg/L	2017-06-21	2017-06-21	
Potassium, total	3.93	N/A	0.02	mg/L	2017-06-21	2017-06-21	
Selenium, total	< 0.00050	0.01	0.00050	mg/L	2017-06-21	2017-06-21	
Silicon, total	18.3	N/A	1.0	mg/L	2017-06-21	2017-06-21	
Silver, total	< 0.000050	0.0005	0.000050	mg/L	2017-06-21	2017-06-21	
Sodium, total	13.7	N/A	0.02	mg/L	2017-06-21	2017-06-21	
Strontium, total	0.372	N/A	0.0010	mg/L	2017-06-21	2017-06-21	
Sulfur, total	225	N/A	3.0	mg/L	2017-06-21	2017-06-21	
Tellurium, total	< 0.00020	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Thallium, total	< 0.000020	0.003	0.000020	mg/L	2017-06-21	2017-06-21	
Thorium, total	0.00230	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Titanium, total	< 0.0050	1	0.0050	mg/L	2017-06-21	2017-06-21	
Uranium, total	0.00107	1	0.000020	mg/L	2017-06-21	2017-06-21	
Vanadium, total	< 0.0010	N/A	0.0010	mg/L	2017-06-21	2017-06-21	
Zinc, total	0.139	0.075	0.0040	mg/L	2017-06-21	2017-06-21	
Zirconium, total	0.00011	N/A	0.00010	mg/L	2017-06-21	2017-06-21	

Sample ID: SFC-3 (7061782-03) [Water] Sampled: 2017-06-20 10:45

Anions							
Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-22	
Chloride	38.8	1500	0.10	mg/L	N/A	2017-06-22	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-06-22	
Nitrate+Nitrite (as N)	0.083	400	0.005	mg/L	N/A	2017-06-29	

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Sample ID: SFC-3 (7061782-03) [Water] Sampled: 2017-06-20 10:45, Continued

Anions, Continued

Nitrite (as N)	0.0052	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	15.2	1000	1.0	mg/L	N/A	2017-06-22	

General Parameters

Alkalinity, Total (as CaCO3)	35.4	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Bicarbonate (as CaCO3)	35.4	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-24	
Ammonia, Total (as N)	< 0.020	1.31	0.005	mg/L	N/A	2017-06-23	
Chemical Oxygen Demand	11	N/A	20	mg/L	N/A	2017-06-22	
Conductivity (EC)	220	N/A	2.0	µS/cm	N/A	2017-06-24	
Nitrogen, Total Kjeldahl	< 0.050	N/A	0.050	mg/L	2017-06-22	2017-06-25	
pH	6.85	N/A	0.01	pH units	N/A	2017-06-24	HT2
Phosphorus, Total (as P)	0.0162	N/A	0.0020	mg/L	2017-06-22	2017-06-23	
Solids, Total Suspended	< 2.0	N/A	2.0	mg/L	N/A	2017-06-22	

Calculated Parameters

Hardness, Total (as CaCO3)	46.0	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0778	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.0830	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	0.0999	N/A	0.0050	mg/L	2017-06-21	2017-06-21	
Antimony, total	< 0.00010	0.2	0.00010	mg/L	2017-06-21	2017-06-21	
Arsenic, total	< 0.00050	0.05	0.00050	mg/L	2017-06-21	2017-06-21	
Barium, total	0.0200	5	0.0050	mg/L	2017-06-21	2017-06-21	
Beryllium, total	< 0.00010	0.053	0.00010	mg/L	2017-06-21	2017-06-21	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Boron, total	0.004	50	0.004	mg/L	2017-06-21	2017-06-21	
Cadmium, total	0.000034	0.0001	0.000010	mg/L	2017-06-21	2017-06-21	
Calcium, total	15.2	N/A	0.20	mg/L	2017-06-21	2017-06-21	
Chromium, total	< 0.00050	N/A	0.00050	mg/L	2017-06-21	2017-06-21	
Cobalt, total	0.00018	0.04	0.00010	mg/L	2017-06-21	2017-06-21	
Copper, total	0.00179	0.02	0.00020	mg/L	2017-06-21	2017-06-21	
Iron, total	0.272	N/A	0.010	mg/L	2017-06-21	2017-06-21	
Lead, total	0.00027	0.04	0.00010	mg/L	2017-06-21	2017-06-21	
Lithium, total	0.00032	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Magnesium, total	1.95	N/A	0.010	mg/L	2017-06-21	2017-06-21	
Manganese, total	0.0203	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-29	
Molybdenum, total	0.00035	10	0.00010	mg/L	2017-06-21	2017-06-21	
Nickel, total	0.00057	0.25	0.00020	mg/L	2017-06-21	2017-06-21	
Phosphorus, total	< 0.050	N/A	0.050	mg/L	2017-06-21	2017-06-21	
Potassium, total	1.35	N/A	0.02	mg/L	2017-06-21	2017-06-21	
Selenium, total	< 0.00050	0.01	0.00050	mg/L	2017-06-21	2017-06-21	
Silicon, total	7.9	N/A	1.0	mg/L	2017-06-21	2017-06-21	

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Sample ID: SFC-3 (7061782-03) [Water] Sampled: 2017-06-20 10:45, Continued

Total Metals, Continued

Silver, total	< 0.000050	0.0005	0.000050	mg/L	2017-06-21	2017-06-21	
Sodium, total	25.4	N/A	0.02	mg/L	2017-06-21	2017-06-21	
Strontium, total	0.137	N/A	0.0010	mg/L	2017-06-21	2017-06-21	
Sulfur, total	4.7	N/A	3.0	mg/L	2017-06-21	2017-06-21	
Tellurium, total	< 0.00020	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Thallium, total	< 0.000020	0.003	0.000020	mg/L	2017-06-21	2017-06-21	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Titanium, total	< 0.0050	1	0.0050	mg/L	2017-06-21	2017-06-21	
Uranium, total	< 0.000020	1	0.000020	mg/L	2017-06-21	2017-06-21	
Vanadium, total	< 0.0010	N/A	0.0010	mg/L	2017-06-21	2017-06-21	
Zinc, total	0.0046	0.075	0.0040	mg/L	2017-06-21	2017-06-21	
Zirconium, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	

Sample ID: SFC-4B (7061782-04) [Water] Sampled: 2017-06-20 09:22

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-22	
Chloride	34.0	1500	0.10	mg/L	N/A	2017-06-22	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-06-22	
Nitrate+Nitrite (as N)	0.234	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	0.0076	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	43.8	1000	1.0	mg/L	N/A	2017-06-22	

General Parameters

Alkalinity, Total (as CaCO3)	35.7	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Bicarbonate (as CaCO3)	35.7	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Ammonia, Total (as N)	0.051	1.31	0.005	mg/L	N/A	2017-06-23	
Chemical Oxygen Demand	9	N/A	20	mg/L	N/A	2017-06-22	
Conductivity (EC)	281	N/A	2.0	µS/cm	N/A	2017-06-26	
Nitrogen, Total Kjeldahl	< 0.050	N/A	0.050	mg/L	2017-06-22	2017-06-25	
pH	7.15	N/A	0.01	pH units	N/A	2017-06-26	HT2
Phosphorus, Total (as P)	0.0057	N/A	0.0020	mg/L	2017-06-22	2017-06-23	
Solids, Total Suspended	< 2.0	N/A	2.0	mg/L	N/A	2017-06-22	

Calculated Parameters

Hardness, Total (as CaCO3)	93.8	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.227	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.234	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	0.0590	N/A	0.0050	mg/L	2017-06-21	2017-06-21	
Antimony, total	< 0.00010	0.2	0.00010	mg/L	2017-06-21	2017-06-21	
Arsenic, total	< 0.00050	0.05	0.00050	mg/L	2017-06-21	2017-06-21	

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Sample ID: SFC-4B (7061782-04) [Water] Sampled: 2017-06-20 09:22, Continued

Total Metals, Continued

Barium, total	0.0224	5	0.0050	mg/L	2017-06-21	2017-06-21	
Beryllium, total	< 0.00010	0.053	0.00010	mg/L	2017-06-21	2017-06-21	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Boron, total	0.035	50	0.004	mg/L	2017-06-21	2017-06-21	
Cadmium, total	0.000017	0.0001	0.000010	mg/L	2017-06-21	2017-06-21	
Calcium, total	31.7	N/A	0.20	mg/L	2017-06-21	2017-06-21	
Chromium, total	< 0.00050	N/A	0.00050	mg/L	2017-06-21	2017-06-21	
Cobalt, total	0.00054	0.04	0.00010	mg/L	2017-06-21	2017-06-21	
Copper, total	0.00167	0.02	0.00020	mg/L	2017-06-21	2017-06-21	
Iron, total	0.267	N/A	0.010	mg/L	2017-06-21	2017-06-21	
Lead, total	< 0.00010	0.04	0.00010	mg/L	2017-06-21	2017-06-21	
Lithium, total	0.00039	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Magnesium, total	3.51	N/A	0.010	mg/L	2017-06-21	2017-06-21	
Manganese, total	0.173	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-29	
Molybdenum, total	0.00040	10	0.00010	mg/L	2017-06-21	2017-06-21	
Nickel, total	0.00071	0.25	0.00020	mg/L	2017-06-21	2017-06-21	
Phosphorus, total	< 0.050	N/A	0.050	mg/L	2017-06-21	2017-06-21	
Potassium, total	2.10	N/A	0.02	mg/L	2017-06-21	2017-06-21	
Selenium, total	< 0.00050	0.01	0.00050	mg/L	2017-06-21	2017-06-21	
Silicon, total	7.7	N/A	1.0	mg/L	2017-06-21	2017-06-21	
Silver, total	< 0.000050	0.0005	0.000050	mg/L	2017-06-21	2017-06-21	
Sodium, total	18.9	N/A	0.02	mg/L	2017-06-21	2017-06-21	
Strontium, total	0.289	N/A	0.0010	mg/L	2017-06-21	2017-06-21	
Sulfur, total	15.6	N/A	3.0	mg/L	2017-06-21	2017-06-21	
Tellurium, total	< 0.00020	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Thallium, total	< 0.000020	0.003	0.000020	mg/L	2017-06-21	2017-06-21	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Titanium, total	< 0.0050	1	0.0050	mg/L	2017-06-21	2017-06-21	
Uranium, total	< 0.000020	1	0.000020	mg/L	2017-06-21	2017-06-21	
Vanadium, total	< 0.0010	N/A	0.0010	mg/L	2017-06-21	2017-06-21	
Zinc, total	< 0.0040	0.075	0.0040	mg/L	2017-06-21	2017-06-21	
Zirconium, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	

Sample ID: SFC-11 (7061782-05) [Water] Sampled: 2017-06-20 10:45

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-22	
Chloride	34.2	1500	0.10	mg/L	N/A	2017-06-22	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-06-22	
Nitrate+Nitrite (as N)	0.090	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	0.0061	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	14.1	1000	1.0	mg/L	N/A	2017-06-22	

General Parameters

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Sample ID: SFC-11 (7061782-05) [Water] Sampled: 2017-06-20 10:45, Continued

General Parameters, Continued

Alkalinity, Total (as CaCO3)	26.9	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Bicarbonate (as CaCO3)	26.9	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Ammonia, Total (as N)	< 0.020	1.31	0.005	mg/L	N/A	2017-06-23	
Chemical Oxygen Demand	10	N/A	20	mg/L	N/A	2017-06-22	
Conductivity (EC)	197	N/A	2.0	µS/cm	N/A	2017-06-26	
Nitrogen, Total Kjeldahl	0.111	N/A	0.050	mg/L	2017-06-22	2017-06-25	
pH	7.02	N/A	0.01	pH units	N/A	2017-06-26	HT2
Phosphorus, Total (as P)	0.0325	N/A	0.0020	mg/L	2017-06-22	2017-06-23	
Solids, Total Suspended	14.6	N/A	2.0	mg/L	N/A	2017-06-22	

Calculated Parameters

Hardness, Total (as CaCO3)	44.4	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0836	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.201	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	0.368	N/A	0.0050	mg/L	2017-06-21	2017-06-21	
Antimony, total	0.00011	0.2	0.00010	mg/L	2017-06-21	2017-06-21	
Arsenic, total	< 0.00050	0.05	0.00050	mg/L	2017-06-21	2017-06-21	
Barium, total	0.0200	5	0.0050	mg/L	2017-06-21	2017-06-21	
Beryllium, total	< 0.00010	0.053	0.00010	mg/L	2017-06-21	2017-06-21	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Boron, total	0.005	50	0.004	mg/L	2017-06-21	2017-06-21	
Cadmium, total	0.000034	0.0001	0.000010	mg/L	2017-06-21	2017-06-21	
Calcium, total	14.4	N/A	0.20	mg/L	2017-06-21	2017-06-21	
Chromium, total	0.00053	N/A	0.00050	mg/L	2017-06-21	2017-06-21	
Cobalt, total	0.00037	0.04	0.00010	mg/L	2017-06-21	2017-06-21	
Copper, total	0.00337	0.02	0.00020	mg/L	2017-06-21	2017-06-21	
Iron, total	0.574	N/A	0.010	mg/L	2017-06-21	2017-06-21	
Lead, total	0.00022	0.04	0.00010	mg/L	2017-06-21	2017-06-21	
Lithium, total	0.00046	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Magnesium, total	2.03	N/A	0.010	mg/L	2017-06-21	2017-06-21	
Manganese, total	0.0297	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Mercury, total	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-29	
Molybdenum, total	0.00043	10	0.00010	mg/L	2017-06-21	2017-06-21	
Nickel, total	0.00068	0.25	0.00020	mg/L	2017-06-21	2017-06-21	
Phosphorus, total	< 0.050	N/A	0.050	mg/L	2017-06-21	2017-06-21	
Potassium, total	1.20	N/A	0.02	mg/L	2017-06-21	2017-06-21	
Selenium, total	< 0.00050	0.01	0.00050	mg/L	2017-06-21	2017-06-21	
Silicon, total	8.5	N/A	1.0	mg/L	2017-06-21	2017-06-21	
Silver, total	< 0.000050	0.0005	0.000050	mg/L	2017-06-21	2017-06-21	
Sodium, total	21.3	N/A	0.02	mg/L	2017-06-21	2017-06-21	
Strontium, total	0.139	N/A	0.0010	mg/L	2017-06-21	2017-06-21	

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Sample ID: SFC-11 (7061782-05) [Water] Sampled: 2017-06-20 10:45, Continued

Total Metals, Continued

Sulfur, total	5.9	N/A	3.0	mg/L	2017-06-21	2017-06-21	
Tellurium, total	< 0.00020	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Thallium, total	< 0.000020	0.003	0.000020	mg/L	2017-06-21	2017-06-21	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2017-06-21	2017-06-21	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2017-06-21	2017-06-21	
Titanium, total	0.0125	1	0.0050	mg/L	2017-06-21	2017-06-21	
Uranium, total	< 0.000020	1	0.000020	mg/L	2017-06-21	2017-06-21	
Vanadium, total	< 0.0010	N/A	0.0010	mg/L	2017-06-21	2017-06-21	
Zinc, total	0.0093	0.075	0.0040	mg/L	2017-06-21	2017-06-21	
Zirconium, total	0.00017	N/A	0.00010	mg/L	2017-06-21	2017-06-21	

Sample ID: GW INTERCEPTOR (7061782-06) [Water] Sampled: 2017-06-20 10:18

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-22	
Chloride	119	1500	0.10	mg/L	N/A	2017-06-25	
Fluoride	0.14	2	0.02	mg/L	N/A	2017-06-22	
Nitrate+Nitrite (as N)	0.027	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	0.0071	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	170	1000	1.0	mg/L	N/A	2017-06-25	

General Parameters

Alkalinity, Total (as CaCO3)	108	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Bicarbonate (as CaCO3)	108	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Ammonia, Total (as N)	1.28	1.31	0.005	mg/L	N/A	2017-06-23	
Chemical Oxygen Demand	18	N/A	20	mg/L	N/A	2017-06-22	
Conductivity (EC)	798	N/A	2.0	µS/cm	N/A	2017-06-26	
Nitrogen, Total Kjeldahl	1.32	N/A	0.050	mg/L	2017-06-20	2017-06-25	
pH	6.59	N/A	0.01	pH units	N/A	2017-06-26	HT2
Phosphorus, Total (as P)	0.0532	N/A	0.0020	mg/L	2017-06-22	2017-06-23	
Solids, Total Suspended	21.0	N/A	2.0	mg/L	N/A	2017-06-22	

Calculated Parameters

Hardness, Total (as CaCO3)	258	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0198	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	1.35	N/A	0.0500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.0282	N/A	0.0050	mg/L	N/A	2017-06-22	
Antimony, dissolved	< 0.00010	0.2	0.00010	mg/L	N/A	2017-06-22	
Arsenic, dissolved	< 0.00050	0.05	0.00050	mg/L	N/A	2017-06-22	
Barium, dissolved	0.0763	5	0.0050	mg/L	N/A	2017-06-22	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-06-22	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-22	

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Sample ID: GW INTERCEPTOR (7061782-06) [Water] Sampled: 2017-06-20 10:18, Continued

Dissolved Metals, Continued

Boron, dissolved	0.153	50	0.004	mg/L	N/A	2017-06-22	
Cadmium, dissolved	< 0.000010	0.0001	0.000010	mg/L	N/A	2017-06-22	
Calcium, dissolved	87.9	N/A	0.20	mg/L	N/A	2017-06-22	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-06-22	
Cobalt, dissolved	0.00752	0.04	0.00010	mg/L	N/A	2017-06-22	
Copper, dissolved	< 0.00020	0.02	0.00020	mg/L	N/A	2017-06-22	
Iron, dissolved	28.2	N/A	0.010	mg/L	N/A	2017-06-22	
Lead, dissolved	< 0.00010	0.04	0.00010	mg/L	N/A	2017-06-22	
Lithium, dissolved	0.00044	N/A	0.00010	mg/L	N/A	2017-06-22	
Magnesium, dissolved	9.19	N/A	0.010	mg/L	N/A	2017-06-22	
Manganese, dissolved	2.41	N/A	0.00020	mg/L	N/A	2017-06-22	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-28	
Molybdenum, dissolved	0.00033	10	0.00010	mg/L	N/A	2017-06-22	
Nickel, dissolved	0.00489	0.25	0.00020	mg/L	N/A	2017-06-22	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-06-22	
Potassium, dissolved	5.89	N/A	0.02	mg/L	N/A	2017-06-22	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-06-22	
Silicon, dissolved	9.1	N/A	1.0	mg/L	N/A	2017-06-22	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-06-22	
Sodium, dissolved	51.0	N/A	0.02	mg/L	N/A	2017-06-22	
Strontium, dissolved	0.546	N/A	0.0010	mg/L	N/A	2017-06-22	
Sulfur, dissolved	47.4	N/A	3.0	mg/L	N/A	2017-06-22	
Tellurium, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-22	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-06-22	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-22	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-22	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-06-22	
Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-06-22	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-06-22	
Zinc, dissolved	0.0244	0.075	0.0040	mg/L	N/A	2017-06-22	
Zirconium, dissolved	0.00010	N/A	0.00010	mg/L	N/A	2017-06-22	

BCMOE Aggregate Hydrocarbons

EPHw10-19	< 250	5000	250	µg/L	2017-06-22	2017-06-22	
EPHw19-32	< 250	N/A	250	µg/L	2017-06-22	2017-06-22	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
Surrogate: 2-Methylnonane	90		60-140	%	2017-06-22	2017-06-22	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	0.285	60	0.050	µg/L	2017-06-22	2017-06-23	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-06-22	2017-06-23	
Acridine	< 0.050	0.5	0.050	µg/L	2017-06-22	2017-06-23	
Anthracene	0.027	1	0.010	µg/L	2017-06-22	2017-06-23	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-06-22	2017-06-23	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-06-22	2017-06-23	

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Polycyclic Aromatic Hydrocarbons (PAH), Continued

Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-06-22	2017-06-23	
Benzo(b+j)fluoranthene	< 0.100	N/A	0.050	µg/L	2017-06-22	2017-06-23	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-06-22	2017-06-23	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-06-22	2017-06-23	
Chrysene	< 0.050	1	0.050	µg/L	2017-06-22	2017-06-23	
Dibenz(a,h)anthracene	< 0.050	N/A	0.050	µg/L	2017-06-22	2017-06-23	
Fluoranthene	0.097	2	0.030	µg/L	2017-06-22	2017-06-23	
Fluorene	0.099	120	0.050	µg/L	2017-06-22	2017-06-23	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-06-22	2017-06-23	
Naphthalene	< 0.200	10	0.200	µg/L	2017-06-22	2017-06-23	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-06-22	2017-06-23	
Pyrene	0.054	0.2	0.020	µg/L	2017-06-22	2017-06-23	
Quinoline	< 0.050	34	0.050	µg/L	2017-06-22	2017-06-23	
Surrogate: Acridine-d9	79		60-130	%	2017-06-22	2017-06-23	
Surrogate: Naphthalene-d8	77		60-130	%	2017-06-22	2017-06-23	
Surrogate: Perylene-d12	82		60-130	%	2017-06-22	2017-06-23	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-06-23	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-06-23	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-06-23	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-06-23	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-06-23	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
1,2-Dibromoethane	< 0.2	N/A	0.2	µg/L	N/A	2017-06-23	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-06-23	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-06-23	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-06-23	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-06-23	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-06-23	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-06-23	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-06-23	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-06-23	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-06-23	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-06-23	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-06-23	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	

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Sample ID: GW INTERCEPTOR (7061782-06) [Water] Sampled: 2017-06-20 10:18, Continued

Volatile Organic Compounds (VOC), Continued

1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-06-23	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-06-23	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-06-23	
Surrogate: Toluene-d8	92		70-130	%	N/A	2017-06-23	
Surrogate: 4-Bromofluorobenzene	95		70-130	%	N/A	2017-06-23	
Surrogate: 1,4-Dichlorobenzene-d4	77		70-130	%	N/A	2017-06-23	

Sample ID: MW-2D (7061782-07) [Water] Sampled: 2017-06-22 10:15

Anions

Bromide	0.16	N/A	0.10	mg/L	N/A	2017-06-25	
Chloride	45.4	1500	0.10	mg/L	N/A	2017-06-26	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-06-25	
Nitrate+Nitrite (as N)	0.021	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	< 0.0050	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	266	1000	1.0	mg/L	N/A	2017-06-26	

General Parameters

Alkalinity, Total (as CaCO3)	260	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Bicarbonate (as CaCO3)	260	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Ammonia, Total (as N)	11.7	1.31	0.005	mg/L	N/A	2017-06-27	
Chemical Oxygen Demand	29	N/A	20	mg/L	N/A	2017-06-26	
Conductivity (EC)	1050	N/A	2.0	µS/cm	N/A	2017-06-26	
Nitrogen, Total Kjeldahl	11.7	N/A	0.050	mg/L	2017-06-24	2017-06-25	
pH	6.90	N/A	0.01	pH units	N/A	2017-06-26	HT2
Phosphorus, Total (as P)	0.106	N/A	0.0020	mg/L	2017-06-26	2017-06-27	
Solids, Total Suspended	2180	N/A	2.0	mg/L	N/A	2017-06-26	

Calculated Parameters

Hardness, Total (as CaCO3)	422	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0209	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	11.7	N/A	0.500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	N/A	2017-06-26	
Antimony, dissolved	< 0.00010	0.2	0.00010	mg/L	N/A	2017-06-26	
Arsenic, dissolved	0.0151	0.05	0.00050	mg/L	N/A	2017-06-26	
Barium, dissolved	0.0326	5	0.0050	mg/L	N/A	2017-06-26	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-06-26	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Boron, dissolved	0.312	50	0.004	mg/L	N/A	2017-06-26	
Cadmium, dissolved	< 0.000010	0.0001	0.000010	mg/L	N/A	2017-06-26	

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Sample ID: MW-2D (7061782-07) [Water] Sampled: 2017-06-22 10:15, Continued

Dissolved Metals, Continued

Calcium, dissolved	141	N/A	0.20	mg/L	N/A	2017-06-26	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-06-26	
Cobalt, dissolved	0.0144	0.04	0.00010	mg/L	N/A	2017-06-26	
Copper, dissolved	< 0.00020	0.02	0.00020	mg/L	N/A	2017-06-26	
Iron, dissolved	60.8	N/A	0.010	mg/L	N/A	2017-06-26	
Lead, dissolved	< 0.00010	0.04	0.00010	mg/L	N/A	2017-06-26	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Magnesium, dissolved	17.1	N/A	0.010	mg/L	N/A	2017-06-26	
Manganese, dissolved	3.94	N/A	0.00020	mg/L	N/A	2017-06-26	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-28	
Molybdenum, dissolved	0.0151	10	0.00010	mg/L	N/A	2017-06-26	
Nickel, dissolved	0.00279	0.25	0.00020	mg/L	N/A	2017-06-26	
Phosphorus, dissolved	0.097	N/A	0.050	mg/L	N/A	2017-06-26	
Potassium, dissolved	19.5	N/A	0.02	mg/L	N/A	2017-06-26	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-06-26	
Silicon, dissolved	16.4	N/A	1.0	mg/L	N/A	2017-06-26	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-06-26	
Sodium, dissolved	33.8	N/A	0.02	mg/L	N/A	2017-06-26	
Strontium, dissolved	0.570	N/A	0.0010	mg/L	N/A	2017-06-26	
Sulfur, dissolved	84.4	N/A	3.0	mg/L	N/A	2017-06-26	
Tellurium, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-06-26	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-06-26	
Uranium, dissolved	0.000199	1	0.000020	mg/L	N/A	2017-06-26	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-06-26	
Zinc, dissolved	< 0.0040	0.075	0.0040	mg/L	N/A	2017-06-26	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	

Sample ID: MW-2S (7061782-08) [Water] Sampled: 2017-06-22 10:20

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-25	
Chloride	6.91	1500	0.10	mg/L	N/A	2017-06-25	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-06-25	
Nitrate+Nitrite (as N)	0.013	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	< 0.0050	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	54.8	1000	1.0	mg/L	N/A	2017-06-25	

General Parameters

Alkalinity, Total (as CaCO3)	80.5	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Bicarbonate (as CaCO3)	80.5	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	

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Sample ID: MW-2S (7061782-08) [Water] Sampled: 2017-06-22 10:20, Continued

General Parameters, Continued

Ammonia, Total (as N)	4.15	1.31	0.005	mg/L	N/A	2017-06-27	
Chemical Oxygen Demand	15	N/A	20	mg/L	N/A	2017-06-26	
Conductivity (EC)	291	N/A	2.0	µS/cm	N/A	2017-06-26	
Nitrogen, Total Kjeldahl	4.14	N/A	0.050	mg/L	2017-06-24	2017-06-25	
pH	6.75	N/A	0.01	pH units	N/A	2017-06-26	HT2
Phosphorus, Total (as P)	0.0423	N/A	0.0020	mg/L	2017-06-26	2017-06-27	
Solids, Total Suspended	96.4	N/A	2.0	mg/L	N/A	2017-06-26	

Calculated Parameters

Hardness, Total (as CaCO3)	88.2	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0128	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	4.15	N/A	0.500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	N/A	2017-06-26	
Antimony, dissolved	< 0.00010	0.2	0.00010	mg/L	N/A	2017-06-26	
Arsenic, dissolved	0.00705	0.05	0.00050	mg/L	N/A	2017-06-26	
Barium, dissolved	0.0665	5	0.0050	mg/L	N/A	2017-06-26	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-06-26	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Boron, dissolved	0.114	50	0.004	mg/L	N/A	2017-06-26	
Cadmium, dissolved	< 0.000010	0.0001	0.000010	mg/L	N/A	2017-06-26	
Calcium, dissolved	28.0	N/A	0.20	mg/L	N/A	2017-06-26	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-06-26	
Cobalt, dissolved	0.00123	0.04	0.00010	mg/L	N/A	2017-06-26	
Copper, dissolved	< 0.00020	0.02	0.00020	mg/L	N/A	2017-06-26	
Iron, dissolved	26.8	N/A	0.010	mg/L	N/A	2017-06-26	
Lead, dissolved	< 0.00010	0.04	0.00010	mg/L	N/A	2017-06-26	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Magnesium, dissolved	4.40	N/A	0.010	mg/L	N/A	2017-06-26	
Manganese, dissolved	1.39	N/A	0.00020	mg/L	N/A	2017-06-26	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-28	
Molybdenum, dissolved	0.00375	10	0.00010	mg/L	N/A	2017-06-26	
Nickel, dissolved	0.00063	0.25	0.00020	mg/L	N/A	2017-06-26	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-06-26	
Potassium, dissolved	6.71	N/A	0.02	mg/L	N/A	2017-06-26	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-06-26	
Silicon, dissolved	9.5	N/A	1.0	mg/L	N/A	2017-06-26	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-06-26	
Sodium, dissolved	6.65	N/A	0.02	mg/L	N/A	2017-06-26	
Strontium, dissolved	0.164	N/A	0.0010	mg/L	N/A	2017-06-26	
Sulfur, dissolved	15.9	N/A	3.0	mg/L	N/A	2017-06-26	
Tellurium, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-06-26	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	

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Sample ID: MW-2S (7061782-08) [Water] Sampled: 2017-06-22 10:20, Continued

Dissolved Metals, Continued

Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-06-26	
Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-06-26	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-06-26	
Zinc, dissolved	< 0.0040	0.075	0.0040	mg/L	N/A	2017-06-26	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	

Sample ID: MW-3 (7061782-09) [Water] Sampled: 2017-06-22 11:10

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-25	
Chloride	10.2	1500	0.10	mg/L	N/A	2017-06-25	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-06-25	
Nitrate+Nitrite (as N)	0.669	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	< 0.0050	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	25.7	1000	1.0	mg/L	N/A	2017-06-25	

General Parameters

Alkalinity, Total (as CaCO3)	31.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Bicarbonate (as CaCO3)	31.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Ammonia, Total (as N)	0.277	1.31	0.005	mg/L	N/A	2017-06-27	
Chemical Oxygen Demand	< 5	N/A	20	mg/L	N/A	2017-06-26	
Conductivity (EC)	151	N/A	2.0	µS/cm	N/A	2017-06-26	
Nitrogen, Total Kjeldahl	0.354	N/A	0.050	mg/L	2017-06-24	2017-06-25	
pH	6.52	N/A	0.01	pH units	N/A	2017-06-26	HT2
Phosphorus, Total (as P)	0.0037	N/A	0.0020	mg/L	2017-06-26	2017-06-27	
Solids, Total Suspended	160	N/A	2.0	mg/L	N/A	2017-06-26	

Calculated Parameters

Hardness, Total (as CaCO3)	41.8	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.669	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	1.02	N/A	0.0500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.0160	N/A	0.0050	mg/L	N/A	2017-06-26	
Antimony, dissolved	< 0.00010	0.2	0.00010	mg/L	N/A	2017-06-26	
Arsenic, dissolved	< 0.00050	0.05	0.00050	mg/L	N/A	2017-06-26	
Barium, dissolved	0.0580	5	0.0050	mg/L	N/A	2017-06-26	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-06-26	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Boron, dissolved	0.013	50	0.004	mg/L	N/A	2017-06-26	
Cadmium, dissolved	0.000195	0.0001	0.000010	mg/L	N/A	2017-06-26	
Calcium, dissolved	13.2	N/A	0.20	mg/L	N/A	2017-06-26	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-06-26	
Cobalt, dissolved	0.00260	0.04	0.00010	mg/L	N/A	2017-06-26	

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Sample ID: MW-3 (7061782-09) [Water] Sampled: 2017-06-22 11:10, Continued

Dissolved Metals, Continued

Copper, dissolved	0.00302	0.02	0.00020	mg/L	N/A	2017-06-26	
Iron, dissolved	0.028	N/A	0.010	mg/L	N/A	2017-06-26	
Lead, dissolved	< 0.00010	0.04	0.00010	mg/L	N/A	2017-06-26	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Magnesium, dissolved	2.15	N/A	0.010	mg/L	N/A	2017-06-26	
Manganese, dissolved	0.874	N/A	0.00020	mg/L	N/A	2017-06-26	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-28	
Molybdenum, dissolved	0.00085	10	0.00010	mg/L	N/A	2017-06-26	
Nickel, dissolved	0.00069	0.25	0.00020	mg/L	N/A	2017-06-26	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-06-26	
Potassium, dissolved	2.82	N/A	0.02	mg/L	N/A	2017-06-26	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-06-26	
Silicon, dissolved	7.7	N/A	1.0	mg/L	N/A	2017-06-26	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-06-26	
Sodium, dissolved	8.54	N/A	0.02	mg/L	N/A	2017-06-26	
Strontium, dissolved	0.123	N/A	0.0010	mg/L	N/A	2017-06-26	
Sulfur, dissolved	6.6	N/A	3.0	mg/L	N/A	2017-06-26	
Tellurium, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Thallium, dissolved	0.00081	0.003	0.000020	mg/L	N/A	2017-06-26	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-06-26	
Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-06-26	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-06-26	
Zinc, dissolved	< 0.0040	0.075	0.0040	mg/L	N/A	2017-06-26	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	

Sample ID: MW-4 (7061782-10) [Water] Sampled: 2017-06-22 09:45

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-25	
Chloride	23.6	1500	0.10	mg/L	N/A	2017-06-25	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-06-25	
Nitrate+Nitrite (as N)	0.022	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	< 0.0050	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	58.5	1000	1.0	mg/L	N/A	2017-06-25	

General Parameters

Alkalinity, Total (as CaCO3)	132	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Bicarbonate (as CaCO3)	132	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Ammonia, Total (as N)	2.01	1.31	0.005	mg/L	N/A	2017-06-27	
Chemical Oxygen Demand	19	N/A	20	mg/L	N/A	2017-06-26	
Conductivity (EC)	424	N/A	2.0	µS/cm	N/A	2017-06-26	

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Sample ID: MW-4 (7061782-10) [Water] Sampled: 2017-06-22 09:45, Continued

General Parameters, Continued

Nitrogen, Total Kjeldahl	3.16	N/A	0.050	mg/L	2017-06-24	2017-06-25	
pH	6.71	N/A	0.01	pH units	N/A	2017-06-26	HT2
Phosphorus, Total (as P)	0.462	N/A	0.0020	mg/L	2017-06-26	2017-06-27	
Solids, Total Suspended	459	N/A	2.0	mg/L	N/A	2017-06-26	

Calculated Parameters

Hardness, Total (as CaCO3)	147	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0218	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	3.19	N/A	0.500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	N/A	2017-06-26	
Antimony, dissolved	< 0.00010	0.2	0.00010	mg/L	N/A	2017-06-26	
Arsenic, dissolved	0.00817	0.05	0.00050	mg/L	N/A	2017-06-26	
Barium, dissolved	0.189	5	0.0050	mg/L	N/A	2017-06-26	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-06-26	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Boron, dissolved	0.066	50	0.004	mg/L	N/A	2017-06-26	
Cadmium, dissolved	0.000203	0.0001	0.000010	mg/L	N/A	2017-06-26	
Calcium, dissolved	47.9	N/A	0.20	mg/L	N/A	2017-06-26	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-06-26	
Cobalt, dissolved	0.0300	0.04	0.00010	mg/L	N/A	2017-06-26	
Copper, dissolved	0.00112	0.02	0.00020	mg/L	N/A	2017-06-26	
Iron, dissolved	49.8	N/A	0.010	mg/L	N/A	2017-06-26	
Lead, dissolved	< 0.00010	0.04	0.00010	mg/L	N/A	2017-06-26	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Magnesium, dissolved	6.56	N/A	0.010	mg/L	N/A	2017-06-26	
Manganese, dissolved	2.73	N/A	0.00020	mg/L	N/A	2017-06-26	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-28	
Molybdenum, dissolved	0.0158	10	0.00010	mg/L	N/A	2017-06-26	
Nickel, dissolved	0.00378	0.25	0.00020	mg/L	N/A	2017-06-26	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-06-26	
Potassium, dissolved	6.22	N/A	0.02	mg/L	N/A	2017-06-26	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-06-26	
Silicon, dissolved	12.2	N/A	1.0	mg/L	N/A	2017-06-26	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-06-26	
Sodium, dissolved	17.8	N/A	0.02	mg/L	N/A	2017-06-26	
Strontium, dissolved	0.285	N/A	0.0010	mg/L	N/A	2017-06-26	
Sulfur, dissolved	16.5	N/A	3.0	mg/L	N/A	2017-06-26	
Tellurium, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Thallium, dissolved	0.000028	0.003	0.000020	mg/L	N/A	2017-06-26	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-06-26	
Uranium, dissolved	0.000218	1	0.000020	mg/L	N/A	2017-06-26	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-06-26	

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Sample ID: MW-4 (7061782-10) [Water] Sampled: 2017-06-22 09:45, Continued

Dissolved Metals, Continued

Zinc, dissolved	0.0077	0.075	0.0040	mg/L	N/A	2017-06-26	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	

Sample ID: MW-2B (7061782-11) [Water] Sampled: 2017-06-22 10:20

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-25	
Chloride	6.53	1500	0.10	mg/L	N/A	2017-06-25	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-06-25	
Nitrate+Nitrite (as N)	0.016	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	< 0.0050	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	53.5	1000	1.0	mg/L	N/A	2017-06-25	

General Parameters

Alkalinity, Total (as CaCO3)	82.2	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Bicarbonate (as CaCO3)	82.2	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Ammonia, Total (as N)	4.06	1.31	0.005	mg/L	N/A	2017-06-27	
Chemical Oxygen Demand	12	N/A	20	mg/L	N/A	2017-06-26	
Conductivity (EC)	279	N/A	2.0	µS/cm	N/A	2017-06-26	
Nitrogen, Total Kjeldahl	4.12	N/A	0.050	mg/L	2017-06-24	2017-06-25	
pH	6.71	N/A	0.01	pH units	N/A	2017-06-26	HT2
Phosphorus, Total (as P)	0.0308	N/A	0.0020	mg/L	2017-06-26	2017-06-27	
Solids, Total Suspended	107	N/A	2.0	mg/L	N/A	2017-06-26	

Calculated Parameters

Hardness, Total (as CaCO3)	87.4	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0163	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	4.13	N/A	0.500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	N/A	2017-06-26	
Antimony, dissolved	< 0.00010	0.2	0.00010	mg/L	N/A	2017-06-26	
Arsenic, dissolved	0.00713	0.05	0.00050	mg/L	N/A	2017-06-26	
Barium, dissolved	0.0676	5	0.0050	mg/L	N/A	2017-06-26	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-06-26	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Boron, dissolved	0.106	50	0.004	mg/L	N/A	2017-06-26	
Cadmium, dissolved	< 0.000010	0.0001	0.000010	mg/L	N/A	2017-06-26	
Calcium, dissolved	27.7	N/A	0.20	mg/L	N/A	2017-06-26	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-06-26	
Cobalt, dissolved	0.00124	0.04	0.00010	mg/L	N/A	2017-06-26	
Copper, dissolved	< 0.00020	0.02	0.00020	mg/L	N/A	2017-06-26	
Iron, dissolved	26.8	N/A	0.010	mg/L	N/A	2017-06-26	
Lead, dissolved	< 0.00010	0.04	0.00010	mg/L	N/A	2017-06-26	

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Sample ID: MW-2B (7061782-11) [Water] Sampled: 2017-06-22 10:20, Continued

Dissolved Metals, Continued

Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Magnesium, dissolved	4.38	N/A	0.010	mg/L	N/A	2017-06-26	
Manganese, dissolved	1.41	N/A	0.00020	mg/L	N/A	2017-06-26	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-28	
Molybdenum, dissolved	0.00377	10	0.00010	mg/L	N/A	2017-06-26	
Nickel, dissolved	0.00065	0.25	0.00020	mg/L	N/A	2017-06-26	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-06-26	
Potassium, dissolved	6.81	N/A	0.02	mg/L	N/A	2017-06-26	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-06-26	
Silicon, dissolved	9.7	N/A	1.0	mg/L	N/A	2017-06-26	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-06-26	
Sodium, dissolved	6.56	N/A	0.02	mg/L	N/A	2017-06-26	
Strontium, dissolved	0.167	N/A	0.0010	mg/L	N/A	2017-06-26	
Sulfur, dissolved	15.8	N/A	3.0	mg/L	N/A	2017-06-26	
Tellurium, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-06-26	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-06-26	
Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-06-26	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-06-26	
Zinc, dissolved	< 0.0040	0.075	0.0040	mg/L	N/A	2017-06-26	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	

Sample ID: Trip Blank (7061782-12) [Water] Sampled: 2017-06-22 00:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-06-25	
Chloride	< 0.10	1500	0.10	mg/L	N/A	2017-06-25	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-06-25	
Nitrate+Nitrite (as N)	< 0.005	400	0.005	mg/L	N/A	2017-06-29	
Nitrite (as N)	< 0.0050	0.2	0.0050	mg/L	N/A	2017-06-29	
Sulfate	< 1.0	1000	1.0	mg/L	N/A	2017-06-25	

General Parameters

Alkalinity, Total (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Ammonia, Total (as N)	< 0.020	1.31	0.005	mg/L	N/A	2017-06-27	
Chemical Oxygen Demand	< 5	N/A	20	mg/L	N/A	2017-06-26	
Conductivity (EC)	< 2.0	N/A	2.0	µS/cm	N/A	2017-06-26	
Nitrogen, Total Kjeldahl	< 0.050	N/A	0.050	mg/L	2017-06-24	2017-06-25	
pH	5.74	N/A	0.01	pH units	N/A	2017-06-26	HT2
Phosphorus, Total (as P)	< 0.0020	N/A	0.0020	mg/L	2017-06-26	2017-06-27	

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Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: Trip Blank (7061782-12) [Water] Sampled: 2017-06-22 00:00, Continued

General Parameters, Continued

Solids, Total Suspended	< 2.0	N/A	2.0	mg/L	N/A	2017-06-26	
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Calculated Parameters

Hardness, Total (as CaCO3)	< 0.500	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	< 0.00500	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	< 0.0500	N/A	0.0500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	N/A	2017-06-26	
Antimony, dissolved	< 0.00010	0.2	0.00010	mg/L	N/A	2017-06-26	
Arsenic, dissolved	< 0.00050	0.05	0.00050	mg/L	N/A	2017-06-26	
Barium, dissolved	< 0.0050	5	0.0050	mg/L	N/A	2017-06-26	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-06-26	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Boron, dissolved	< 0.004	50	0.004	mg/L	N/A	2017-06-26	
Cadmium, dissolved	< 0.000010	0.0001	0.000010	mg/L	N/A	2017-06-26	
Calcium, dissolved	< 0.20	N/A	0.20	mg/L	N/A	2017-06-26	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-06-26	
Cobalt, dissolved	< 0.00010	0.04	0.00010	mg/L	N/A	2017-06-26	
Copper, dissolved	< 0.00020	0.02	0.00020	mg/L	N/A	2017-06-26	
Iron, dissolved	< 0.010	N/A	0.010	mg/L	N/A	2017-06-26	
Lead, dissolved	< 0.00010	0.04	0.00010	mg/L	N/A	2017-06-26	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Magnesium, dissolved	< 0.010	N/A	0.010	mg/L	N/A	2017-06-26	
Manganese, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Mercury, dissolved	< 0.00002	0.001	0.00002	mg/L	2017-06-27	2017-06-28	
Molybdenum, dissolved	< 0.00010	10	0.00010	mg/L	N/A	2017-06-26	
Nickel, dissolved	< 0.00020	0.25	0.00020	mg/L	N/A	2017-06-26	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-06-26	
Potassium, dissolved	< 0.02	N/A	0.02	mg/L	N/A	2017-06-26	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-06-26	
Silicon, dissolved	< 1.0	N/A	1.0	mg/L	N/A	2017-06-26	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-06-26	
Sodium, dissolved	< 0.02	N/A	0.02	mg/L	N/A	2017-06-26	
Strontium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-06-26	
Sulfur, dissolved	< 3.0	N/A	3.0	mg/L	N/A	2017-06-26	
Tellurium, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-06-26	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-06-26	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-06-26	
Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-06-26	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-06-26	
Zinc, dissolved	< 0.0040	0.075	0.0040	mg/L	N/A	2017-06-26	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-06-26	

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Sample / Analysis Qualifiers:

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

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The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC 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.

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	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Anions, Batch B7F1621									
Blank (B7F1621-BLK1) Prepared: 2017-06-22, Analyzed: 2017-06-22									
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.02 mg/L							
Sulfate	< 1.0	1.0 mg/L							
Blank (B7F1621-BLK2) Prepared: 2017-06-22, Analyzed: 2017-06-22									
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.02 mg/L							
Sulfate	< 1.0	1.0 mg/L							
LCS (B7F1621-BS1) Prepared: 2017-06-22, Analyzed: 2017-06-22									
Bromide	4.06	0.10 mg/L	4.00		101	85-115			
Chloride	15.5	0.10 mg/L	16.0		97	90-110			
Fluoride	3.85	0.02 mg/L	4.00		96	88-108			
Sulfate	15.6	1.0 mg/L	16.0		97	91-109			
LCS (B7F1621-BS2) Prepared: 2017-06-22, Analyzed: 2017-06-22									
Bromide	3.99	0.10 mg/L	4.00		100	85-115			
Chloride	15.6	0.10 mg/L	16.0		98	90-110			
Fluoride	3.91	0.02 mg/L	4.00		98	88-108			
Sulfate	15.9	1.0 mg/L	16.0		100	91-109			
Anions, Batch B7F1713									
Blank (B7F1713-BLK1) Prepared: 2017-06-29, Analyzed: 2017-06-29									
Nitrate+Nitrite (as N)	< 0.005	0.005 mg/L							
Blank (B7F1713-BLK2) Prepared: 2017-06-29, Analyzed: 2017-06-29									
Nitrate+Nitrite (as N)	< 0.005	0.005 mg/L							

APPENDIX 1: QUALITY CONTROL DATA

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Anions, Batch B7F1713, Continued									
Blank (B7F1713-BLK3)			Prepared: 2017-06-30, Analyzed: 2017-06-30						
Nitrate+Nitrite (as N)	< 0.005	0.005 mg/L							
LCS (B7F1713-BS1)			Prepared: 2017-06-29, Analyzed: 2017-06-29						
Nitrate+Nitrite (as N)	0.510	0.005 mg/L	0.500		102	91-108			
LCS (B7F1713-BS2)			Prepared: 2017-06-29, Analyzed: 2017-06-29						
Nitrate+Nitrite (as N)	0.496	0.005 mg/L	0.500		99	91-108			
LCS (B7F1713-BS3)			Prepared: 2017-06-30, Analyzed: 2017-06-30						
Nitrate+Nitrite (as N)	0.503	0.005 mg/L	0.500		101	91-108			
Duplicate (B7F1713-DUP1)			Source: 7061782-03			Prepared: 2017-06-29, Analyzed: 2017-06-29			
Nitrate+Nitrite (as N)	0.083	0.005 mg/L		0.083			< 1	10	
Matrix Spike (B7F1713-MS1)			Source: 7061782-03			Prepared: 2017-06-29, Analyzed: 2017-06-29			
Nitrate+Nitrite (as N)	0.208	0.005 mg/L	0.125	0.083	100	80-120			
Anions, Batch B7F1714									
Blank (B7F1714-BLK1)			Prepared: 2017-06-29, Analyzed: 2017-06-29						
Nitrite (as N)	< 0.0050	0.0050 mg/L							
Blank (B7F1714-BLK2)			Prepared: 2017-06-29, Analyzed: 2017-06-29						
Nitrite (as N)	< 0.0050	0.0050 mg/L							
LCS (B7F1714-BS1)			Prepared: 2017-06-29, Analyzed: 2017-06-29						
Nitrite (as N)	0.510	0.0050 mg/L	0.500		102	90-110			
LCS (B7F1714-BS2)			Prepared: 2017-06-29, Analyzed: 2017-06-29						
Nitrite (as N)	0.508	0.0050 mg/L	0.500		102	90-110			
Duplicate (B7F1714-DUP1)			Source: 7061782-03			Prepared: 2017-06-29, Analyzed: 2017-06-29			
Nitrite (as N)	0.0051	0.0050 mg/L		0.0052				20	
Matrix Spike (B7F1714-MS1)			Source: 7061782-03			Prepared: 2017-06-29, Analyzed: 2017-06-29			
Nitrite (as N)	0.130	0.0050 mg/L	0.125	0.0052	100	75-120			
Anions, Batch B7F1829									
Blank (B7F1829-BLK1)			Prepared: 2017-06-25, Analyzed: 2017-06-25						
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.02 mg/L							
Sulfate	< 1.0	1.0 mg/L							
Blank (B7F1829-BLK2)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.02 mg/L							
Sulfate	< 1.0	1.0 mg/L							
Blank (B7F1829-BLK3)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.02 mg/L							
Sulfate	< 1.0	1.0 mg/L							

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Anions, Batch B7F1829, Continued									
LCS (B7F1829-BS1)			Prepared: 2017-06-25, Analyzed: 2017-06-25						
Bromide	4.05	0.10 mg/L	4.00		101	85-115			
Chloride	16.2	0.10 mg/L	16.0		101	90-110			
Fluoride	3.96	0.02 mg/L	4.00		99	88-108			
Sulfate	16.4	1.0 mg/L	16.0		102	91-109			
LCS (B7F1829-BS2)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Bromide	3.98	0.10 mg/L	4.00		99	85-115			
Chloride	16.3	0.10 mg/L	16.0		102	90-110			
Fluoride	3.93	0.02 mg/L	4.00		98	88-108			
Sulfate	16.4	1.0 mg/L	16.0		103	91-109			
LCS (B7F1829-BS3)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Bromide	4.05	0.10 mg/L	4.00		101	85-115			
Chloride	16.5	0.10 mg/L	16.0		103	90-110			
Fluoride	3.98	0.02 mg/L	4.00		99	88-108			
Sulfate	16.0	1.0 mg/L	16.0		100	91-109			
Duplicate (B7F1829-DUP1)			Source: 7061782-07		Prepared: 2017-06-26, Analyzed: 2017-06-26				
Bromide	0.16	0.10 mg/L		0.16					10
Chloride	46.9	0.10 mg/L		45.4			3		10
Fluoride	< 0.10	0.02 mg/L		< 0.10					10
Sulfate	282	1.0 mg/L		266			6		6
Matrix Spike (B7F1829-MS1)			Source: 7061782-07		Prepared: 2017-06-25, Analyzed: 2017-06-25				
Bromide	4.16	0.10 mg/L	4.00	0.16	100	80-120			
Chloride	63.3	0.10 mg/L	16.0	45.4	112	75-125			
Fluoride	4.21	0.02 mg/L	4.00	< 0.10	104	75-125			
BCMOE Aggregate Hydrocarbons, Batch B7F1616									
Blank (B7F1616-BLK1)			Prepared: 2017-06-22, Analyzed: 2017-06-22						
EPHw10-19	< 250	250 µg/L							
EPHw19-32	< 250	250 µg/L							
Surrogate: 2-Methylnonane	402	µg/L	460		87	60-140			
LCS (B7F1616-BS2)			Prepared: 2017-06-22, Analyzed: 2017-06-22						
EPHw10-19	13900	250 µg/L	15500		90	70-130			
EPHw19-32	20100	250 µg/L	22200		90	70-130			
Surrogate: 2-Methylnonane	496	µg/L	460		108	60-140			
Dissolved Metals, Batch B7F1703									
Blank (B7F1703-BLK1)			Prepared: 2017-06-22, Analyzed: 2017-06-22						
Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00010	0.00010 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.004	0.004 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00020	0.00020 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Dissolved Metals, Batch B7F1703, Continued

Blank (B7F1703-BLK1), Continued

Prepared: 2017-06-22, Analyzed: 2017-06-22

Lead, dissolved	< 0.00010	0.00010 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00020	0.00020 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.02	0.02 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.02	0.02 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00020	0.00020 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							

LCS (B7F1703-BS1)

Prepared: 2017-06-22, Analyzed: 2017-06-22

Aluminum, dissolved	0.0210	0.0050 mg/L	0.0200		105	80-120			
Antimony, dissolved	0.0190	0.00010 mg/L	0.0200		95	80-120			
Arsenic, dissolved	0.0196	0.00050 mg/L	0.0200		98	80-120			
Barium, dissolved	0.0189	0.0050 mg/L	0.0200		94	80-120			
Beryllium, dissolved	0.0208	0.00010 mg/L	0.0200		104	80-120			
Bismuth, dissolved	0.0211	0.00010 mg/L	0.0200		105	80-120			
Boron, dissolved	0.020	0.004 mg/L	0.0200		100	80-120			
Cadmium, dissolved	0.0203	0.000010 mg/L	0.0200		102	80-120			
Calcium, dissolved	2.13	0.20 mg/L	2.00		107	80-120			
Chromium, dissolved	0.0202	0.00050 mg/L	0.0200		101	80-120			
Cobalt, dissolved	0.0205	0.00010 mg/L	0.0200		102	80-120			
Copper, dissolved	0.0215	0.00020 mg/L	0.0200		107	80-120			
Iron, dissolved	2.01	0.010 mg/L	2.00		101	80-120			
Lead, dissolved	0.0212	0.00010 mg/L	0.0200		106	80-120			
Lithium, dissolved	0.0211	0.00010 mg/L	0.0200		106	80-120			
Magnesium, dissolved	2.05	0.010 mg/L	2.00		102	80-120			
Manganese, dissolved	0.0199	0.00020 mg/L	0.0200		100	80-120			
Molybdenum, dissolved	0.0191	0.00010 mg/L	0.0200		95	80-120			
Nickel, dissolved	0.0204	0.00020 mg/L	0.0200		102	80-120			
Phosphorus, dissolved	1.90	0.050 mg/L	2.00		95	80-120			
Potassium, dissolved	2.00	0.02 mg/L	2.00		100	80-120			
Selenium, dissolved	0.0202	0.00050 mg/L	0.0200		101	80-120			
Silicon, dissolved	2.1	1.0 mg/L	2.00		107	80-120			
Silver, dissolved	0.0201	0.000050 mg/L	0.0200		101	80-120			
Sodium, dissolved	2.50	0.02 mg/L	2.40		104	80-120			
Strontium, dissolved	0.0189	0.0010 mg/L	0.0200		94	80-120			
Sulfur, dissolved	4.4	3.0 mg/L	5.00		87	80-120			
Tellurium, dissolved	0.0200	0.00020 mg/L	0.0200		100	80-120			
Thallium, dissolved	0.0209	0.000020 mg/L	0.0200		105	80-120			
Thorium, dissolved	0.0197	0.00010 mg/L	0.0200		98	80-120			
Tin, dissolved	0.0200	0.00020 mg/L	0.0200		100	80-120			
Titanium, dissolved	0.0197	0.0050 mg/L	0.0200		99	80-120			

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Dissolved Metals, Batch B7F1703, Continued

LCS (B7F1703-BS1), Continued

Prepared: 2017-06-22, Analyzed: 2017-06-22

Uranium, dissolved	0.0200	0.000020 mg/L	0.0200		100	80-120			
Vanadium, dissolved	0.0194	0.0010 mg/L	0.0200		97	80-120			
Zinc, dissolved	0.0225	0.0040 mg/L	0.0200		113	80-120			
Zirconium, dissolved	0.0202	0.00010 mg/L	0.0200		101	80-120			

Duplicate (B7F1703-DUP1)

Source: 7061782-06

Prepared: 2017-06-22, Analyzed: 2017-06-22

Aluminum, dissolved	0.0278	0.0050 mg/L		0.0282			1	11	
Antimony, dissolved	< 0.00010	0.00010 mg/L		< 0.00010				20	
Arsenic, dissolved	< 0.00050	0.00050 mg/L		< 0.00050				8	
Barium, dissolved	0.0756	0.0050 mg/L		0.0763			1	7	
Beryllium, dissolved	< 0.00010	0.00010 mg/L		< 0.00010				14	
Bismuth, dissolved	< 0.00010	0.00010 mg/L		< 0.00010				20	
Boron, dissolved	0.149	0.004 mg/L		0.153			3	13	
Cadmium, dissolved	0.000012	0.000010 mg/L		< 0.000010				20	
Calcium, dissolved	86.5	0.20 mg/L		87.9			2	8	
Chromium, dissolved	< 0.00050	0.00050 mg/L		< 0.00050				14	
Cobalt, dissolved	0.00741	0.00010 mg/L		0.00752			1	10	
Copper, dissolved	0.00022	0.00020 mg/L		< 0.00020				20	
Iron, dissolved	27.6	0.010 mg/L		28.2			2	14	
Lead, dissolved	< 0.00010	0.00010 mg/L		< 0.00010				20	
Lithium, dissolved	0.00044	0.00010 mg/L		0.00044				14	
Magnesium, dissolved	8.93	0.010 mg/L		9.19			3	6	
Manganese, dissolved	2.36	0.00020 mg/L		2.41			2	9	
Molybdenum, dissolved	0.00035	0.00010 mg/L		0.00033				19	
Nickel, dissolved	0.00482	0.00020 mg/L		0.00489			1	20	
Phosphorus, dissolved	< 0.050	0.050 mg/L		< 0.050				14	
Potassium, dissolved	5.72	0.02 mg/L		5.89			3	8	
Selenium, dissolved	< 0.00050	0.00050 mg/L		< 0.00050				20	
Silicon, dissolved	9.0	1.0 mg/L		9.1			2	12	
Silver, dissolved	< 0.000050	0.000050 mg/L		< 0.000050				20	
Sodium, dissolved	49.8	0.02 mg/L		51.0			2	6	
Strontium, dissolved	0.533	0.0010 mg/L		0.546			2	6	
Sulfur, dissolved	45.1	3.0 mg/L		47.4			5	20	
Tellurium, dissolved	< 0.00020	0.00020 mg/L		< 0.00020				20	
Thallium, dissolved	< 0.000020	0.000020 mg/L		< 0.000020				13	
Thorium, dissolved	< 0.00010	0.00010 mg/L		< 0.00010				20	
Tin, dissolved	< 0.00020	0.00020 mg/L		< 0.00020				20	
Titanium, dissolved	< 0.0050	0.0050 mg/L		< 0.0050				20	
Uranium, dissolved	< 0.000020	0.000020 mg/L		< 0.000020				14	
Vanadium, dissolved	< 0.0010	0.0010 mg/L		< 0.0010				20	
Zinc, dissolved	0.0250	0.0040 mg/L		0.0244			2	11	
Zirconium, dissolved	< 0.00010	0.00010 mg/L		0.00010				20	

Reference (B7F1703-SRM1)

Prepared: 2017-06-22, Analyzed: 2017-06-22

Aluminum, dissolved	0.207	0.0050 mg/L	0.233		89	58-142			
Antimony, dissolved	0.0449	0.00010 mg/L	0.0430		104	75-125			
Arsenic, dissolved	0.418	0.00050 mg/L	0.438		96	81-119			
Barium, dissolved	3.31	0.0050 mg/L	3.35		99	83-117			
Beryllium, dissolved	0.226	0.00010 mg/L	0.213		106	80-120			
Boron, dissolved	1.63	0.004 mg/L	1.74		94	74-117			
Cadmium, dissolved	0.227	0.000010 mg/L	0.224		101	83-117			
Calcium, dissolved	7.85	0.20 mg/L	7.69		102	76-124			
Chromium, dissolved	0.409	0.00050 mg/L	0.437		94	81-119			

APPENDIX 1: QUALITY CONTROL DATA

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Whistler Landfill - Summer/Winter

WORK ORDER REPORTED 7061782
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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Dissolved Metals, Batch B7F1703, Continued

Reference (B7F1703-SRM1), Continued

Prepared: 2017-06-22, Analyzed: 2017-06-22

Cobalt, dissolved	0.124	0.00010 mg/L	0.128		97	76-124			
Copper, dissolved	0.832	0.00020 mg/L	0.844		99	84-116			
Iron, dissolved	1.19	0.010 mg/L	1.29		92	74-126			
Lead, dissolved	0.112	0.00010 mg/L	0.112		100	72-128			
Lithium, dissolved	0.112	0.00010 mg/L	0.104		108	60-140			
Magnesium, dissolved	6.30	0.010 mg/L	6.92		91	81-119			
Manganese, dissolved	0.320	0.00020 mg/L	0.345		93	84-116			
Molybdenum, dissolved	0.414	0.00010 mg/L	0.426		97	83-117			
Nickel, dissolved	0.812	0.00020 mg/L	0.840		97	74-126			
Phosphorus, dissolved	0.438	0.050 mg/L	0.495		88	68-132			
Potassium, dissolved	2.82	0.02 mg/L	3.19		88	74-126			
Selenium, dissolved	0.0319	0.00050 mg/L	0.0331		96	70-130			
Sodium, dissolved	17.2	0.02 mg/L	19.1		90	72-128			
Strontium, dissolved	0.844	0.0010 mg/L	0.916		92	84-113			
Thallium, dissolved	0.0392	0.000020 mg/L	0.0393		100	57-143			
Uranium, dissolved	0.265	0.000020 mg/L	0.266		99	85-115			
Vanadium, dissolved	0.779	0.0010 mg/L	0.869		90	87-113			
Zinc, dissolved	0.864	0.0040 mg/L	0.881		98	72-128			

Dissolved Metals, Batch B7F1920

Blank (B7F1920-BLK1)

Prepared: 2017-06-26, Analyzed: 2017-06-26

Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00010	0.00010 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.004	0.004 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00020	0.00020 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00010	0.00010 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00020	0.00020 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.02	0.02 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.02	0.02 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00020	0.00020 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Dissolved Metals, Batch B7F1920, Continued

Blank (B7F1920-BLK1), Continued

Prepared: 2017-06-26, Analyzed: 2017-06-26

Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							

LCS (B7F1920-BS1)

Prepared: 2017-06-26, Analyzed: 2017-06-26

Aluminum, dissolved	0.0224	0.0050 mg/L	0.0200		112	80-120			
Antimony, dissolved	0.0192	0.00010 mg/L	0.0200		96	80-120			
Arsenic, dissolved	0.0195	0.00050 mg/L	0.0200		98	80-120			
Barium, dissolved	0.0191	0.0050 mg/L	0.0200		96	80-120			
Beryllium, dissolved	0.0198	0.00010 mg/L	0.0200		99	80-120			
Bismuth, dissolved	0.0209	0.00010 mg/L	0.0200		105	80-120			
Boron, dissolved	0.021	0.004 mg/L	0.0200		104	80-120			
Cadmium, dissolved	0.0200	0.000010 mg/L	0.0200		100	80-120			
Calcium, dissolved	2.06	0.20 mg/L	2.00		103	80-120			
Chromium, dissolved	0.0198	0.00050 mg/L	0.0200		99	80-120			
Cobalt, dissolved	0.0202	0.00010 mg/L	0.0200		101	80-120			
Copper, dissolved	0.0211	0.00020 mg/L	0.0200		105	80-120			
Iron, dissolved	1.96	0.010 mg/L	2.00		98	80-120			
Lead, dissolved	0.0210	0.00010 mg/L	0.0200		105	80-120			
Lithium, dissolved	0.0195	0.00010 mg/L	0.0200		98	80-120			
Magnesium, dissolved	1.98	0.010 mg/L	2.00		99	80-120			
Manganese, dissolved	0.0203	0.00020 mg/L	0.0200		102	80-120			
Molybdenum, dissolved	0.0187	0.00010 mg/L	0.0200		93	80-120			
Nickel, dissolved	0.0203	0.00020 mg/L	0.0200		102	80-120			
Phosphorus, dissolved	1.93	0.050 mg/L	2.00		96	80-120			
Potassium, dissolved	2.04	0.02 mg/L	2.00		102	80-120			
Selenium, dissolved	0.0211	0.00050 mg/L	0.0200		106	80-120			
Silicon, dissolved	2.2	1.0 mg/L	2.00		108	80-120			
Silver, dissolved	0.0200	0.000050 mg/L	0.0200		100	80-120			
Sodium, dissolved	2.35	0.02 mg/L	2.40		98	80-120			
Strontium, dissolved	0.0197	0.0010 mg/L	0.0200		98	80-120			
Sulfur, dissolved	4.2	3.0 mg/L	5.00		85	80-120			
Tellurium, dissolved	0.0199	0.00020 mg/L	0.0200		100	80-120			
Thallium, dissolved	0.0206	0.000020 mg/L	0.0200		103	80-120			
Thorium, dissolved	0.0193	0.00010 mg/L	0.0200		97	80-120			
Tin, dissolved	0.0198	0.00020 mg/L	0.0200		99	80-120			
Titanium, dissolved	0.0211	0.0050 mg/L	0.0200		105	80-120			
Uranium, dissolved	0.0195	0.000020 mg/L	0.0200		97	80-120			
Vanadium, dissolved	0.0193	0.0010 mg/L	0.0200		96	80-120			
Zinc, dissolved	0.0218	0.0040 mg/L	0.0200		109	80-120			
Zirconium, dissolved	0.0198	0.00010 mg/L	0.0200		99	80-120			

Duplicate (B7F1920-DUP1)

Source: 7061782-07

Prepared: 2017-06-26, Analyzed: 2017-06-26

Aluminum, dissolved	< 0.0050	0.0050 mg/L	< 0.0050					11	
Antimony, dissolved	< 0.00010	0.00010 mg/L	< 0.00010						20
Arsenic, dissolved	0.0155	0.00050 mg/L	0.0151			2			8
Barium, dissolved	0.0334	0.0050 mg/L	0.0326			3			7
Beryllium, dissolved	< 0.00010	0.00010 mg/L	< 0.00010						14
Bismuth, dissolved	< 0.00010	0.00010 mg/L	< 0.00010						20
Boron, dissolved	0.320	0.004 mg/L	0.312				3		13
Cadmium, dissolved	< 0.000010	0.000010 mg/L	< 0.000010						20
Calcium, dissolved	146	0.20 mg/L	141				4		8
Chromium, dissolved	< 0.00050	0.00050 mg/L	< 0.00050						14
Cobalt, dissolved	0.0146	0.00010 mg/L	0.0144				1		10
Copper, dissolved	< 0.00020	0.00020 mg/L	< 0.00020						20
Iron, dissolved	62.0	0.010 mg/L	60.8				2		14
Lead, dissolved	< 0.00010	0.00010 mg/L	< 0.00010						20

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Dissolved Metals, Batch B7F1920, Continued

Duplicate (B7F1920-DUP1), Continued	Source: 7061782-07		Prepared: 2017-06-26, Analyzed: 2017-06-26						
Lithium, dissolved	< 0.00010	0.00010 mg/L		< 0.00010					14
Magnesium, dissolved	17.3	0.010 mg/L		17.1			1		6
Manganese, dissolved	3.97	0.00020 mg/L		3.94			< 1		9
Molybdenum, dissolved	0.0155	0.00010 mg/L		0.0151			3		19
Nickel, dissolved	0.00284	0.00020 mg/L		0.00279			2		20
Phosphorus, dissolved	0.090	0.050 mg/L		0.097					14
Potassium, dissolved	19.7	0.02 mg/L		19.5			1		8
Selenium, dissolved	< 0.00050	0.00050 mg/L		< 0.00050					20
Silicon, dissolved	16.5	1.0 mg/L		16.4			< 1		12
Silver, dissolved	< 0.000050	0.000050 mg/L		< 0.000050					20
Sodium, dissolved	34.7	0.02 mg/L		33.8			3		6
Strontium, dissolved	0.572	0.0010 mg/L		0.570			< 1		6
Sulfur, dissolved	85.4	3.0 mg/L		84.4			1		20
Tellurium, dissolved	< 0.00020	0.00020 mg/L		< 0.00020					20
Thallium, dissolved	< 0.000020	0.000020 mg/L		< 0.000020					13
Thorium, dissolved	< 0.00010	0.00010 mg/L		< 0.00010					20
Tin, dissolved	< 0.00020	0.00020 mg/L		< 0.00020					20
Titanium, dissolved	< 0.0050	0.0050 mg/L		< 0.0050					20
Uranium, dissolved	0.000212	0.000020 mg/L		0.000199			6		14
Vanadium, dissolved	< 0.0010	0.0010 mg/L		< 0.0010					20
Zinc, dissolved	< 0.0040	0.0040 mg/L		< 0.0040					11
Zirconium, dissolved	< 0.00010	0.00010 mg/L		< 0.00010					20

Reference (B7F1920-SRM1)	Prepared: 2017-06-26, Analyzed: 2017-06-26								
Aluminum, dissolved	0.215	0.0050 mg/L	0.233	92	58-142				
Antimony, dissolved	0.0437	0.00010 mg/L	0.0430	102	75-125				
Arsenic, dissolved	0.436	0.00050 mg/L	0.438	100	81-119				
Barium, dissolved	3.15	0.0050 mg/L	3.35	94	83-117				
Beryllium, dissolved	0.204	0.00010 mg/L	0.213	96	80-120				
Boron, dissolved	1.58	0.004 mg/L	1.74	91	74-117				
Cadmium, dissolved	0.223	0.000010 mg/L	0.224	100	83-117				
Calcium, dissolved	7.87	0.20 mg/L	7.69	102	76-124				
Chromium, dissolved	0.426	0.00050 mg/L	0.437	98	81-119				
Cobalt, dissolved	0.129	0.00010 mg/L	0.128	101	76-124				
Copper, dissolved	0.855	0.00020 mg/L	0.844	101	84-116				
Iron, dissolved	1.24	0.010 mg/L	1.29	96	74-126				
Lead, dissolved	0.110	0.00010 mg/L	0.112	98	72-128				
Lithium, dissolved	0.0972	0.00010 mg/L	0.104	94	60-140				
Magnesium, dissolved	6.44	0.010 mg/L	6.92	93	81-119				
Manganese, dissolved	0.337	0.00020 mg/L	0.345	98	84-116				
Molybdenum, dissolved	0.407	0.00010 mg/L	0.426	96	83-117				
Nickel, dissolved	0.844	0.00020 mg/L	0.840	100	74-126				
Phosphorus, dissolved	0.455	0.050 mg/L	0.495	92	68-132				
Potassium, dissolved	3.02	0.02 mg/L	3.19	95	74-126				
Selenium, dissolved	0.0353	0.00050 mg/L	0.0331	107	70-130				
Sodium, dissolved	17.8	0.02 mg/L	19.1	93	72-128				
Strontium, dissolved	0.867	0.0010 mg/L	0.916	95	84-113				
Thallium, dissolved	0.0383	0.000020 mg/L	0.0393	97	57-143				
Uranium, dissolved	0.255	0.000020 mg/L	0.266	96	85-115				
Vanadium, dissolved	0.819	0.0010 mg/L	0.869	94	87-113				
Zinc, dissolved	0.885	0.0040 mg/L	0.881	100	72-128				

Dissolved Metals, Batch B7F1953

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REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Dissolved Metals, Batch B7F1953, Continued									
Blank (B7F1953-BLK1)			Prepared: 2017-06-27, Analyzed: 2017-06-28						
Mercury, dissolved	< 0.00002	0.00002 mg/L							
Blank (B7F1953-BLK2)			Prepared: 2017-06-27, Analyzed: 2017-06-28						
Mercury, dissolved	< 0.00002	0.00002 mg/L							
Duplicate (B7F1953-DUP1)			Source: 7061782-06		Prepared: 2017-06-27, Analyzed: 2017-06-28				
Mercury, dissolved	< 0.00002	0.00002 mg/L		< 0.00002				20	
Matrix Spike (B7F1953-MS1)			Source: 7061782-07		Prepared: 2017-06-27, Analyzed: 2017-06-28				
Mercury, dissolved	0.00022	0.00002 mg/L	0.000250	< 0.00002	88	70-130			
Reference (B7F1953-SRM1)			Prepared: 2017-06-27, Analyzed: 2017-06-28						
Mercury, dissolved	0.00464	0.00002 mg/L	0.00489		95	50-150			
Reference (B7F1953-SRM2)			Prepared: 2017-06-27, Analyzed: 2017-06-28						
Mercury, dissolved	0.00450	0.00002 mg/L	0.00489		92	50-150			
General Parameters, Batch B7F1517									
Blank (B7F1517-BLK1)			Prepared: 2017-06-20, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
Blank (B7F1517-BLK2)			Prepared: 2017-06-20, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
LCS (B7F1517-BS1)			Prepared: 2017-06-20, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	1.07	0.050 mg/L	1.00		107	84-121			
LCS (B7F1517-BS2)			Prepared: 2017-06-20, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	1.03	0.050 mg/L	1.00		103	84-121			
General Parameters, Batch B7F1687									
Blank (B7F1687-BLK1)			Prepared: 2017-06-22, Analyzed: 2017-06-22						
Solids, Total Suspended	< 1.0	2.0 mg/L							
LCS (B7F1687-BS1)			Prepared: 2017-06-22, Analyzed: 2017-06-22						
Solids, Total Suspended	48.6	2.0 mg/L	50.0		97	91-106			
General Parameters, Batch B7F1695									
Blank (B7F1695-BLK1)			Prepared: 2017-06-22, Analyzed: 2017-06-23						
Phosphorus, Total (as P)	< 0.0020	0.0020 mg/L							
Blank (B7F1695-BLK2)			Prepared: 2017-06-22, Analyzed: 2017-06-23						
Phosphorus, Total (as P)	< 0.0020	0.0020 mg/L							
LCS (B7F1695-BS1)			Prepared: 2017-06-22, Analyzed: 2017-06-23						
Phosphorus, Total (as P)	0.0977	0.0020 mg/L	0.100		98	80-112			
LCS (B7F1695-BS2)			Prepared: 2017-06-22, Analyzed: 2017-06-23						
Phosphorus, Total (as P)	0.0968	0.0020 mg/L	0.100		97	80-112			

General Parameters, Batch B7F1698

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
General Parameters, Batch B7F1698, Continued									
Blank (B7F1698-BLK1)			Prepared: 2017-06-22, Analyzed: 2017-06-22						
Chemical Oxygen Demand	5	20 mg/L							BLK
LCS (B7F1698-BS1)			Prepared: 2017-06-22, Analyzed: 2017-06-22						
Chemical Oxygen Demand	53	20 mg/L	50.0		106	89-115			
Duplicate (B7F1698-DUP1)			Source: 7061782-05 Prepared: 2017-06-22, Analyzed: 2017-06-22						
Chemical Oxygen Demand	9	20 mg/L		10				14	
Matrix Spike (B7F1698-MS1)			Source: 7061782-05 Prepared: 2017-06-22, Analyzed: 2017-06-22						
Chemical Oxygen Demand	205	20 mg/L	200	10	98	75-125			
General Parameters, Batch B7F1699									
Blank (B7F1699-BLK1)			Prepared: 2017-06-22, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
Blank (B7F1699-BLK2)			Prepared: 2017-06-22, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
LCS (B7F1699-BS1)			Prepared: 2017-06-22, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	1.04	0.050 mg/L	1.00		104	84-121			
LCS (B7F1699-BS2)			Prepared: 2017-06-22, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	1.00	0.050 mg/L	1.00		100	84-121			
General Parameters, Batch B7F1716									
Blank (B7F1716-BLK1)			Prepared: 2017-06-22, Analyzed: 2017-06-22						
Solids, Total Suspended	< 1.0	2.0 mg/L							
LCS (B7F1716-BS1)			Prepared: 2017-06-22, Analyzed: 2017-06-22						
Solids, Total Suspended	49.4	2.0 mg/L	50.0		99	91-106			
General Parameters, Batch B7F1740									
Blank (B7F1740-BLK1)			Prepared: 2017-06-23, Analyzed: 2017-06-23						
Ammonia, Total (as N)	< 0.020	0.005 mg/L							
LCS (B7F1740-BS1)			Prepared: 2017-06-23, Analyzed: 2017-06-23						
Ammonia, Total (as N)	1.04	0.005 mg/L	1.00		104	90-115			
General Parameters, Batch B7F1821									
Blank (B7F1821-BLK1)			Prepared: 2017-06-24, Analyzed: 2017-06-24						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Conductivity (EC)	< 2.0	2.0 µS/cm							
LCS (B7F1821-BS1)			Prepared: 2017-06-24, Analyzed: 2017-06-24						
Alkalinity, Total (as CaCO3)	101	1.0 mg/L	100		101	92-106			
LCS (B7F1821-BS2)			Prepared: 2017-06-24, Analyzed: 2017-06-24						
Conductivity (EC)	1350	2.0 µS/cm	1410		96	95-104			

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
General Parameters, Batch B7F1821, Continued									
Reference (B7F1821-SRM1)			Prepared: 2017-06-24, Analyzed: 2017-06-24						
pH	7.01	0.01 pH units	7.00		100	98-102			HT2
General Parameters, Batch B7F1828									
Blank (B7F1828-BLK1)			Prepared: 2017-06-24, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
Blank (B7F1828-BLK2)			Prepared: 2017-06-24, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
LCS (B7F1828-BS1)			Prepared: 2017-06-24, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	1.05	0.050 mg/L	1.00		105	84-121			
LCS (B7F1828-BS2)			Prepared: 2017-06-24, Analyzed: 2017-06-25						
Nitrogen, Total Kjeldahl	1.02	0.050 mg/L	1.00		102	84-121			
General Parameters, Batch B7F1898									
Blank (B7F1898-BLK1)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Solids, Total Suspended	< 1.0	2.0 mg/L							
LCS (B7F1898-BS1)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Solids, Total Suspended	48.8	2.0 mg/L	50.0		98	91-106			
Duplicate (B7F1898-DUP1)			Source: 7061782-07		Prepared: 2017-06-26, Analyzed: 2017-06-26				
Solids, Total Suspended	2050	2.0 mg/L		2180			6	20	
General Parameters, Batch B7F1902									
Blank (B7F1902-BLK1)			Prepared: 2017-06-26, Analyzed: 2017-06-27						
Phosphorus, Total (as P)	< 0.0020	0.0020 mg/L							
LCS (B7F1902-BS1)			Prepared: 2017-06-26, Analyzed: 2017-06-27						
Phosphorus, Total (as P)	0.0960	0.0020 mg/L	0.100		96	80-112			
General Parameters, Batch B7F1905									
Blank (B7F1905-BLK1)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Conductivity (EC)	< 2.0	2.0 µS/cm							
Blank (B7F1905-BLK2)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Conductivity (EC)	< 2.0	2.0 µS/cm							
LCS (B7F1905-BS1)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Alkalinity, Total (as CaCO3)	101	1.0 mg/L	100		101	92-106			

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General Parameters, Batch B7F1905, Continued									
LCS (B7F1905-BS2)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Alkalinity, Total (as CaCO3)	99.4	1.0 mg/L	100		99	92-106			
LCS (B7F1905-BS3)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Conductivity (EC)	1400	2.0 µS/cm	1410		99	95-104			
LCS (B7F1905-BS4)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Conductivity (EC)	1400	2.0 µS/cm	1410		99	95-104			
Reference (B7F1905-SRM1)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
pH	7.01	0.01 pH units	7.00		100	98-102			HT2
Reference (B7F1905-SRM2)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
pH	7.01	0.01 pH units	7.00		100	98-102			HT2
General Parameters, Batch B7F1915									
Blank (B7F1915-BLK1)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Chemical Oxygen Demand	< 5	20 mg/L							
Blank (B7F1915-BLK2)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Chemical Oxygen Demand	< 5	20 mg/L							
LCS (B7F1915-BS1)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Chemical Oxygen Demand	50	20 mg/L	50.0		100	89-115			
LCS (B7F1915-BS2)			Prepared: 2017-06-26, Analyzed: 2017-06-26						
Chemical Oxygen Demand	48	20 mg/L	50.0		95	89-115			
General Parameters, Batch B7F1944									
Blank (B7F1944-BLK1)			Prepared: 2017-06-27, Analyzed: 2017-06-27						
Ammonia, Total (as N)	< 0.020	0.005 mg/L							
Blank (B7F1944-BLK2)			Prepared: 2017-06-27, Analyzed: 2017-06-27						
Ammonia, Total (as N)	< 0.020	0.005 mg/L							
LCS (B7F1944-BS1)			Prepared: 2017-06-27, Analyzed: 2017-06-27						
Ammonia, Total (as N)	1.03	0.005 mg/L	1.00		103	90-115			
LCS (B7F1944-BS2)			Prepared: 2017-06-27, Analyzed: 2017-06-27						
Ammonia, Total (as N)	1.03	0.005 mg/L	1.00		103	90-115			
Duplicate (B7F1944-DUP1)			Source: 7061782-11		Prepared: 2017-06-27, Analyzed: 2017-06-27				
Ammonia, Total (as N)	4.13	0.005 mg/L		4.06			2	15	
Polycyclic Aromatic Hydrocarbons (PAH), Batch B7F1616									
Blank (B7F1616-BLK1)			Prepared: 2017-06-22, Analyzed: 2017-06-23						
Acenaphthene	< 0.050	0.050 µg/L							
Acenaphthylene	< 0.200	0.200 µg/L							
Acridine	< 0.050	0.050 µg/L							
Anthracene	< 0.010	0.010 µg/L							
Benz(a)anthracene	< 0.010	0.010 µg/L							
Benzo(a)pyrene	< 0.010	0.010 µg/L							
Benzo(b)fluoranthene	< 0.050	0.050 µg/L							
Benzo(b+j)fluoranthene	< 0.100	0.050 µg/L							

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Polycyclic Aromatic Hydrocarbons (PAH), Batch B7F1616, Continued									
Blank (B7F1616-BLK1), Continued					Prepared: 2017-06-22, Analyzed: 2017-06-23				
Benzo(g,h,i)perylene	< 0.050	0.050 µg/L							
Benzo(k)fluoranthene	< 0.050	0.050 µg/L							
Chrysene	< 0.050	0.050 µg/L							
Dibenz(a,h)anthracene	< 0.050	0.050 µg/L							
Fluoranthene	< 0.030	0.030 µg/L							
Fluorene	< 0.050	0.050 µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050 µg/L							
Naphthalene	< 0.200	0.200 µg/L							
Phenanthrene	< 0.100	0.100 µg/L							
Pyrene	< 0.020	0.020 µg/L							
Quinoline	< 0.050	0.050 µg/L							
Surrogate: Acridine-d9	0.414	µg/L	0.444		93	60-130			
Surrogate: Naphthalene-d8	3.62	µg/L	4.44		81	60-130			
Surrogate: Perylene-d12	3.85	µg/L	4.44		87	60-130			
LCS (B7F1616-BS1)					Prepared: 2017-06-22, Analyzed: 2017-06-23				
Acenaphthene	3.15	0.050 µg/L	4.44		71	70-130			
Acenaphthylene	3.13	0.200 µg/L	4.44		70	70-130			
Acridine	2.03	0.050 µg/L	4.44		46	60-130			SPK1
Anthracene	3.14	0.010 µg/L	4.44		71	70-130			
Benz(a)anthracene	3.12	0.010 µg/L	4.44		70	70-130			
Benzo(a)pyrene	3.28	0.010 µg/L	4.44		74	70-130			
Benzo(b)fluoranthene	3.43	0.050 µg/L	4.44		77	70-130			
Benzo(b+j)fluoranthene	6.91	0.050 µg/L	8.89		78	70-130			
Benzo(g,h,i)perylene	3.68	0.050 µg/L	4.44		83	70-130			
Benzo(k)fluoranthene	3.81	0.050 µg/L	4.44		86	70-130			
Chrysene	3.21	0.050 µg/L	4.44		72	70-130			
Dibenz(a,h)anthracene	3.61	0.050 µg/L	4.44		81	70-130			
Fluoranthene	3.40	0.030 µg/L	4.44		76	70-130			
Fluorene	2.78	0.050 µg/L	4.44		63	70-130			SPK1
Indeno(1,2,3-cd)pyrene	3.65	0.050 µg/L	4.44		82	70-130			
Naphthalene	3.09	0.200 µg/L	4.44		70	70-130			
Phenanthrene	3.21	0.100 µg/L	4.44		72	70-130			
Pyrene	3.55	0.020 µg/L	4.44		80	70-130			
Quinoline	4.52	0.050 µg/L	4.44		102	70-130			
Surrogate: Acridine-d9	0.293	µg/L	0.444		66	60-130			
Surrogate: Naphthalene-d8	3.12	µg/L	4.44		70	60-130			
Surrogate: Perylene-d12	3.25	µg/L	4.44		73	60-130			
LCS Dup (B7F1616-BSD1)					Prepared: 2017-06-22, Analyzed: 2017-06-23				
Acenaphthene	3.58	0.050 µg/L	4.44		81	70-130	13	20	
Acenaphthylene	3.60	0.200 µg/L	4.44		81	70-130	14	20	
Acridine	3.08	0.050 µg/L	4.44		69	60-130	41	20	RPD
Anthracene	3.67	0.010 µg/L	4.44		83	70-130	16	20	
Benz(a)anthracene	3.71	0.010 µg/L	4.44		84	70-130	17	20	
Benzo(a)pyrene	3.89	0.010 µg/L	4.44		87	70-130	17	20	
Benzo(b)fluoranthene	4.03	0.050 µg/L	4.44		91	70-130	16	20	
Benzo(b+j)fluoranthene	8.23	0.050 µg/L	8.89		93	70-130	17	20	
Benzo(g,h,i)perylene	4.37	0.050 µg/L	4.44		98	70-130	17	20	
Benzo(k)fluoranthene	4.50	0.050 µg/L	4.44		101	70-130	17	20	
Chrysene	3.82	0.050 µg/L	4.44		86	70-130	17	20	
Dibenz(a,h)anthracene	4.27	0.050 µg/L	4.44		96	70-130	17	20	
Fluoranthene	3.91	0.030 µg/L	4.44		88	70-130	14	20	
Fluorene	3.27	0.050 µg/L	4.44		74	70-130	16	20	
Indeno(1,2,3-cd)pyrene	4.32	0.050 µg/L	4.44		97	70-130	17	20	
Naphthalene	3.57	0.200 µg/L	4.44		80	70-130	14	20	

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Polycyclic Aromatic Hydrocarbons (PAH), Batch B7F1616, Continued

LCS Dup (B7F1616-BSD1), Continued

Prepared: 2017-06-22, Analyzed: 2017-06-23

Phenanthrene	3.74	0.100 µg/L	4.44		84	70-130	15	20	
Pyrene	4.07	0.020 µg/L	4.44		92	70-130	14	20	
Quinoline	4.51	0.050 µg/L	4.44		102	70-130	< 1	20	
Surrogate: Acridine-d9	0.433	µg/L	0.444		97	60-130			
Surrogate: Naphthalene-d8	3.66	µg/L	4.44		82	60-130			
Surrogate: Perylene-d12	3.85	µg/L	4.44		87	60-130			

Total Metals, Batch B7F1524

Blank (B7F1524-BLK1)

Prepared: 2017-06-21, Analyzed: 2017-06-21

Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00010	0.00010 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.004	0.004 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00020	0.00020 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00010	0.00010 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00020	0.00020 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.02	0.02 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.02	0.02 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00020	0.00020 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0010	0.0010 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							

LCS (B7F1524-BS1)

Prepared: 2017-06-21, Analyzed: 2017-06-21

Aluminum, total	0.0203	0.0050 mg/L	0.0200		102	80-120			
Antimony, total	0.0211	0.00010 mg/L	0.0200		105	80-120			
Arsenic, total	0.0203	0.00050 mg/L	0.0200		102	80-120			
Barium, total	0.0208	0.0050 mg/L	0.0200		104	80-120			
Beryllium, total	0.0205	0.00010 mg/L	0.0200		102	80-120			
Bismuth, total	0.0224	0.00010 mg/L	0.0200		112	80-120			
Boron, total	0.018	0.004 mg/L	0.0200		92	80-120			
Cadmium, total	0.0216	0.000010 mg/L	0.0200		108	80-120			

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Total Metals, Batch B7F1524, Continued

LCS (B7F1524-BS1), Continued

Prepared: 2017-06-21, Analyzed: 2017-06-21

Calcium, total	2.13	0.20 mg/L	2.00		107	80-120			
Chromium, total	0.0206	0.00050 mg/L	0.0200		103	80-120			
Cobalt, total	0.0210	0.00010 mg/L	0.0200		105	80-120			
Copper, total	0.0222	0.00020 mg/L	0.0200		111	80-120			
Iron, total	2.04	0.010 mg/L	2.00		102	80-120			
Lead, total	0.0224	0.00010 mg/L	0.0200		112	80-120			
Lithium, total	0.0203	0.00010 mg/L	0.0200		101	80-120			
Magnesium, total	2.08	0.010 mg/L	2.00		104	80-120			
Manganese, total	0.0206	0.00020 mg/L	0.0200		103	80-120			
Molybdenum, total	0.0201	0.00010 mg/L	0.0200		100	80-120			
Nickel, total	0.0213	0.00020 mg/L	0.0200		106	80-120			
Phosphorus, total	1.92	0.050 mg/L	2.00		96	80-120			
Potassium, total	2.04	0.02 mg/L	2.00		102	80-120			
Selenium, total	0.0228	0.00050 mg/L	0.0200		114	80-120			
Silicon, total	2.2	1.0 mg/L	2.00		110	80-120			
Silver, total	0.0222	0.000050 mg/L	0.0200		111	80-120			
Sodium, total	2.45	0.02 mg/L	2.40		102	80-120			
Strontium, total	0.0201	0.0010 mg/L	0.0200		100	80-120			
Sulfur, total	4.5	3.0 mg/L	5.00		90	80-120			
Tellurium, total	0.0214	0.00020 mg/L	0.0200		107	80-120			
Thallium, total	0.0221	0.000020 mg/L	0.0200		110	80-120			
Thorium, total	0.0210	0.00010 mg/L	0.0200		105	80-120			
Tin, total	0.0215	0.00020 mg/L	0.0200		108	80-120			
Titanium, total	0.0206	0.0050 mg/L	0.0200		103	80-120			
Uranium, total	0.0211	0.000020 mg/L	0.0200		106	80-120			
Vanadium, total	0.0201	0.0010 mg/L	0.0200		101	80-120			
Zinc, total	0.0198	0.0040 mg/L	0.0200		99	80-120			
Zirconium, total	0.0212	0.00010 mg/L	0.0200		106	80-120			

Reference (B7F1524-SRM1)

Prepared: 2017-06-21, Analyzed: 2017-06-21

Aluminum, total	0.311	0.0050 mg/L	0.303		103	81-129			
Antimony, total	0.0543	0.00010 mg/L	0.0511		106	88-114			
Arsenic, total	0.123	0.00050 mg/L	0.118		104	88-114			
Barium, total	0.809	0.0050 mg/L	0.823		98	72-104			
Beryllium, total	0.0503	0.00010 mg/L	0.0496		101	76-131			
Boron, total	3.38	0.004 mg/L	3.45		98	75-121			
Cadmium, total	0.0526	0.000010 mg/L	0.0495		106	89-111			
Calcium, total	11.9	0.20 mg/L	11.6		102	86-121			
Chromium, total	0.258	0.00050 mg/L	0.250		103	89-114			
Cobalt, total	0.0404	0.00010 mg/L	0.0377		107	91-113			
Copper, total	0.527	0.00020 mg/L	0.486		108	91-115			
Iron, total	0.510	0.010 mg/L	0.488		104	77-124			
Lead, total	0.210	0.00010 mg/L	0.204		103	92-113			
Lithium, total	0.394	0.00010 mg/L	0.403		98	85-115			
Magnesium, total	3.87	0.010 mg/L	3.79		102	78-120			
Manganese, total	0.111	0.00020 mg/L	0.109		102	90-114			
Molybdenum, total	0.203	0.00010 mg/L	0.198		102	90-111			
Nickel, total	0.263	0.00020 mg/L	0.249		106	90-111			
Phosphorus, total	0.224	0.050 mg/L	0.227		99	85-115			
Potassium, total	7.33	0.02 mg/L	7.21		102	84-113			
Selenium, total	0.135	0.00050 mg/L	0.121		111	85-115			
Sodium, total	7.64	0.02 mg/L	7.54		101	82-123			
Strontium, total	0.384	0.0010 mg/L	0.375		102	88-112			
Thallium, total	0.0845	0.000020 mg/L	0.0805		105	91-114			
Uranium, total	0.0314	0.000020 mg/L	0.0306		103	85-120			
Vanadium, total	0.389	0.0010 mg/L	0.386		101	86-111			
Zinc, total	2.63	0.0040 mg/L	2.49		105	85-111			

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Total Metals, Batch B7F1524, Continued									
Total Metals, Batch B7F2012									
Blank (B7F2012-BLK1)			Prepared: 2017-06-27, Analyzed: 2017-06-29						
Mercury, total	< 0.00002	0.00002 mg/L							
Blank (B7F2012-BLK2)			Prepared: 2017-06-27, Analyzed: 2017-06-29						
Mercury, total	< 0.00002	0.00002 mg/L							
Reference (B7F2012-SRM1)			Prepared: 2017-06-27, Analyzed: 2017-06-29						
Mercury, total	0.00442	0.00002 mg/L	0.00489		90	50-150			
Reference (B7F2012-SRM2)			Prepared: 2017-06-27, Analyzed: 2017-06-29						
Mercury, total	0.00414	0.00002 mg/L	0.00489		85	50-150			
Volatile Organic Compounds (VOC), Batch B7F1659									
Blank (B7F1659-BLK1)			Prepared: 2017-06-23, Analyzed: 2017-06-23						
Benzene	< 0.5	0.5 µg/L							
Bromodichloromethane	< 1.0	1.0 µg/L							
Bromoform	< 1.0	1.0 µg/L							
Carbon tetrachloride	< 0.5	0.5 µg/L							
Chlorobenzene	< 1.0	1.0 µg/L							
Chloroethane	< 2.0	2.0 µg/L							
Chloroform	< 1.0	1.0 µg/L							
Dibromochloromethane	< 1.0	1.0 µg/L							
1,2-Dibromoethane	< 0.2	0.2 µg/L							
Dibromomethane	< 1.0	1.0 µg/L							
1,2-Dichlorobenzene	< 0.5	0.5 µg/L							
1,3-Dichlorobenzene	< 1.0	1.0 µg/L							
1,4-Dichlorobenzene	< 1.0	1.0 µg/L							
1,1-Dichloroethane	< 1.0	1.0 µg/L							
1,2-Dichloroethane	< 1.0	1.0 µg/L							
1,1-Dichloroethylene	< 1.0	1.0 µg/L							
cis-1,2-Dichloroethylene	< 1.0	1.0 µg/L							
trans-1,2-Dichloroethylene	< 1.0	1.0 µg/L							
1,2-Dichloropropane	< 1.0	1.0 µg/L							
1,3-Dichloropropene	< 1.0	1.0 µg/L							
Ethylbenzene	< 1.0	1.0 µg/L							
Methyl tert-butyl ether	< 1.0	1.0 µg/L							
Dichloromethane	< 3.0	3.0 µg/L							
Styrene	< 1.0	1.0 µg/L							
1,1,2,2-Tetrachloroethane	< 0.5	0.5 µg/L							
Tetrachloroethylene	< 1.0	1.0 µg/L							
Toluene	< 1.0	1.0 µg/L							
1,1,1-Trichloroethane	< 1.0	1.0 µg/L							
1,1,2-Trichloroethane	< 1.0	1.0 µg/L							
Trichloroethylene	< 1.0	1.0 µg/L							
Trichlorofluoromethane	< 1.0	1.0 µg/L							
Vinyl chloride	< 1.0	1.0 µg/L							
Xylenes (total)	< 2.0	2.0 µg/L							
Surrogate: Toluene-d8	23.3	µg/L	25.0		93	70-130			
Surrogate: 4-Bromofluorobenzene	23.2	µg/L	25.0		93	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	18.8	µg/L	25.2		75	70-130			
LCS (B7F1659-BS1)			Prepared: 2017-06-23, Analyzed: 2017-06-23						
Benzene	18.9	0.5 µg/L	20.0		95	70-130			
Bromodichloromethane	18.1	1.0 µg/L	20.0		91	70-130			

APPENDIX 1: QUALITY CONTROL DATA

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Whistler Landfill - Summer/Winter

WORK ORDER REPORTED 7061782
2017-06-30

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Volatile Organic Compounds (VOC), Batch B7F1659, Continued

LCS (B7F1659-BS1), Continued

Prepared: 2017-06-23, Analyzed: 2017-06-23

Bromoform	17.3	1.0 µg/L	20.0		87	70-130			
Carbon tetrachloride	18.9	0.5 µg/L	20.0		95	70-130			
Chlorobenzene	19.2	1.0 µg/L	20.0		96	70-130			
Chloroethane	13.9	2.0 µg/L	20.0		70	70-130			
Chloroform	19.5	1.0 µg/L	20.0		98	70-130			
Dibromochloromethane	17.6	1.0 µg/L	20.0		88	70-130			
1,2-Dibromoethane	17.4	0.2 µg/L	20.0		87	70-130			
Dibromomethane	18.0	1.0 µg/L	20.0		90	70-130			
1,2-Dichlorobenzene	18.0	0.5 µg/L	20.0		90	70-130			
1,3-Dichlorobenzene	18.0	1.0 µg/L	20.0		90	70-130			
1,4-Dichlorobenzene	18.6	1.0 µg/L	20.0		93	70-130			
1,1-Dichloroethane	18.3	1.0 µg/L	20.0		92	70-130			
1,2-Dichloroethane	18.6	1.0 µg/L	20.0		93	70-130			
1,1-Dichloroethylene	16.5	1.0 µg/L	20.0		82	70-130			
cis-1,2-Dichloroethylene	18.5	1.0 µg/L	20.0		93	70-130			
trans-1,2-Dichloroethylene	18.0	1.0 µg/L	20.0		90	70-130			
1,2-Dichloropropane	17.0	1.0 µg/L	20.0		85	70-130			
1,3-Dichloropropene	30.8	1.0 µg/L	40.0		77	70-130			
Ethylbenzene	18.6	1.0 µg/L	20.0		93	70-130			
Methyl tert-butyl ether	13.8	1.0 µg/L	17.2		80	70-130			
Dichloromethane	15.7	3.0 µg/L	20.0		79	70-130			
Styrene	17.8	1.0 µg/L	20.0		89	70-130			
1,1,2,2-Tetrachloroethane	20.2	0.5 µg/L	20.0		101	70-130			
Tetrachloroethylene	18.8	1.0 µg/L	20.0		94	70-130			
Toluene	19.4	1.0 µg/L	20.0		97	70-130			
1,1,1-Trichloroethane	18.4	1.0 µg/L	20.0		92	70-130			
1,1,2-Trichloroethane	19.5	1.0 µg/L	20.0		97	70-130			
Trichloroethylene	19.0	1.0 µg/L	20.0		95	70-130			
Trichlorofluoromethane	16.5	1.0 µg/L	20.0		82	70-130			
Vinyl chloride	17.3	1.0 µg/L	20.0		86	70-130			
Xylenes (total)	56.7	2.0 µg/L	60.0		94	70-130			
Surrogate: Toluene-d8	24.9	µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	26.2	µg/L	25.0		105	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	27.4	µg/L	25.2		109	70-130			

LCS (B7F1659-BS2)

Prepared: 2017-06-23, Analyzed: 2017-06-23

Surrogate: Toluene-d8	28.7	µg/L	25.0		115	70-130			
Surrogate: 4-Bromofluorobenzene	28.9	µg/L	25.0		116	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	31.2	µg/L	25.2		124	70-130			

QC Qualifiers:

- BLK Analyte concentration in the Method Blank is above the Method Reporting Limit (MRL).
- HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
- RPD Relative percent difference (RPD) of duplicate analysis are outside of control limits for unknown reason(s).
- S02 Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.
- SPK1 The recovery of this analyte was outside of established control limits. The data was accepted based on performance of other batch QC.

REPORTED TO	Morrison Hershfield Limited - Burnaby 310 - 4321 Still Creek Drive Burnaby, BC V5C 6S7	TEL	(604) 454-0402
		FAX	(604) 454-0403
ATTENTION	Josie Gilson	WORK ORDER	7091294
PO NUMBER	721849	RECEIVED / TEMP	2017-09-14 14:38 / 8°C
PROJECT	Resort Municipality of Whister - Spring/Fall 17	REPORTED	2017-09-22
PROJECT INFO	5104016.07		

General Comments:

CARO Analytical Services employs methods which are conducted according to procedures accepted by appropriate regulatory agencies, and/or are conducted 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 or Sample Requisition document. This analytical report must be reproduced in its entirety. 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.



Authorized By: **Jennifer Shanko, A.Sc.T.**
Account Manager

If you have any questions or concerns, please contact me at jshanko@caro.ca

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REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7091294
2017-09-22

Analysis Description	Method Reference	Technique	Location
Alkalinity in Water	APHA 2320 B*	Titration with H2SO4	Kelowna
Ammonia, Total in Water	APHA 4500-NH3 G*	Automated Colorimetry (Phenate)	Kelowna
Anions by IC in Water	APHA 4110 B	Ion Chromatography with Chemical Suppression of Eluent Conductivity	Kelowna
BTEX in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MS (SIM)	Richmond
Chemical Oxygen Demand in Water	APHA 5220 D*	Closed Reflux, Colorimetry	Kelowna
Conductivity in Water	APHA 2510 B	Conductivity Meter	Kelowna
Dissolved Metals by ICPMS in Water	APHA 3030 B / EPA 6020B	0.45 µm Filtration / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	Richmond
EPH in Water	EPA 3511* / BCMOE EPHw	Hexane MicroExtraction (Base/Neutral) / Gas Chromatography (GC-FID)	Richmond
Hardness (as CaCO3) in Water	APHA 2340 B	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	N/A
HEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
LEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
Mercury, dissolved by CVAFS in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
Mercury, total by CVAFS in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
Nitrate+Nitrite by Colorimetry in Water	APHA 4500-NO3- F	Automated Colorimetry (Cadmium Reduction)	Kelowna
Nitrite by Colorimetry in Water	APHA 4500-NO3- F	Automated Colorimetry (Cadmium Reduction)	Kelowna
Nitrogen, Total Kjeldahl in Water	APHA 4500-Norg D*	Block Digestion and Flow Injection Analysis	Kelowna
pH in Water	APHA 4500-H+ B	Electrometry	Kelowna
Phosphorus, Total by Colorimetry in Water	APHA 4500-P B.5* / APHA 4500-P F	Persulfate Digestion / Automated Colorimetry (Ascorbic Acid)	Kelowna
Polycyclic Aromatic Hydrocarbons in Water	EPA 3511* / EPA 8270D	Hexane MicroExtraction (Base/Neutral) / GC-MS (SIM)	Richmond
Solids, Total Suspended in Water	APHA 2540 D*	Gravimetry (Dried at 103-105C)	Kelowna
Total Metals by ICPMS in Water	APHA 3030 E* / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	Richmond
VH in Water	EPA 5030B / BCMOE VHw	Purge&Trap / Gas Chromatography (GC-FID)	Richmond
Volatile Organic Compounds in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MS (SIM)	Richmond
VPHw in Water	BCMOE VPH	Calculation: VH - (Benzene + Toluene + Ethylbenzene + Xylenes + Styrene)	N/A

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Method Reference Descriptions:

APHA Standard Methods for the Examination of Water and Wastewater, 22nd Edition, American Public Health Association/American Water Works Association/Water Environment Federation
 BCMOE British Columbia Environmental Laboratory Manual, 2015, British Columbia Ministry of Environment
 EPA United States Environmental Protection Agency Test Methods

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7091294
2017-09-22

Glossary of Terms:

MRL Method Reporting Limit
< Less than the Reported Detection Limit (RDL) - the RDL may be higher than the MRL due to various factors such as dilutions, limited sample volume, high moisture, or interferences
mg/L Milligrams per litre
pH units pH < 7 = acidic, pH > 7 = basic
µg/L Micrograms per litre
µS/cm Microsiemens per centimetre

Standards / Guidelines Referenced in this Report:

BC CSR Schedule 4/5/6/10/11 Residential/Aquatic Water
Website: http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/375_96_00

Note: In some cases, the values displayed on the report represent the lowest guideline and are to be verified by the end user

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7091294
2017-09-22

Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: MW-2D (7091294-01) [Water] Sampled: 2017-09-13 15:30

Anions

Bromide	0.13	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	53.7	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	0.14	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	0.0016	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	0.0167	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	200	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters

pH	7.24	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	1010	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	10.2	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	10.4	N/A	0.050	mg/L	2017-09-16	2017-09-17	
Alkalinity, Total (as CaCO3)	282	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Bicarbonate (as CaCO3)	282	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	27	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	852	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	1.08	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters

Hardness, Total (as CaCO3)	390	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0151	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	10.4	N/A	1.00	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	N/A	2017-09-20	
Antimony, dissolved	< 0.00020	0.2	0.00020	mg/L	N/A	2017-09-20	
Arsenic, dissolved	0.0140	0.05	0.00050	mg/L	N/A	2017-09-20	
Barium, dissolved	0.0307	5	0.0050	mg/L	N/A	2017-09-20	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-09-20	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Boron, dissolved	0.273	50	0.0050	mg/L	N/A	2017-09-20	
Cadmium, dissolved	< 0.000010	0.0001	0.000010	mg/L	N/A	2017-09-20	
Calcium, dissolved	129	N/A	0.20	mg/L	N/A	2017-09-20	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Cobalt, dissolved	0.0130	0.04	0.00010	mg/L	N/A	2017-09-20	
Copper, dissolved	< 0.00040	0.02	0.00040	mg/L	N/A	2017-09-20	
Iron, dissolved	59.9	N/A	0.010	mg/L	N/A	2017-09-20	
Lead, dissolved	< 0.00020	0.04	0.00020	mg/L	N/A	2017-09-20	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Magnesium, dissolved	16.1	N/A	0.010	mg/L	N/A	2017-09-20	
Manganese, dissolved	4.24	N/A	0.00020	mg/L	N/A	2017-09-20	
Mercury, dissolved	< 0.000010	0.001	0.000010	mg/L	2017-09-19	2017-09-20	
Molybdenum, dissolved	0.0119	10	0.00010	mg/L	N/A	2017-09-20	
Nickel, dissolved	0.00216	0.25	0.00040	mg/L	N/A	2017-09-20	

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7091294
2017-09-22

Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: MW-2D (7091294-01) [Water] Sampled: 2017-09-13 15:30, Continued

Dissolved Metals, Continued

Phosphorus, dissolved	0.099	N/A	0.050	mg/L	N/A	2017-09-20	
Potassium, dissolved	19.6	N/A	0.10	mg/L	N/A	2017-09-20	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-09-20	
Silicon, dissolved	15.8	N/A	1.0	mg/L	N/A	2017-09-20	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-09-20	
Sodium, dissolved	35.1	N/A	0.10	mg/L	N/A	2017-09-20	
Strontium, dissolved	0.552	N/A	0.0010	mg/L	N/A	2017-09-20	
Sulfur, dissolved	71.6	N/A	3.0	mg/L	N/A	2017-09-20	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-09-20	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-09-20	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-09-20	
Uranium, dissolved	0.000165	1	0.000020	mg/L	N/A	2017-09-20	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-09-20	
Zinc, dissolved	0.0042	0.075	0.0040	mg/L	N/A	2017-09-20	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-09-18	2017-09-18	
EPHw19-32	< 250	N/A	250	µg/L	2017-09-18	2017-09-18	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-09-22	
Surrogate: 2-Methylnonane (EPH/F2-4)	68		60-140	%	2017-09-18	2017-09-18	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-09-18	2017-09-18	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-09-18	2017-09-18	
Acridine	< 0.050	0.5	0.050	µg/L	2017-09-18	2017-09-18	
Anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-18	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-18	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-09-18	2017-09-18	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Chrysene	< 0.050	1	0.050	µg/L	2017-09-18	2017-09-18	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2017-09-18	2017-09-18	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-09-18	2017-09-18	
Fluorene	< 0.050	120	0.050	µg/L	2017-09-18	2017-09-18	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Naphthalene	< 0.200	10	0.200	µg/L	2017-09-18	2017-09-18	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-09-18	2017-09-18	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-09-18	2017-09-18	

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7091294
2017-09-22

Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: MW-2D (7091294-01) [Water] Sampled: 2017-09-13 15:30, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Quinoline	< 0.050	34	0.050	µg/L	2017-09-18	2017-09-18	
Surrogate: Acridine-d9	86		50-140	%	2017-09-18	2017-09-18	
Surrogate: Naphthalene-d8	83		50-140	%	2017-09-18	2017-09-18	
Surrogate: Perylene-d12	82		50-140	%	2017-09-18	2017-09-18	

Volatile Organic Compounds (VOC)

CT2

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-09-22	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-09-22	
Chlorobenzene	< 2.5	13	1.0	µg/L	N/A	2017-09-22	RA1
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-09-22	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-09-22	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-09-22	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-09-22	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-09-22	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-09-22	

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Sample ID: MW-2D (7091294-01) [Water] Sampled: 2017-09-13 15:30, Continued

<i>Volatile Organic Compounds (VOC), Continued</i>							CT2
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	N/A	2017-09-22	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-09-22	
Surrogate: Toluene-d8	91		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	99		70-130	%	N/A	2017-09-22	
Surrogate: Toluene-d8	91		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	99		70-130	%	N/A	2017-09-22	
Surrogate: 1,4-Dichlorobenzene-d4	94		70-130	%	N/A	2017-09-22	

Sample ID: MW-25 (7091294-02) [Water] Sampled: 2017-09-13 16:00

<i>Anions</i>							
Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	9.40	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	0.45	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	0.0016	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	0.0118	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	63.6	1000	1.0	mg/L	N/A	2017-09-16	

<i>General Parameters</i>							
pH	7.15	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	340	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	4.69	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	4.80	N/A	0.050	mg/L	2017-09-16	2017-09-17	
Alkalinity, Total (as CaCO3)	89.5	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Bicarbonate (as CaCO3)	89.5	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	27	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	161	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	0.105	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

<i>Calculated Parameters</i>							
Hardness, Total (as CaCO3)	104	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0102	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	4.81	N/A	0.500	mg/L	N/A	N/A	

<i>Dissolved Metals</i>							
Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	N/A	2017-09-20	
Antimony, dissolved	< 0.00020	0.2	0.00020	mg/L	N/A	2017-09-20	
Arsenic, dissolved	0.00742	0.05	0.00050	mg/L	N/A	2017-09-20	
Barium, dissolved	0.0679	5	0.0050	mg/L	N/A	2017-09-20	

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Sample ID: MW-25 (7091294-02) [Water] Sampled: 2017-09-13 16:00, Continued

Dissolved Metals, Continued

Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-09-20	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Boron, dissolved	0.110	50	0.0050	mg/L	N/A	2017-09-20	
Cadmium, dissolved	< 0.000010	0.0001	0.000010	mg/L	N/A	2017-09-20	
Calcium, dissolved	32.3	N/A	0.20	mg/L	N/A	2017-09-20	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Cobalt, dissolved	0.00181	0.04	0.00010	mg/L	N/A	2017-09-20	
Copper, dissolved	0.00056	0.02	0.00040	mg/L	N/A	2017-09-20	
Iron, dissolved	33.5	N/A	0.010	mg/L	N/A	2017-09-20	
Lead, dissolved	< 0.00020	0.04	0.00020	mg/L	N/A	2017-09-20	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Magnesium, dissolved	5.53	N/A	0.010	mg/L	N/A	2017-09-20	
Manganese, dissolved	1.66	N/A	0.00020	mg/L	N/A	2017-09-20	
Mercury, dissolved	< 0.000010	0.001	0.000010	mg/L	2017-09-19	2017-09-20	
Molybdenum, dissolved	0.00470	10	0.00010	mg/L	N/A	2017-09-20	
Nickel, dissolved	0.00063	0.25	0.00040	mg/L	N/A	2017-09-20	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-09-20	
Potassium, dissolved	7.19	N/A	0.10	mg/L	N/A	2017-09-20	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-09-20	
Silicon, dissolved	9.4	N/A	1.0	mg/L	N/A	2017-09-20	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-09-20	
Sodium, dissolved	7.27	N/A	0.10	mg/L	N/A	2017-09-20	
Strontium, dissolved	0.188	N/A	0.0010	mg/L	N/A	2017-09-20	
Sulfur, dissolved	20.2	N/A	3.0	mg/L	N/A	2017-09-20	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-09-20	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-09-20	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-09-20	
Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-09-20	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-09-20	
Zinc, dissolved	0.0067	0.075	0.0040	mg/L	N/A	2017-09-20	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-09-18	2017-09-18	
EPHw19-32	< 250	N/A	250	µg/L	2017-09-18	2017-09-18	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-09-22	
<i>Surrogate: 2-Methylnonane (EPH/F2-4)</i>	63		60-140	%	2017-09-18	2017-09-18	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-09-18	2017-09-18	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-09-18	2017-09-18	

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Sample ID: MW-25 (7091294-02) [Water] Sampled: 2017-09-13 16:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Acridine	< 0.050	0.5	0.050	µg/L	2017-09-18	2017-09-18	
Anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-18	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-18	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-09-18	2017-09-18	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Chrysene	< 0.050	1	0.050	µg/L	2017-09-18	2017-09-18	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2017-09-18	2017-09-18	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-09-18	2017-09-18	
Fluorene	< 0.050	120	0.050	µg/L	2017-09-18	2017-09-18	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Naphthalene	< 0.200	10	0.200	µg/L	2017-09-18	2017-09-18	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-09-18	2017-09-18	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-09-18	2017-09-18	
Quinoline	< 0.050	34	0.050	µg/L	2017-09-18	2017-09-18	
Surrogate: Acridine-d9	72		50-140	%	2017-09-18	2017-09-18	
Surrogate: Naphthalene-d8	70		50-140	%	2017-09-18	2017-09-18	
Surrogate: Perylene-d12	100		50-140	%	2017-09-18	2017-09-18	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-09-22	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-09-22	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-09-22	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-09-22	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-09-22	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	

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Sample ID: MW-25 (7091294-02) [Water] Sampled: 2017-09-13 16:00, Continued

Volatile Organic Compounds (VOC), Continued

trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-09-22	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-09-22	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-09-22	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-09-22	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	N/A	2017-09-22	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-09-22	
Surrogate: Toluene-d8	89		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	95		70-130	%	N/A	2017-09-22	
Surrogate: Toluene-d8	89		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	95		70-130	%	N/A	2017-09-22	
Surrogate: 1,4-Dichlorobenzene-d4	88		70-130	%	N/A	2017-09-22	

Sample ID: MW-3 (7091294-03) [Water] Sampled: 2017-09-13 17:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	11.1	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	0.32	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	0.0016	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	0.0118	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	19.0	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters

pH	6.81	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	129	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	0.503	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	0.508	N/A	0.050	mg/L	2017-09-16	2017-09-17	
Alkalinity, Total (as CaCO3)	31.3	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	

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Sample ID: MW-3 (7091294-03) [Water] Sampled: 2017-09-13 17:00, Continued

General Parameters, Continued

Alkalinity, Bicarbonate (as CaCO ₃)	31.3	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	17.6	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	0.0047	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters

Hardness, Total (as CaCO ₃)	40.4	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0102	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.520	N/A	0.0500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.0107	N/A	0.0050	mg/L	N/A	2017-09-20	
Antimony, dissolved	< 0.00020	0.2	0.00020	mg/L	N/A	2017-09-20	
Arsenic, dissolved	< 0.00050	0.05	0.00050	mg/L	N/A	2017-09-20	
Barium, dissolved	0.0531	5	0.0050	mg/L	N/A	2017-09-20	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-09-20	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Boron, dissolved	0.0206	50	0.0050	mg/L	N/A	2017-09-20	
Cadmium, dissolved	0.000094	0.0001	0.000010	mg/L	N/A	2017-09-20	
Calcium, dissolved	12.3	N/A	0.20	mg/L	N/A	2017-09-20	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Cobalt, dissolved	0.00133	0.04	0.00010	mg/L	N/A	2017-09-20	
Copper, dissolved	0.00175	0.02	0.00040	mg/L	N/A	2017-09-20	
Iron, dissolved	0.058	N/A	0.010	mg/L	N/A	2017-09-20	
Lead, dissolved	< 0.00020	0.04	0.00020	mg/L	N/A	2017-09-20	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Magnesium, dissolved	2.35	N/A	0.010	mg/L	N/A	2017-09-20	
Manganese, dissolved	1.08	N/A	0.00020	mg/L	N/A	2017-09-20	
Mercury, dissolved	< 0.000010	0.001	0.000010	mg/L	2017-09-19	2017-09-20	
Molybdenum, dissolved	0.00095	10	0.00010	mg/L	N/A	2017-09-20	
Nickel, dissolved	< 0.00040	0.25	0.00040	mg/L	N/A	2017-09-20	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-09-20	
Potassium, dissolved	2.97	N/A	0.10	mg/L	N/A	2017-09-20	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-09-20	
Silicon, dissolved	7.8	N/A	1.0	mg/L	N/A	2017-09-20	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-09-20	
Sodium, dissolved	6.78	N/A	0.10	mg/L	N/A	2017-09-20	
Strontium, dissolved	0.120	N/A	0.0010	mg/L	N/A	2017-09-20	
Sulfur, dissolved	6.4	N/A	3.0	mg/L	N/A	2017-09-20	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-09-20	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-09-20	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-09-20	

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Sample ID: MW-3 (7091294-03) [Water] Sampled: 2017-09-13 17:00, Continued

Dissolved Metals, Continued

Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-09-20	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-09-20	
Zinc, dissolved	< 0.0040	0.075	0.0040	mg/L	N/A	2017-09-20	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-09-18	2017-09-18	
EPHw19-32	< 250	N/A	250	µg/L	2017-09-18	2017-09-18	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-09-22	
Surrogate: 2-Methylnonane (EPH/F2-4)	58		60-140	%	2017-09-18	2017-09-18	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-09-18	2017-09-18	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-09-18	2017-09-18	
Acridine	< 0.050	0.5	0.050	µg/L	2017-09-18	2017-09-18	
Anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-18	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-18	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-09-18	2017-09-18	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Chrysene	< 0.050	1	0.050	µg/L	2017-09-18	2017-09-18	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2017-09-18	2017-09-18	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-09-18	2017-09-18	
Fluorene	< 0.050	120	0.050	µg/L	2017-09-18	2017-09-18	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Naphthalene	< 0.200	10	0.200	µg/L	2017-09-18	2017-09-18	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-09-18	2017-09-18	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-09-18	2017-09-18	
Quinoline	< 0.050	34	0.050	µg/L	2017-09-18	2017-09-18	
Surrogate: Acridine-d9	72		50-140	%	2017-09-18	2017-09-18	
Surrogate: Naphthalene-d8	70		50-140	%	2017-09-18	2017-09-18	
Surrogate: Perylene-d12	95		50-140	%	2017-09-18	2017-09-18	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	

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Sample ID: MW-3 (7091294-03) [Water] Sampled: 2017-09-13 17:00, Continued

Volatile Organic Compounds (VOC), Continued

Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-09-22	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-09-22	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-09-22	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-09-22	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-09-22	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-09-22	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-09-22	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-09-22	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-09-22	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	N/A	2017-09-22	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-09-22	
Surrogate: Toluene-d8	82		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	94		70-130	%	N/A	2017-09-22	
Surrogate: Toluene-d8	82		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	94		70-130	%	N/A	2017-09-22	
Surrogate: 1,4-Dichlorobenzene-d4	86		70-130	%	N/A	2017-09-22	

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Sample ID: MW-4 (7091294-04) [Water] Sampled: 2017-09-13 14:45

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	17.1	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	0.38	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	0.0023	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	0.0218	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	25.4	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters

pH	6.98	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	234	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	1.53	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	2.10	N/A	0.050	mg/L	2017-09-17	2017-09-19	
Alkalinity, Total (as CaCO3)	71.3	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Bicarbonate (as CaCO3)	71.3	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	206	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	0.211	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters

Hardness, Total (as CaCO3)	77.2	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0195	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	2.12	N/A	0.100	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	N/A	2017-09-20	
Antimony, dissolved	< 0.00020	0.2	0.00020	mg/L	N/A	2017-09-20	
Arsenic, dissolved	0.00587	0.05	0.00050	mg/L	N/A	2017-09-20	
Barium, dissolved	0.0800	5	0.0050	mg/L	N/A	2017-09-20	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-09-20	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Boron, dissolved	0.0456	50	0.0050	mg/L	N/A	2017-09-20	
Cadmium, dissolved	0.000057	0.0001	0.000010	mg/L	N/A	2017-09-20	
Calcium, dissolved	25.4	N/A	0.20	mg/L	N/A	2017-09-20	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Cobalt, dissolved	0.0165	0.04	0.00010	mg/L	N/A	2017-09-20	
Copper, dissolved	< 0.00040	0.02	0.00040	mg/L	N/A	2017-09-20	
Iron, dissolved	27.7	N/A	0.010	mg/L	N/A	2017-09-20	
Lead, dissolved	< 0.00020	0.04	0.00020	mg/L	N/A	2017-09-20	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Magnesium, dissolved	3.30	N/A	0.010	mg/L	N/A	2017-09-20	
Manganese, dissolved	1.58	N/A	0.00020	mg/L	N/A	2017-09-20	
Mercury, dissolved	< 0.000010	0.001	0.000010	mg/L	2017-09-19	2017-09-20	
Molybdenum, dissolved	0.0173	10	0.00010	mg/L	N/A	2017-09-20	
Nickel, dissolved	0.00148	0.25	0.00040	mg/L	N/A	2017-09-20	

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Sample ID: MW-4 (7091294-04) [Water] Sampled: 2017-09-13 14:45, Continued

Dissolved Metals, Continued

Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-09-20	
Potassium, dissolved	4.13	N/A	0.10	mg/L	N/A	2017-09-20	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-09-20	
Silicon, dissolved	9.9	N/A	1.0	mg/L	N/A	2017-09-20	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-09-20	
Sodium, dissolved	10.6	N/A	0.10	mg/L	N/A	2017-09-20	
Strontium, dissolved	0.143	N/A	0.0010	mg/L	N/A	2017-09-20	
Sulfur, dissolved	8.7	N/A	3.0	mg/L	N/A	2017-09-20	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-09-20	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-09-20	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-09-20	
Uranium, dissolved	0.000060	1	0.000020	mg/L	N/A	2017-09-20	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-09-20	
Zinc, dissolved	< 0.0040	0.075	0.0040	mg/L	N/A	2017-09-20	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-09-18	2017-09-18	
EPHw19-32	< 250	N/A	250	µg/L	2017-09-18	2017-09-18	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-09-22	
<i>Surrogate: 2-Methylnonane (EPH/F2-4)</i>	72		60-140	%	2017-09-18	2017-09-18	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-09-18	2017-09-18	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-09-18	2017-09-18	
Acridine	< 0.050	0.5	0.050	µg/L	2017-09-18	2017-09-18	
Anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-18	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-18	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-09-18	2017-09-18	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Chrysene	< 0.050	1	0.050	µg/L	2017-09-18	2017-09-18	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2017-09-18	2017-09-18	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-09-18	2017-09-18	
Fluorene	< 0.050	120	0.050	µg/L	2017-09-18	2017-09-18	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Naphthalene	< 0.200	10	0.200	µg/L	2017-09-18	2017-09-18	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-09-18	2017-09-18	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-09-18	2017-09-18	

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Sample ID: MW-4 (7091294-04) [Water] Sampled: 2017-09-13 14:45, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Quinoline	< 0.050	34	0.050	µg/L	2017-09-18	2017-09-18	
Surrogate: Acridine-d9	85		50-140	%	2017-09-18	2017-09-18	
Surrogate: Naphthalene-d8	69		50-140	%	2017-09-18	2017-09-18	
Surrogate: Perylene-d12	114		50-140	%	2017-09-18	2017-09-18	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-09-22	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-09-22	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-09-22	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-09-22	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-09-22	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-09-22	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-09-22	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-09-22	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-09-22	

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Sample ID: MW-4 (7091294-04) [Water] Sampled: 2017-09-13 14:45, Continued

Volatile Organic Compounds (VOC), Continued

Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	N/A	2017-09-22	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-09-22	
Surrogate: Toluene-d8	89		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	95		70-130	%	N/A	2017-09-22	
Surrogate: Toluene-d8	89		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	95		70-130	%	N/A	2017-09-22	
Surrogate: 1,4-Dichlorobenzene-d4	86		70-130	%	N/A	2017-09-22	

Sample ID: MW-6 (7091294-05) [Water] Sampled: 2017-09-13 10:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	206	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	0.24	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	0.0019	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	0.209	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	114	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters

pH	5.98	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	929	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	0.070	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	0.639	N/A	0.050	mg/L	2017-09-17	2017-09-19	
Alkalinity, Total (as CaCO3)	6.5	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Bicarbonate (as CaCO3)	6.5	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	23	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	924	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	1.43	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters

Hardness, Total (as CaCO3)	157	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.207	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.848	N/A	0.0500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.104	N/A	0.0050	mg/L	N/A	2017-09-20	
Antimony, dissolved	< 0.00020	0.2	0.00020	mg/L	N/A	2017-09-20	
Arsenic, dissolved	< 0.00050	0.05	0.00050	mg/L	N/A	2017-09-20	
Barium, dissolved	0.0474	5	0.0050	mg/L	N/A	2017-09-20	

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Sample ID: MW-6 (7091294-05) [Water] Sampled: 2017-09-13 10:00, Continued

Dissolved Metals, Continued

Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-09-20	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Boron, dissolved	0.0334	50	0.0050	mg/L	N/A	2017-09-20	
Cadmium, dissolved	0.000303	0.0001	0.000010	mg/L	N/A	2017-09-20	
Calcium, dissolved	51.9	N/A	0.20	mg/L	N/A	2017-09-20	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Cobalt, dissolved	0.00395	0.04	0.00010	mg/L	N/A	2017-09-20	
Copper, dissolved	0.00320	0.02	0.00040	mg/L	N/A	2017-09-20	
Iron, dissolved	1.72	N/A	0.010	mg/L	N/A	2017-09-20	
Lead, dissolved	< 0.00020	0.04	0.00020	mg/L	N/A	2017-09-20	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Magnesium, dissolved	6.56	N/A	0.010	mg/L	N/A	2017-09-20	
Manganese, dissolved	0.604	N/A	0.00020	mg/L	N/A	2017-09-20	
Mercury, dissolved	< 0.000010	0.001	0.000010	mg/L	2017-09-19	2017-09-20	
Molybdenum, dissolved	< 0.00010	10	0.00010	mg/L	N/A	2017-09-20	
Nickel, dissolved	0.00147	0.25	0.00040	mg/L	N/A	2017-09-20	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-09-20	
Potassium, dissolved	4.50	N/A	0.10	mg/L	N/A	2017-09-20	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-09-20	
Silicon, dissolved	7.2	N/A	1.0	mg/L	N/A	2017-09-20	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-09-20	
Sodium, dissolved	115	N/A	0.10	mg/L	N/A	2017-09-20	
Strontium, dissolved	0.783	N/A	0.0010	mg/L	N/A	2017-09-20	
Sulfur, dissolved	41.3	N/A	3.0	mg/L	N/A	2017-09-20	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-09-20	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-09-20	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-09-20	
Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-09-20	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-09-20	
Zinc, dissolved	0.0055	0.075	0.0040	mg/L	N/A	2017-09-20	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	330	5000	250	µg/L	2017-09-18	2017-09-18	
EPHw19-32	412	N/A	250	µg/L	2017-09-18	2017-09-18	
LEPHw	329	500	250	µg/L	N/A	N/A	
HEPHw	412	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-09-22	
Surrogate: 2-Methylnonane (EPH/F2-4)	66		60-140	%	2017-09-18	2017-09-18	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-09-18	2017-09-18	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-09-18	2017-09-18	

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Sample ID: MW-6 (7091294-05) [Water] Sampled: 2017-09-13 10:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Acridine	< 0.050	0.5	0.050	µg/L	2017-09-18	2017-09-18	
Anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-18	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-18	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-09-18	2017-09-18	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Chrysene	< 0.050	1	0.050	µg/L	2017-09-18	2017-09-18	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2017-09-18	2017-09-18	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-09-18	2017-09-18	
Fluorene	< 0.050	120	0.050	µg/L	2017-09-18	2017-09-18	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-18	
Naphthalene	0.332	10	0.200	µg/L	2017-09-18	2017-09-18	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-09-18	2017-09-18	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-09-18	2017-09-18	
Quinoline	< 0.050	34	0.050	µg/L	2017-09-18	2017-09-18	
Surrogate: Acridine-d9	81		50-140	%	2017-09-18	2017-09-18	
Surrogate: Naphthalene-d8	79		50-140	%	2017-09-18	2017-09-18	
Surrogate: Perylene-d12	94		50-140	%	2017-09-18	2017-09-18	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-09-22	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-09-22	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-09-22	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-09-22	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-09-22	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	

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Sample ID: MW-6 (7091294-05) [Water] Sampled: 2017-09-13 10:00, Continued

Volatile Organic Compounds (VOC), Continued

trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-09-22	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-09-22	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-09-22	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-09-22	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	N/A	2017-09-22	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-09-22	
Surrogate: Toluene-d8	89		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	94		70-130	%	N/A	2017-09-22	
Surrogate: Toluene-d8	89		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	94		70-130	%	N/A	2017-09-22	
Surrogate: 1,4-Dichlorobenzene-d4	86		70-130	%	N/A	2017-09-22	

Sample ID: Duplicate (MW3) (7091294-06) [Water] Sampled: 2017-09-13 17:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	8.32	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	0.53	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	0.0026	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	0.0119	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	19.5	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters

pH	6.78	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	120	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	0.556	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	0.598	N/A	0.050	mg/L	2017-09-17	2017-09-19	
Alkalinity, Total (as CaCO3)	29.1	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	

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Sample ID: Duplicate (MW3) (7091294-06) [Water] Sampled: 2017-09-13 17:00, Continued

General Parameters, Continued

Alkalinity, Bicarbonate (as CaCO ₃)	29.1	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	16.6	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	0.0052	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters

Hardness, Total (as CaCO ₃)	40.3	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.00930	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.610	N/A	0.0500	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.0110	N/A	0.0050	mg/L	N/A	2017-09-20	
Antimony, dissolved	< 0.00020	0.2	0.00020	mg/L	N/A	2017-09-20	
Arsenic, dissolved	< 0.00050	0.05	0.00050	mg/L	N/A	2017-09-20	
Barium, dissolved	0.0529	5	0.0050	mg/L	N/A	2017-09-20	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-09-20	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Boron, dissolved	0.0118	50	0.0050	mg/L	N/A	2017-09-20	
Cadmium, dissolved	0.000094	0.0001	0.000010	mg/L	N/A	2017-09-20	
Calcium, dissolved	12.2	N/A	0.20	mg/L	N/A	2017-09-20	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Cobalt, dissolved	0.00130	0.04	0.00010	mg/L	N/A	2017-09-20	
Copper, dissolved	0.00186	0.02	0.00040	mg/L	N/A	2017-09-20	
Iron, dissolved	0.051	N/A	0.010	mg/L	N/A	2017-09-20	
Lead, dissolved	< 0.00020	0.04	0.00020	mg/L	N/A	2017-09-20	
Lithium, dissolved	0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Magnesium, dissolved	2.35	N/A	0.010	mg/L	N/A	2017-09-20	
Manganese, dissolved	1.05	N/A	0.00020	mg/L	N/A	2017-09-20	
Mercury, dissolved	< 0.000010	0.001	0.000010	mg/L	2017-09-19	2017-09-20	
Molybdenum, dissolved	0.00090	10	0.00010	mg/L	N/A	2017-09-20	
Nickel, dissolved	< 0.00040	0.25	0.00040	mg/L	N/A	2017-09-20	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-09-20	
Potassium, dissolved	2.93	N/A	0.10	mg/L	N/A	2017-09-20	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-09-20	
Silicon, dissolved	7.6	N/A	1.0	mg/L	N/A	2017-09-20	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-09-20	
Sodium, dissolved	6.73	N/A	0.10	mg/L	N/A	2017-09-20	
Strontium, dissolved	0.118	N/A	0.0010	mg/L	N/A	2017-09-20	
Sulfur, dissolved	6.3	N/A	3.0	mg/L	N/A	2017-09-20	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-09-20	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-09-20	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-09-20	

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
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Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: Duplicate (MW3) (7091294-06) [Water] Sampled: 2017-09-13 17:00, Continued

Dissolved Metals, Continued

Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-09-20	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-09-20	
Zinc, dissolved	< 0.0040	0.075	0.0040	mg/L	N/A	2017-09-20	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-09-18	2017-09-18	
EPHw19-32	< 250	N/A	250	µg/L	2017-09-18	2017-09-18	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-09-22	
Surrogate: 2-Methylnonane (EPH/F2-4)	45		60-140	%	2017-09-18	2017-09-18	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-09-18	2017-09-19	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-09-18	2017-09-19	
Acridine	< 0.050	0.5	0.050	µg/L	2017-09-18	2017-09-19	
Anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-19	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-19	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-09-18	2017-09-19	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Chrysene	< 0.050	1	0.050	µg/L	2017-09-18	2017-09-19	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2017-09-18	2017-09-19	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-09-18	2017-09-19	
Fluorene	< 0.050	120	0.050	µg/L	2017-09-18	2017-09-19	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Naphthalene	< 0.200	10	0.200	µg/L	2017-09-18	2017-09-19	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-09-18	2017-09-19	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-09-18	2017-09-19	
Quinoline	< 0.050	34	0.050	µg/L	2017-09-18	2017-09-19	
Surrogate: Acridine-d9	63		50-140	%	2017-09-18	2017-09-19	
Surrogate: Naphthalene-d8	71		50-140	%	2017-09-18	2017-09-19	
Surrogate: Perylene-d12	85		50-140	%	2017-09-18	2017-09-19	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	

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Sample ID: Duplicate (MW3) (7091294-06) [Water] Sampled: 2017-09-13 17:00, Continued

<i>Volatile Organic Compounds (VOC), Continued</i>							
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-09-22	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-09-22	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-09-22	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-09-22	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-09-22	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-09-22	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-09-22	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-09-22	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-09-22	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	N/A	2017-09-22	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-09-22	
Surrogate: Toluene-d8	89		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	95		70-130	%	N/A	2017-09-22	
Surrogate: Toluene-d8	89		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	95		70-130	%	N/A	2017-09-22	
Surrogate: 1,4-Dichlorobenzene-d4	86		70-130	%	N/A	2017-09-22	

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Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: SFC-2 (7091294-07) [Water] Sampled: 2017-09-13 12:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	14.2	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	0.34	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	0.0024	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	0.0597	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	48.8	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters

pH	7.30	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	280	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	0.577	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	0.593	N/A	0.050	mg/L	2017-09-17	2017-09-19	
Alkalinity, Total (as CaCO3)	61.3	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Bicarbonate (as CaCO3)	61.3	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	24	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	8.5	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	0.0033	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters

Hardness, Total (as CaCO3)	102	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0573	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.653	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	0.0768	N/A	0.0050	mg/L	2017-09-19	2017-09-20	
Antimony, total	< 0.00020	0.2	0.00020	mg/L	2017-09-19	2017-09-20	
Arsenic, total	< 0.00050	0.05	0.00050	mg/L	2017-09-19	2017-09-20	
Barium, total	0.0571	5	0.0050	mg/L	2017-09-19	2017-09-20	
Beryllium, total	< 0.00010	0.053	0.00010	mg/L	2017-09-19	2017-09-20	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Boron, total	0.0496	50	0.0050	mg/L	2017-09-19	2017-09-20	
Cadmium, total	0.000044	0.0001	0.000010	mg/L	2017-09-19	2017-09-20	
Calcium, total	34.7	N/A	0.20	mg/L	2017-09-19	2017-09-20	
Chromium, total	< 0.00050	N/A	0.00050	mg/L	2017-09-19	2017-09-20	
Cobalt, total	0.00620	0.04	0.00010	mg/L	2017-09-19	2017-09-20	
Copper, total	0.00187	0.02	0.00040	mg/L	2017-09-19	2017-09-20	
Iron, total	5.52	N/A	0.010	mg/L	2017-09-19	2017-09-20	
Lead, total	< 0.00020	0.04	0.00020	mg/L	2017-09-19	2017-09-20	
Lithium, total	0.00013	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Magnesium, total	3.67	N/A	0.010	mg/L	2017-09-19	2017-09-20	
Manganese, total	1.85	N/A	0.00020	mg/L	2017-09-19	2017-09-20	
Mercury, total	< 0.000010	0.001	0.000010	mg/L	2017-09-20	2017-09-20	
Molybdenum, total	0.00225	10	0.00010	mg/L	2017-09-19	2017-09-20	
Nickel, total	0.00088	0.25	0.00040	mg/L	2017-09-19	2017-09-20	

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Sample ID: SFC-2 (7091294-07) [Water] Sampled: 2017-09-13 12:00, Continued

Total Metals, Continued

Phosphorus, total	< 0.050	N/A	0.050	mg/L	2017-09-19	2017-09-20	
Potassium, total	3.26	N/A	0.10	mg/L	2017-09-19	2017-09-20	
Selenium, total	< 0.00050	0.01	0.00050	mg/L	2017-09-19	2017-09-20	
Silicon, total	5.2	N/A	1.0	mg/L	2017-09-19	2017-09-20	
Silver, total	< 0.000050	0.0005	0.000050	mg/L	2017-09-19	2017-09-20	
Sodium, total	11.1	N/A	0.10	mg/L	2017-09-19	2017-09-20	
Strontium, total	0.239	N/A	0.0010	mg/L	2017-09-19	2017-09-20	
Sulfur, total	16.3	N/A	3.0	mg/L	2017-09-19	2017-09-20	
Tellurium, total	< 0.00050	N/A	0.00050	mg/L	2017-09-19	2017-09-20	
Thallium, total	< 0.000020	0.003	0.000020	mg/L	2017-09-19	2017-09-20	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2017-09-19	2017-09-20	
Titanium, total	< 0.0050	1	0.0050	mg/L	2017-09-19	2017-09-20	
Uranium, total	< 0.000020	1	0.000020	mg/L	2017-09-19	2017-09-20	
Vanadium, total	< 0.0010	N/A	0.0010	mg/L	2017-09-19	2017-09-20	
Zinc, total	0.0239	0.075	0.0040	mg/L	2017-09-19	2017-09-20	
Zirconium, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	

Sample ID: SFC-3 (7091294-09) [Water] Sampled: 2017-09-13 11:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	12.6	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	0.19	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	0.0022	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	0.0303	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	9.7	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters

pH	7.25	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	130	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	0.094	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	0.162	N/A	0.050	mg/L	2017-09-17	2017-09-19	
Alkalinity, Total (as CaCO3)	32.6	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Bicarbonate (as CaCO3)	32.6	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	11.0	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	0.0113	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters

Hardness, Total (as CaCO3)	44.6	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0281	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.192	N/A	0.0500	mg/L	N/A	N/A	

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Sample ID: SFC-3 (7091294-09) [Water] Sampled: 2017-09-13 11:00, Continued

Total Metals							
Aluminum, total	0.360	N/A	0.0050	mg/L	2017-09-19	2017-09-20	
Antimony, total	< 0.00020	0.2	0.00020	mg/L	2017-09-19	2017-09-20	
Arsenic, total	< 0.00050	0.05	0.00050	mg/L	2017-09-19	2017-09-20	
Barium, total	0.0180	5	0.0050	mg/L	2017-09-19	2017-09-20	
Beryllium, total	< 0.00010	0.053	0.00010	mg/L	2017-09-19	2017-09-20	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Boron, total	0.0091	50	0.0050	mg/L	2017-09-19	2017-09-20	
Cadmium, total	0.000019	0.0001	0.000010	mg/L	2017-09-19	2017-09-20	
Calcium, total	14.0	N/A	0.20	mg/L	2017-09-19	2017-09-20	
Chromium, total	< 0.00050	N/A	0.00050	mg/L	2017-09-19	2017-09-20	
Cobalt, total	0.00185	0.04	0.00010	mg/L	2017-09-19	2017-09-20	
Copper, total	0.0329	0.02	0.00040	mg/L	2017-09-19	2017-09-20	
Iron, total	3.93	N/A	0.010	mg/L	2017-09-19	2017-09-20	
Lead, total	< 0.00020	0.04	0.00020	mg/L	2017-09-19	2017-09-20	
Lithium, total	0.00040	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Magnesium, total	2.33	N/A	0.010	mg/L	2017-09-19	2017-09-20	
Manganese, total	0.215	N/A	0.00020	mg/L	2017-09-19	2017-09-20	
Mercury, total	< 0.000010	0.001	0.000010	mg/L	2017-09-20	2017-09-20	
Molybdenum, total	0.00037	10	0.00010	mg/L	2017-09-19	2017-09-20	
Nickel, total	< 0.00040	0.25	0.00040	mg/L	2017-09-19	2017-09-20	
Phosphorus, total	< 0.050	N/A	0.050	mg/L	2017-09-19	2017-09-20	
Potassium, total	0.84	N/A	0.10	mg/L	2017-09-19	2017-09-20	
Selenium, total	< 0.00050	0.01	0.00050	mg/L	2017-09-19	2017-09-20	
Silicon, total	10.9	N/A	1.0	mg/L	2017-09-19	2017-09-20	
Silver, total	< 0.000050	0.0005	0.000050	mg/L	2017-09-19	2017-09-20	
Sodium, total	8.26	N/A	0.10	mg/L	2017-09-19	2017-09-20	
Strontium, total	0.160	N/A	0.0010	mg/L	2017-09-19	2017-09-20	
Sulfur, total	< 3.0	N/A	3.0	mg/L	2017-09-19	2017-09-20	
Tellurium, total	< 0.00050	N/A	0.00050	mg/L	2017-09-19	2017-09-20	
Thallium, total	< 0.000020	0.003	0.000020	mg/L	2017-09-19	2017-09-20	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2017-09-19	2017-09-20	
Titanium, total	0.0192	1	0.0050	mg/L	2017-09-19	2017-09-20	
Uranium, total	0.000023	1	0.000020	mg/L	2017-09-19	2017-09-20	
Vanadium, total	0.0014	N/A	0.0010	mg/L	2017-09-19	2017-09-20	
Zinc, total	< 0.0040	0.075	0.0040	mg/L	2017-09-19	2017-09-20	
Zirconium, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	

Sample ID: SFC-4B (7091294-10) [Water] Sampled: 2017-09-13 12:30

Anions							
Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	47.1	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	0.0011	0.2	0.0010	mg/L	N/A	2017-09-20	

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Sample ID: SFC-4B (7091294-10) [Water] Sampled: 2017-09-13 12:30, Continued

Anions, Continued

Nitrate+Nitrite (as N)	0.142	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	45.2	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters

pH	7.62	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	363	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	0.064	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	0.103	N/A	0.050	mg/L	2017-09-17	2017-09-19	
Alkalinity, Total (as CaCO3)	51.7	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Bicarbonate (as CaCO3)	51.7	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	< 2.0	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	0.0086	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters

Hardness, Total (as CaCO3)	116	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.141	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.245	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	0.0115	N/A	0.0050	mg/L	2017-09-19	2017-09-20	
Antimony, total	< 0.00020	0.2	0.00020	mg/L	2017-09-19	2017-09-20	
Arsenic, total	< 0.00050	0.05	0.00050	mg/L	2017-09-19	2017-09-20	
Barium, total	0.0216	5	0.0050	mg/L	2017-09-19	2017-09-20	
Beryllium, total	< 0.00010	0.053	0.00010	mg/L	2017-09-19	2017-09-20	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Boron, total	0.0607	50	0.0050	mg/L	2017-09-19	2017-09-20	
Cadmium, total	< 0.000010	0.0001	0.000010	mg/L	2017-09-19	2017-09-20	
Calcium, total	40.0	N/A	0.20	mg/L	2017-09-19	2017-09-20	
Chromium, total	< 0.00050	N/A	0.00050	mg/L	2017-09-19	2017-09-20	
Cobalt, total	0.00017	0.04	0.00010	mg/L	2017-09-19	2017-09-20	
Copper, total	0.00078	0.02	0.00040	mg/L	2017-09-19	2017-09-20	
Iron, total	0.062	N/A	0.010	mg/L	2017-09-19	2017-09-20	
Lead, total	< 0.00020	0.04	0.00020	mg/L	2017-09-19	2017-09-20	
Lithium, total	0.00052	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Magnesium, total	3.95	N/A	0.010	mg/L	2017-09-19	2017-09-20	
Manganese, total	0.115	N/A	0.00020	mg/L	2017-09-19	2017-09-20	
Mercury, total	< 0.000010	0.001	0.000010	mg/L	2017-09-20	2017-09-20	
Molybdenum, total	0.00040	10	0.00010	mg/L	2017-09-19	2017-09-20	
Nickel, total	< 0.00040	0.25	0.00040	mg/L	2017-09-19	2017-09-20	
Phosphorus, total	< 0.050	N/A	0.050	mg/L	2017-09-19	2017-09-20	
Potassium, total	2.38	N/A	0.10	mg/L	2017-09-19	2017-09-20	
Selenium, total	< 0.00050	0.01	0.00050	mg/L	2017-09-19	2017-09-20	
Silicon, total	7.5	N/A	1.0	mg/L	2017-09-19	2017-09-20	

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Sample ID: SFC-4B (7091294-10) [Water] Sampled: 2017-09-13 12:30, Continued

Total Metals, Continued

Silver, total	< 0.000050	0.0005	0.000050	mg/L	2017-09-19	2017-09-20	
Sodium, total	21.9	N/A	0.10	mg/L	2017-09-19	2017-09-20	
Strontium, total	0.405	N/A	0.0010	mg/L	2017-09-19	2017-09-20	
Sulfur, total	12.9	N/A	3.0	mg/L	2017-09-19	2017-09-20	
Tellurium, total	< 0.00050	N/A	0.00050	mg/L	2017-09-19	2017-09-20	
Thallium, total	< 0.000020	0.003	0.000020	mg/L	2017-09-19	2017-09-20	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2017-09-19	2017-09-20	
Titanium, total	0.0112	1	0.0050	mg/L	2017-09-19	2017-09-20	
Uranium, total	< 0.000020	1	0.000020	mg/L	2017-09-19	2017-09-20	
Vanadium, total	< 0.0010	N/A	0.0010	mg/L	2017-09-19	2017-09-20	
Zinc, total	< 0.0040	0.075	0.0040	mg/L	2017-09-19	2017-09-20	
Zirconium, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	

Sample ID: SFC-11 (7091294-11) [Water] Sampled: 2017-09-13 11:00

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	12.6	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	< 0.0010	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	0.134	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	13.8	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters

pH	7.24	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	138	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	0.113	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	0.161	N/A	0.050	mg/L	2017-09-17	2017-09-19	
Alkalinity, Total (as CaCO3)	32.4	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Bicarbonate (as CaCO3)	32.4	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	< 2.0	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	0.0049	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters

Hardness, Total (as CaCO3)	48.2	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.134	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	0.294	N/A	0.0500	mg/L	N/A	N/A	

Total Metals

Aluminum, total	0.0251	N/A	0.0050	mg/L	2017-09-19	2017-09-20	
Antimony, total	< 0.00020	0.2	0.00020	mg/L	2017-09-19	2017-09-20	
Arsenic, total	< 0.00050	0.05	0.00050	mg/L	2017-09-19	2017-09-20	

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Sample ID: SFC-11 (7091294-11) [Water] Sampled: 2017-09-13 11:00, Continued

Total Metals, Continued

Barium, total	0.0104	5	0.0050	mg/L	2017-09-19	2017-09-20	
Beryllium, total	< 0.00010	0.053	0.00010	mg/L	2017-09-19	2017-09-20	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Boron, total	0.0132	50	0.0050	mg/L	2017-09-19	2017-09-20	
Cadmium, total	0.000020	0.0001	0.000010	mg/L	2017-09-19	2017-09-20	
Calcium, total	15.6	N/A	0.20	mg/L	2017-09-19	2017-09-20	
Chromium, total	< 0.00050	N/A	0.00050	mg/L	2017-09-19	2017-09-20	
Cobalt, total	< 0.00010	0.04	0.00010	mg/L	2017-09-19	2017-09-20	
Copper, total	< 0.00040	0.02	0.00040	mg/L	2017-09-19	2017-09-20	
Iron, total	0.028	N/A	0.010	mg/L	2017-09-19	2017-09-20	
Lead, total	< 0.00020	0.04	0.00020	mg/L	2017-09-19	2017-09-20	
Lithium, total	0.00072	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Magnesium, total	2.24	N/A	0.010	mg/L	2017-09-19	2017-09-20	
Manganese, total	0.00392	N/A	0.00020	mg/L	2017-09-19	2017-09-20	
Mercury, total	< 0.000010	0.001	0.000010	mg/L	2017-09-20	2017-09-20	
Molybdenum, total	0.00022	10	0.00010	mg/L	2017-09-19	2017-09-20	
Nickel, total	< 0.00040	0.25	0.00040	mg/L	2017-09-19	2017-09-20	
Phosphorus, total	< 0.050	N/A	0.050	mg/L	2017-09-19	2017-09-20	
Potassium, total	0.73	N/A	0.10	mg/L	2017-09-19	2017-09-20	
Selenium, total	< 0.00050	0.01	0.00050	mg/L	2017-09-19	2017-09-20	
Silicon, total	11.6	N/A	1.0	mg/L	2017-09-19	2017-09-20	
Silver, total	< 0.000050	0.0005	0.000050	mg/L	2017-09-19	2017-09-20	
Sodium, total	8.28	N/A	0.10	mg/L	2017-09-19	2017-09-20	
Strontium, total	0.196	N/A	0.0010	mg/L	2017-09-19	2017-09-20	
Sulfur, total	3.2	N/A	3.0	mg/L	2017-09-19	2017-09-20	
Tellurium, total	< 0.00050	N/A	0.00050	mg/L	2017-09-19	2017-09-20	
Thallium, total	< 0.000020	0.003	0.000020	mg/L	2017-09-19	2017-09-20	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2017-09-19	2017-09-20	
Titanium, total	< 0.0050	1	0.0050	mg/L	2017-09-19	2017-09-20	
Uranium, total	< 0.000020	1	0.000020	mg/L	2017-09-19	2017-09-20	
Vanadium, total	< 0.0010	N/A	0.0010	mg/L	2017-09-19	2017-09-20	
Zinc, total	< 0.0040	0.075	0.0040	mg/L	2017-09-19	2017-09-20	
Zirconium, total	< 0.00010	N/A	0.00010	mg/L	2017-09-19	2017-09-20	

Sample ID: GW Int. (7091294-13) [Water] Sampled: 2017-09-13 11:30

Anions

Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	114	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	0.27	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	0.0024	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	0.0432	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	96.7	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters

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Sample ID: GW Int. (7091294-13) [Water] Sampled: 2017-09-13 11:30, Continued

General Parameters, Continued

pH	6.88	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	800	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	1.42	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	1.81	N/A	0.050	mg/L	2017-09-17	2017-09-19	
Alkalinity, Total (as CaCO3)	118	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Bicarbonate (as CaCO3)	118	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	44.0	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	0.0139	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters

Hardness, Total (as CaCO3)	227	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	0.0408	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	1.85	N/A	0.100	mg/L	N/A	N/A	

Dissolved Metals

Aluminum, dissolved	0.0250	N/A	0.0050	mg/L	N/A	2017-09-20	
Antimony, dissolved	< 0.00020	0.2	0.00020	mg/L	N/A	2017-09-20	
Arsenic, dissolved	< 0.00050	0.05	0.00050	mg/L	N/A	2017-09-20	
Barium, dissolved	0.0681	5	0.0050	mg/L	N/A	2017-09-20	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-09-20	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Boron, dissolved	0.129	50	0.0050	mg/L	N/A	2017-09-20	
Cadmium, dissolved	< 0.000010	0.0001	0.000010	mg/L	N/A	2017-09-20	
Calcium, dissolved	76.3	N/A	0.20	mg/L	N/A	2017-09-20	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Cobalt, dissolved	0.00362	0.04	0.00010	mg/L	N/A	2017-09-20	
Copper, dissolved	< 0.00040	0.02	0.00040	mg/L	N/A	2017-09-20	
Iron, dissolved	32.7	N/A	0.010	mg/L	N/A	2017-09-20	
Lead, dissolved	< 0.00020	0.04	0.00020	mg/L	N/A	2017-09-20	
Lithium, dissolved	0.00039	N/A	0.00010	mg/L	N/A	2017-09-20	
Magnesium, dissolved	8.86	N/A	0.010	mg/L	N/A	2017-09-20	
Manganese, dissolved	2.55	N/A	0.00020	mg/L	N/A	2017-09-20	
Mercury, dissolved	< 0.000010	0.001	0.000010	mg/L	2017-09-19	2017-09-20	
Molybdenum, dissolved	0.00022	10	0.00010	mg/L	N/A	2017-09-20	
Nickel, dissolved	0.00321	0.25	0.00040	mg/L	N/A	2017-09-20	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-09-20	
Potassium, dissolved	7.14	N/A	0.10	mg/L	N/A	2017-09-20	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-09-20	
Silicon, dissolved	9.8	N/A	1.0	mg/L	N/A	2017-09-20	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-09-20	
Sodium, dissolved	58.3	N/A	0.10	mg/L	N/A	2017-09-20	
Strontium, dissolved	0.530	N/A	0.0010	mg/L	N/A	2017-09-20	

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Sample ID: GW Int. (7091294-13) [Water] Sampled: 2017-09-13 11:30, Continued

Dissolved Metals, Continued

Sulfur, dissolved	34.7	N/A	3.0	mg/L	N/A	2017-09-20	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-09-20	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-09-20	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-09-20	
Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-09-20	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-09-20	
Zinc, dissolved	0.0197	0.075	0.0040	mg/L	N/A	2017-09-20	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-09-18	2017-09-18	
EPHw19-32	< 250	N/A	250	µg/L	2017-09-18	2017-09-18	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-09-22	
Surrogate: 2-Methylnonane (EPH/F2-4)	45		60-140	%	2017-09-18	2017-09-18	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	0.177	60	0.050	µg/L	2017-09-18	2017-09-19	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-09-18	2017-09-19	
Acridine	< 0.050	0.5	0.050	µg/L	2017-09-18	2017-09-19	
Anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-19	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-19	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-09-18	2017-09-19	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Chrysene	< 0.050	1	0.050	µg/L	2017-09-18	2017-09-19	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2017-09-18	2017-09-19	
Fluoranthene	0.104	2	0.030	µg/L	2017-09-18	2017-09-19	
Fluorene	0.057	120	0.050	µg/L	2017-09-18	2017-09-19	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Naphthalene	< 0.200	10	0.200	µg/L	2017-09-18	2017-09-19	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-09-18	2017-09-19	
Pyrene	0.054	0.2	0.020	µg/L	2017-09-18	2017-09-19	
Quinoline	< 0.050	34	0.050	µg/L	2017-09-18	2017-09-19	
Surrogate: Acridine-d9	70		50-140	%	2017-09-18	2017-09-19	
Surrogate: Naphthalene-d8	69		50-140	%	2017-09-18	2017-09-19	
Surrogate: Perylene-d12	80		50-140	%	2017-09-18	2017-09-19	

Volatile Organic Compounds (VOC)

CT2

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
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Sample ID: GW Int. (7091294-13) [Water] Sampled: 2017-09-13 11:30, Continued

<i>Volatile Organic Compounds (VOC), Continued</i>							CT2
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-09-22	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-09-22	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-09-22	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-09-22	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-09-22	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-09-22	
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-09-22	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-09-22	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-09-22	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	N/A	2017-09-22	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-09-22	

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Sample ID: GW Int. (7091294-13) [Water] Sampled: 2017-09-13 11:30, Continued

Volatile Organic Compounds (VOC), Continued							CT2
Surrogate: Toluene-d8	90		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	96		70-130	%	N/A	2017-09-22	
Surrogate: Toluene-d8	90		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	96		70-130	%	N/A	2017-09-22	
Surrogate: 1,4-Dichlorobenzene-d4	88		70-130	%	N/A	2017-09-22	

Sample ID: Trip Blank (7091294-14) [Water] Sampled: 2017-09-13 00:00

Anions							
Bromide	< 0.10	N/A	0.10	mg/L	N/A	2017-09-16	
Chloride	< 0.10	1500	0.10	mg/L	N/A	2017-09-16	
Fluoride	< 0.10	2	0.02	mg/L	N/A	2017-09-16	
Nitrite (as N)	< 0.0010	0.2	0.0010	mg/L	N/A	2017-09-20	
Nitrate+Nitrite (as N)	< 0.0050	400	0.0050	mg/L	N/A	2017-09-20	
Sulfate	< 1.0	1000	1.0	mg/L	N/A	2017-09-16	

General Parameters							
pH	5.28	N/A	0.10	pH units	N/A	2017-09-17	HT2
Conductivity (EC)	< 2.0	N/A	2.0	µS/cm	N/A	2017-09-17	
Ammonia, Total (as N)	< 0.010	1.31	0.010	mg/L	N/A	2017-09-19	
Nitrogen, Total Kjeldahl	< 0.050	N/A	0.050	mg/L	2017-09-17	2017-09-19	
Alkalinity, Total (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	N/A	2017-09-17	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	N/A	2017-09-16	
Solids, Total Suspended	< 2.0	N/A	2.0	mg/L	N/A	2017-09-16	
Phosphorus, Total (as P)	< 0.0020	N/A	0.0020	mg/L	2017-09-19	2017-09-20	

Calculated Parameters							
Hardness, Total (as CaCO3)	< 0.500	N/A	0.500	mg/L	N/A	N/A	
Nitrate (as N)	< 0.00500	400	0.00500	mg/L	N/A	N/A	
Nitrogen, Total	< 0.0500	N/A	0.0500	mg/L	N/A	N/A	

Dissolved Metals							
Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	N/A	2017-09-20	
Antimony, dissolved	< 0.00020	0.2	0.00020	mg/L	N/A	2017-09-20	
Arsenic, dissolved	< 0.00050	0.05	0.00050	mg/L	N/A	2017-09-20	
Barium, dissolved	< 0.0050	5	0.0050	mg/L	N/A	2017-09-20	
Beryllium, dissolved	< 0.00010	0.053	0.00010	mg/L	N/A	2017-09-20	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Boron, dissolved	< 0.0050	50	0.0050	mg/L	N/A	2017-09-20	
Cadmium, dissolved	< 0.000010	0.0001	0.000010	mg/L	N/A	2017-09-20	
Calcium, dissolved	< 0.20	N/A	0.20	mg/L	N/A	2017-09-20	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Cobalt, dissolved	< 0.00010	0.04	0.00010	mg/L	N/A	2017-09-20	

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Sample ID: Trip Blank (7091294-14) [Water] Sampled: 2017-09-13 00:00, Continued

Dissolved Metals, Continued

Copper, dissolved	< 0.00040	0.02	0.00040	mg/L	N/A	2017-09-20	
Iron, dissolved	< 0.010	N/A	0.010	mg/L	N/A	2017-09-20	
Lead, dissolved	< 0.00020	0.04	0.00020	mg/L	N/A	2017-09-20	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Magnesium, dissolved	< 0.010	N/A	0.010	mg/L	N/A	2017-09-20	
Manganese, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-09-20	
Mercury, dissolved	< 0.000010	0.001	0.000010	mg/L	2017-09-19	2017-09-20	
Molybdenum, dissolved	< 0.00010	10	0.00010	mg/L	N/A	2017-09-20	
Nickel, dissolved	< 0.00040	0.25	0.00040	mg/L	N/A	2017-09-20	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	N/A	2017-09-20	
Potassium, dissolved	< 0.10	N/A	0.10	mg/L	N/A	2017-09-20	
Selenium, dissolved	< 0.00050	0.01	0.00050	mg/L	N/A	2017-09-20	
Silicon, dissolved	< 1.0	N/A	1.0	mg/L	N/A	2017-09-20	
Silver, dissolved	< 0.000050	0.0005	0.000050	mg/L	N/A	2017-09-20	
Sodium, dissolved	< 0.10	N/A	0.10	mg/L	N/A	2017-09-20	
Strontium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-09-20	
Sulfur, dissolved	< 3.0	N/A	3.0	mg/L	N/A	2017-09-20	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	N/A	2017-09-20	
Thallium, dissolved	< 0.000020	0.003	0.000020	mg/L	N/A	2017-09-20	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	N/A	2017-09-20	
Titanium, dissolved	< 0.0050	1	0.0050	mg/L	N/A	2017-09-20	
Uranium, dissolved	< 0.000020	1	0.000020	mg/L	N/A	2017-09-20	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	N/A	2017-09-20	
Zinc, dissolved	< 0.0040	0.075	0.0040	mg/L	N/A	2017-09-20	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	N/A	2017-09-20	

BCMOE Aggregate Hydrocarbons

VPHw	< 100	1500	100	µg/L	N/A	N/A	
EPHw10-19	< 250	5000	250	µg/L	2017-09-18	2017-09-18	
EPHw19-32	< 250	N/A	250	µg/L	2017-09-18	2017-09-18	
LEPHw	< 250	500	250	µg/L	N/A	N/A	
HEPHw	< 250	N/A	250	µg/L	N/A	N/A	
VHw (6-10)	< 100	15000	100	µg/L	N/A	2017-09-22	
<i>Surrogate: 2-Methylnonane (EPH/F2-4)</i>	40		60-140	%	2017-09-18	2017-09-18	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	60	0.050	µg/L	2017-09-18	2017-09-19	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2017-09-18	2017-09-19	
Acridine	< 0.050	0.5	0.050	µg/L	2017-09-18	2017-09-19	
Anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-19	
Benz(a)anthracene	< 0.010	1	0.010	µg/L	2017-09-18	2017-09-19	
Benzo(a)pyrene	< 0.010	0.1	0.010	µg/L	2017-09-18	2017-09-19	
Benzo(b)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	

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Sample ID: Trip Blank (7091294-14) [Water] Sampled: 2017-09-13 00:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Chrysene	< 0.050	1	0.050	µg/L	2017-09-18	2017-09-19	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2017-09-18	2017-09-19	
Fluoranthene	< 0.030	2	0.030	µg/L	2017-09-18	2017-09-19	
Fluorene	< 0.050	120	0.050	µg/L	2017-09-18	2017-09-19	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2017-09-18	2017-09-19	
Naphthalene	< 0.200	10	0.200	µg/L	2017-09-18	2017-09-19	
Phenanthrene	< 0.100	3	0.100	µg/L	2017-09-18	2017-09-19	
Pyrene	< 0.020	0.2	0.020	µg/L	2017-09-18	2017-09-19	
Quinoline	< 0.050	34	0.050	µg/L	2017-09-18	2017-09-19	
Surrogate: Acridine-d9	48		50-140	%	2017-09-18	2017-09-19	S02
Surrogate: Naphthalene-d8	65		50-140	%	2017-09-18	2017-09-19	
Surrogate: Perylene-d12	87		50-140	%	2017-09-18	2017-09-19	

Volatile Organic Compounds (VOC)

CT2

Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Acetone	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Benzene	< 0.5	1000	0.5	µg/L	N/A	2017-09-22	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromoform	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Bromomethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
2-Butanone (MEK)	< 5.0	N/A	5.0	µg/L	N/A	2017-09-22	
Carbon tetrachloride	< 0.5	130	0.5	µg/L	N/A	2017-09-22	
Chlorobenzene	< 1.0	13	1.0	µg/L	N/A	2017-09-22	
Chloroethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Chloroform	< 1.0	20	1.0	µg/L	N/A	2017-09-22	
Chloromethane	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Dibromomethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,3-Dichlorobenzene	< 1.0	1500	1.0	µg/L	N/A	2017-09-22	
1,4-Dichlorobenzene	< 1.0	260	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloroethane	< 1.0	1000	1.0	µg/L	N/A	2017-09-22	
1,1-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
cis-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
trans-1,3-Dichloropropene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Ethylbenzene	< 1.0	2000	1.0	µg/L	N/A	2017-09-22	
Methyl tert-butyl ether	< 1.0	4400	1.0	µg/L	N/A	2017-09-22	
Dichloromethane	< 3.0	980	3.0	µg/L	N/A	2017-09-22	

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Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: Trip Blank (7091294-14) [Water] Sampled: 2017-09-13 00:00, Continued

<i>Volatile Organic Compounds (VOC), Continued</i>							CT2
4-Methyl-2-Pentanone (MIBK)	< 10.0	N/A	10.0	µg/L	N/A	2017-09-22	
Styrene	< 1.0	720	1.0	µg/L	N/A	2017-09-22	
1,1,1,2-Tetrachloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	N/A	2017-09-22	
Tetrachloroethylene	< 1.0	1100	1.0	µg/L	N/A	2017-09-22	
Toluene	< 1.0	390	1.0	µg/L	N/A	2017-09-22	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Trichloroethylene	< 1.0	200	1.0	µg/L	N/A	2017-09-22	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Vinyl chloride	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
m,p-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
o-Xylene	< 1.0	N/A	1.0	µg/L	N/A	2017-09-22	
Xylenes (total)	< 2.0	N/A	2.0	µg/L	N/A	2017-09-22	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	N/A	2017-09-22	
1,2-Dichlorobenzene	< 0.5	7	0.5	µg/L	N/A	2017-09-22	
Surrogate: Toluene-d8	88		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	94		70-130	%	N/A	2017-09-22	
Surrogate: Toluene-d8	88		70-130	%	N/A	2017-09-22	
Surrogate: 4-Bromofluorobenzene	94		70-130	%	N/A	2017-09-22	
Surrogate: 1,4-Dichlorobenzene-d4	83		70-130	%	N/A	2017-09-22	

Sample / Analysis Qualifiers:

- CT2 Excessive headspace in sample container - VOC results may be compromised.
- HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
- RA1 The Reported Detection Limit (RDL) has been raised due to matrix interference.
- S02 Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.
- S09 The surrogate recovery for this sample is outside of established control limits .

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The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC 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.

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	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Anions, Batch B710988									
Blank (B710988-BLK1)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Nitrate+Nitrite (as N)	< 0.0050	0.0050 mg/L							
Blank (B710988-BLK2)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Nitrate+Nitrite (as N)	< 0.0050	0.0050 mg/L							
LCS (B710988-BS1)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Nitrate+Nitrite (as N)	0.517	0.0050 mg/L	0.500		103	91-108			
LCS (B710988-BS2)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Nitrate+Nitrite (as N)	0.515	0.0050 mg/L	0.500		103	91-108			
Anions, Batch B710989									
Blank (B710989-BLK1)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Nitrite (as N)	< 0.0010	0.0010 mg/L							
Blank (B710989-BLK2)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Nitrite (as N)	< 0.0010	0.0010 mg/L							
LCS (B710989-BS1)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Nitrite (as N)	0.513	0.0010 mg/L	0.500		103	90-110			
LCS (B710989-BS2)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Nitrite (as N)	0.506	0.0010 mg/L	0.500		101	90-110			
Anions, Batch B711127									
Blank (B711127-BLK1)			Prepared: 2017-09-16, Analyzed: 2017-09-16						
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.02 mg/L							
Sulfate	< 1.0	1.0 mg/L							

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Anions, Batch B711127, Continued									
Blank (B711127-BLK2)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.02 mg/L							
Sulfate	< 1.0	1.0 mg/L							
LCS (B711127-BS1)			Prepared: 2017-09-16, Analyzed: 2017-09-16						
Bromide	3.99	0.10 mg/L	4.00		100	85-115			
Chloride	15.9	0.10 mg/L	16.0		99	90-110			
Fluoride	3.71	0.02 mg/L	4.00		93	88-108			
Sulfate	15.8	1.0 mg/L	16.0		99	91-109			
LCS (B711127-BS2)			Prepared: 2017-09-16, Analyzed: 2017-09-16						
Bromide	3.92	0.10 mg/L	4.00		98	85-115			
Chloride	16.1	0.10 mg/L	16.0		101	90-110			
Fluoride	3.79	0.02 mg/L	4.00		95	88-108			
Sulfate	15.8	1.0 mg/L	16.0		99	91-109			
Duplicate (B711127-DUP1)			Source: 7091294-02		Prepared: 2017-09-16, Analyzed: 2017-09-16				
Bromide	< 0.10	0.10 mg/L	< 0.10						10
Chloride	9.36	0.10 mg/L	9.40				< 1		10
Fluoride	0.45	0.02 mg/L	0.45						10
Sulfate	63.6	1.0 mg/L	63.6				< 1		6
Duplicate (B711127-DUP2)			Source: 7091294-14		Prepared: 2017-09-16, Analyzed: 2017-09-16				
Bromide	< 0.10	0.10 mg/L	< 0.10						10
Chloride	< 0.10	0.10 mg/L	< 0.10						10
Fluoride	< 0.10	0.02 mg/L	< 0.10						10
Sulfate	< 1.0	1.0 mg/L	< 1.0						6
Matrix Spike (B711127-MS1)			Source: 7091294-02		Prepared: 2017-09-16, Analyzed: 2017-09-16				
Bromide	4.01	0.10 mg/L	4.00	< 0.10	100	80-120			
Chloride	25.2	0.10 mg/L	16.0	9.40	99	75-125			
Fluoride	3.82	0.02 mg/L	4.00	0.45	84	75-125			
Sulfate	81.1	1.0 mg/L	16.0	63.6	110	75-125			
Matrix Spike (B711127-MS2)			Source: 7091294-14		Prepared: 2017-09-16, Analyzed: 2017-09-16				
Bromide	3.95	0.10 mg/L	4.00	< 0.10	99	80-120			
Chloride	15.8	0.10 mg/L	16.0	< 0.10	99	75-125			
Fluoride	3.93	0.02 mg/L	4.00	< 0.10	98	75-125			
Sulfate	16.0	1.0 mg/L	16.0	< 1.0	100	75-125			

BCMOE Aggregate Hydrocarbons, Batch B711162

Blank (B711162-BLK1)			Prepared: 2017-09-18, Analyzed: 2017-09-18						
EPHw10-19	< 250	250 µg/L							
EPHw19-32	< 250	250 µg/L							
Surrogate: 2-Methylnonane (EPH/F2-4)	272	µg/L	444		61	60-140			
LCS (B711162-BS2)			Prepared: 2017-09-18, Analyzed: 2017-09-18						
EPHw10-19	8840	250 µg/L	15500		57	70-130			SPK
EPHw19-32	12500	250 µg/L	22100		56	70-130			SPK
Surrogate: 2-Methylnonane (EPH/F2-4)	277	µg/L	444		62	60-140			

BCMOE Aggregate Hydrocarbons, Batch B711475

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
BCMOE Aggregate Hydrocarbons, Batch B711475, Continued									
Blank (B711475-BLK1)			Prepared: 2017-09-21, Analyzed: 2017-09-21						
VHw (6-10)	< 100	100 µg/L							
LCS (B711475-BS2)			Prepared: 2017-09-21, Analyzed: 2017-09-21						
VHw (6-10)	2380	100 µg/L	3320		72	70-130			
Duplicate (B711475-DUP1)			Source: 7091294-01		Prepared: 2017-09-22, Analyzed: 2017-09-22				CT2
VHw (6-10)	< 100	100 µg/L		< 100				19	

Dissolved Metals, Batch B711291

Blank (B711291-BLK1)			Prepared: 2017-09-19, Analyzed: 2017-09-20						
Mercury, dissolved	< 0.000010	0.000010 mg/L							
Reference (B711291-SRM1)			Prepared: 2017-09-19, Analyzed: 2017-09-20						
Mercury, dissolved	0.00483	0.000010 mg/L	0.00489		99	70-130			

Dissolved Metals, Batch B711363

Blank (B711363-BLK1)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0050	0.0050 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Dissolved Metals, Batch B711363, Continued									
LCS (B711363-BS1)					Prepared: 2017-09-20, Analyzed: 2017-09-20				
Aluminum, dissolved	0.0232	0.0050 mg/L	0.0200		116	80-120			
Antimony, dissolved	0.0165	0.00020 mg/L	0.0200		82	80-120			
Arsenic, dissolved	0.0185	0.00050 mg/L	0.0200		93	80-120			
Barium, dissolved	0.0167	0.0050 mg/L	0.0200		84	80-120			
Beryllium, dissolved	0.0192	0.00010 mg/L	0.0200		96	80-120			
Bismuth, dissolved	0.0180	0.00010 mg/L	0.0200		90	80-120			
Boron, dissolved	0.0227	0.0050 mg/L	0.0200		113	80-120			
Cadmium, dissolved	0.0172	0.000010 mg/L	0.0200		86	80-120			
Calcium, dissolved	2.00	0.20 mg/L	2.00		100	80-120			
Chromium, dissolved	0.0192	0.00050 mg/L	0.0200		96	80-120			
Cobalt, dissolved	0.0190	0.00010 mg/L	0.0200		95	80-120			
Copper, dissolved	0.0195	0.00040 mg/L	0.0200		98	80-120			
Iron, dissolved	1.94	0.010 mg/L	2.00		97	80-120			
Lead, dissolved	0.0179	0.00020 mg/L	0.0200		89	80-120			
Lithium, dissolved	0.0188	0.00010 mg/L	0.0200		94	80-120			
Magnesium, dissolved	2.00	0.010 mg/L	2.00		100	80-120			
Manganese, dissolved	0.0200	0.00020 mg/L	0.0200		100	80-120			
Molybdenum, dissolved	0.0168	0.00010 mg/L	0.0200		84	80-120			
Nickel, dissolved	0.0185	0.00040 mg/L	0.0200		93	80-120			
Phosphorus, dissolved	1.96	0.050 mg/L	2.00		98	80-120			
Potassium, dissolved	2.10	0.10 mg/L	2.00		105	80-120			
Selenium, dissolved	0.0185	0.00050 mg/L	0.0200		93	80-120			
Silicon, dissolved	2.0	1.0 mg/L	2.00		100	80-120			
Silver, dissolved	0.0175	0.000050 mg/L	0.0200		88	80-120			
Sodium, dissolved	2.03	0.10 mg/L	2.40		85	80-120			
Strontium, dissolved	0.0183	0.0010 mg/L	0.0200		92	80-120			
Sulfur, dissolved	5.5	3.0 mg/L	5.00		110	80-120			
Tellurium, dissolved	0.0183	0.00050 mg/L	0.0200		91	80-120			
Thallium, dissolved	0.0178	0.000020 mg/L	0.0200		89	80-120			
Thorium, dissolved	0.0167	0.00010 mg/L	0.0200		84	80-120			
Tin, dissolved	0.0173	0.00020 mg/L	0.0200		86	80-120			
Titanium, dissolved	0.0197	0.0050 mg/L	0.0200		99	80-120			
Uranium, dissolved	0.0171	0.000020 mg/L	0.0200		85	80-120			
Vanadium, dissolved	0.0190	0.0010 mg/L	0.0200		95	80-120			
Zinc, dissolved	0.0222	0.0040 mg/L	0.0200		111	80-120			
Zirconium, dissolved	0.0183	0.00010 mg/L	0.0200		91	80-120			
Reference (B711363-SRM1)					Prepared: 2017-09-20, Analyzed: 2017-09-20				
Aluminum, dissolved	0.243	0.0050 mg/L	0.233		104	79-114			
Antimony, dissolved	0.0418	0.00020 mg/L	0.0430		97	89-123			
Arsenic, dissolved	0.452	0.00050 mg/L	0.438		103	87-113			
Barium, dissolved	3.10	0.0050 mg/L	3.35		92	85-114			
Beryllium, dissolved	0.218	0.00010 mg/L	0.213		102	79-122			
Boron, dissolved	1.59	0.0050 mg/L	1.74		91	79-117			
Cadmium, dissolved	0.212	0.000010 mg/L	0.224		95	89-112			
Calcium, dissolved	7.91	0.20 mg/L	7.69		103	85-120			
Chromium, dissolved	0.461	0.00050 mg/L	0.437		106	87-113			
Cobalt, dissolved	0.137	0.00010 mg/L	0.128		107	90-117			
Copper, dissolved	0.880	0.00040 mg/L	0.844		104	90-115			
Iron, dissolved	1.33	0.010 mg/L	1.29		103	86-112			
Lead, dissolved	0.105	0.00020 mg/L	0.112		94	90-113			
Lithium, dissolved	0.104	0.00010 mg/L	0.104		100	77-127			
Magnesium, dissolved	7.16	0.010 mg/L	6.92		103	84-116			
Manganese, dissolved	0.378	0.00020 mg/L	0.345		110	85-113			
Molybdenum, dissolved	0.395	0.00010 mg/L	0.426		93	87-112			
Nickel, dissolved	0.874	0.00040 mg/L	0.840		104	90-114			
Phosphorus, dissolved	0.533	0.050 mg/L	0.495		108	74-119			

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Dissolved Metals, Batch B711363, Continued

Reference (B711363-SRM1), Continued

Prepared: 2017-09-20, Analyzed: 2017-09-20

Potassium, dissolved	3.45	0.10 mg/L	3.19		108	78-119			
Selenium, dissolved	0.0324	0.00050 mg/L	0.0331		98	89-123			
Sodium, dissolved	19.9	0.10 mg/L	19.1		104	81-117			
Strontium, dissolved	0.921	0.0010 mg/L	0.916		101	82-111			
Thallium, dissolved	0.0364	0.000020 mg/L	0.0393		93	90-113			
Uranium, dissolved	0.238	0.000020 mg/L	0.266		90	87-113			
Vanadium, dissolved	0.896	0.0010 mg/L	0.869		103	85-110			
Zinc, dissolved	0.930	0.0040 mg/L	0.881		106	88-114			

General Parameters, Batch B711132

Blank (B711132-BLK1)

Prepared: 2017-09-16, Analyzed: 2017-09-16

Solids, Total Suspended	< 2.0	2.0 mg/L							
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LCS (B711132-BS1)

Prepared: 2017-09-16, Analyzed: 2017-09-16

Solids, Total Suspended	96.0	2.0 mg/L	100		96	91-106			
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Duplicate (B711132-DUP1)

Source: 7091294-01

Prepared: 2017-09-16, Analyzed: 2017-09-16

Solids, Total Suspended	820	2.0 mg/L		852			4	20	
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General Parameters, Batch B711134

Blank (B711134-BLK1)

Prepared: 2017-09-16, Analyzed: 2017-09-16

Chemical Oxygen Demand	< 5	20 mg/L							
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LCS (B711134-BS1)

Prepared: 2017-09-16, Analyzed: 2017-09-16

Chemical Oxygen Demand	50	20 mg/L	50.0		100	89-115			
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General Parameters, Batch B711144

Blank (B711144-BLK1)

Prepared: 2017-09-16, Analyzed: 2017-09-17

Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
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Blank (B711144-BLK2)

Prepared: 2017-09-16, Analyzed: 2017-09-17

Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
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LCS (B711144-BS1)

Prepared: 2017-09-16, Analyzed: 2017-09-17

Nitrogen, Total Kjeldahl	1.09	0.050 mg/L	1.00		109	84-121			
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LCS (B711144-BS2)

Prepared: 2017-09-16, Analyzed: 2017-09-17

Nitrogen, Total Kjeldahl	1.08	0.050 mg/L	1.00		108	84-121			
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Duplicate (B711144-DUP2)

Source: 7091294-03

Prepared: 2017-09-16, Analyzed: 2017-09-17

Nitrogen, Total Kjeldahl	0.452	0.050 mg/L		0.508			12	16	
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Matrix Spike (B711144-MS2)

Source: 7091294-03

Prepared: 2017-09-16, Analyzed: 2017-09-17

Nitrogen, Total Kjeldahl	1.45	0.050 mg/L	1.00	0.508	94	65-135			
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General Parameters, Batch B711148

Blank (B711148-BLK1)

Prepared: 2017-09-17, Analyzed: 2017-09-17

Conductivity (EC)	< 2.0	2.0 µS/cm							
Alkalinity, Total (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO ₃)	< 1.0	1.0 mg/L							

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
General Parameters, Batch B711148, Continued									
Blank (B711148-BLK1), Continued			Prepared: 2017-09-17, Analyzed: 2017-09-17						
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Blank (B711148-BLK2)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
Conductivity (EC)	< 2.0	2.0 µS/cm							
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Blank (B711148-BLK3)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
Conductivity (EC)	< 2.0	2.0 µS/cm							
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
LCS (B711148-BS1)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
Alkalinity, Total (as CaCO3)	104	1.0 mg/L	100		104	92-106			
LCS (B711148-BS2)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
Conductivity (EC)	1380	2.0 µS/cm	1410		98	95-104			
LCS (B711148-BS3)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
Alkalinity, Total (as CaCO3)	102	1.0 mg/L	100		102	92-106			
LCS (B711148-BS4)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
Conductivity (EC)	1390	2.0 µS/cm	1410		99	95-104			
LCS (B711148-BS5)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
Alkalinity, Total (as CaCO3)	104	1.0 mg/L	100		104	92-106			
LCS (B711148-BS6)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
Conductivity (EC)	1410	2.0 µS/cm	1410		100	95-104			
Reference (B711148-SRM1)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
pH	7.00	0.10 pH units	7.00		100	98-102			HT2
Reference (B711148-SRM2)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
pH	6.99	0.10 pH units	7.00		100	98-102			HT2
Reference (B711148-SRM3)			Prepared: 2017-09-17, Analyzed: 2017-09-17						
pH	7.00	0.10 pH units	7.00		100	98-102			HT2
General Parameters, Batch B711151									
Blank (B711151-BLK1)			Prepared: 2017-09-17, Analyzed: 2017-09-19						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
Blank (B711151-BLK2)			Prepared: 2017-09-17, Analyzed: 2017-09-19						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
LCS (B711151-BS1)			Prepared: 2017-09-17, Analyzed: 2017-09-19						
Nitrogen, Total Kjeldahl	1.09	0.050 mg/L	1.00		109	84-121			

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
General Parameters, Batch B711151, Continued									
LCS (B711151-BS2)			Prepared: 2017-09-17, Analyzed: 2017-09-19						
Nitrogen, Total Kjeldahl	1.08	0.050 mg/L	1.00		108	84-121			
Duplicate (B711151-DUP1)			Source: 7091294-07 Prepared: 2017-09-17, Analyzed: 2017-09-19						
Nitrogen, Total Kjeldahl	0.624	0.050 mg/L		0.593			5	16	
Matrix Spike (B711151-MS1)			Source: 7091294-07 Prepared: 2017-09-17, Analyzed: 2017-09-19						
Nitrogen, Total Kjeldahl	1.82	0.050 mg/L	1.00	0.593	123	65-135			
General Parameters, Batch B711279									
Blank (B711279-BLK1)			Prepared: 2017-09-19, Analyzed: 2017-09-20						
Phosphorus, Total (as P)	< 0.0020	0.0020 mg/L							
Blank (B711279-BLK3)			Prepared: 2017-09-19, Analyzed: 2017-09-20						
Phosphorus, Total (as P)	< 0.0020	0.0020 mg/L							
LCS (B711279-BS1)			Prepared: 2017-09-19, Analyzed: 2017-09-20						
Phosphorus, Total (as P)	0.100	0.0020 mg/L	0.100		100	80-112			
LCS (B711279-BS3)			Prepared: 2017-09-19, Analyzed: 2017-09-20						
Phosphorus, Total (as P)	0.0987	0.0020 mg/L	0.100		99	80-112			
Duplicate (B711279-DUP3)			Source: 7091294-02 Prepared: 2017-09-19, Analyzed: 2017-09-20						
Phosphorus, Total (as P)	0.107	0.0020 mg/L		0.105			1	20	
Matrix Spike (B711279-MS3)			Source: 7091294-02 Prepared: 2017-09-19, Analyzed: 2017-09-20						
Phosphorus, Total (as P)	0.586	0.0020 mg/L	0.500	0.105	96	70-122			
General Parameters, Batch B711284									
Blank (B711284-BLK1)			Prepared: 2017-09-19, Analyzed: 2017-09-19						
Ammonia, Total (as N)	< 0.020	0.010 mg/L							
LCS (B711284-BS1)			Prepared: 2017-09-19, Analyzed: 2017-09-19						
Ammonia, Total (as N)	1.02	0.010 mg/L	1.00		102	90-115			
Polycyclic Aromatic Hydrocarbons (PAH), Batch B711162									
Blank (B711162-BLK1)			Prepared: 2017-09-18, Analyzed: 2017-09-18						
Acenaphthene	< 0.050	0.050 µg/L							
Acenaphthylene	< 0.200	0.200 µg/L							
Acridine	< 0.050	0.050 µg/L							
Anthracene	< 0.010	0.010 µg/L							
Benz(a)anthracene	< 0.010	0.010 µg/L							
Benzo(a)pyrene	< 0.010	0.010 µg/L							
Benzo(b)fluoranthene	< 0.050	0.050 µg/L							
Benzo(b+j)fluoranthene	< 0.050	0.050 µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050 µg/L							
Benzo(k)fluoranthene	< 0.050	0.050 µg/L							
Chrysene	< 0.050	0.050 µg/L							
Dibenz(a,h)anthracene	< 0.010	0.010 µg/L							
Fluoranthene	< 0.030	0.030 µg/L							
Fluorene	< 0.050	0.050 µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050 µg/L							
Naphthalene	< 0.200	0.200 µg/L							
Phenanthrene	< 0.100	0.100 µg/L							

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Polycyclic Aromatic Hydrocarbons (PAH), Batch B711162, Continued

Blank (B711162-BLK1), Continued

Prepared: 2017-09-18, Analyzed: 2017-09-18

Pyrene	< 0.020	0.020 µg/L							
Quinoline	< 0.050	0.050 µg/L							
Surrogate: Acridine-d9	3.83	µg/L	4.44		86	50-140			
Surrogate: Naphthalene-d8	3.36	µg/L	4.44		76	50-140			
Surrogate: Perylene-d12	4.30	µg/L	4.44		97	50-140			

LCS (B711162-BS1)

Prepared: 2017-09-18, Analyzed: 2017-09-18

Acenaphthene	3.11	0.050 µg/L	4.44		70	58-125			
Acenaphthylene	3.09	0.200 µg/L	4.44		70	54-128			
Acridine	2.72	0.050 µg/L	4.44		61	50-112			
Anthracene	3.34	0.010 µg/L	4.44		75	66-125			
Benz(a)anthracene	3.49	0.010 µg/L	4.44		78	59-123			
Benzo(a)pyrene	3.59	0.010 µg/L	4.44		81	62-116			
Benzo(b)fluoranthene	3.30	0.050 µg/L	4.44		74	68-126			
Benzo(b+j)fluoranthene	7.21	0.050 µg/L	8.89		81	69-121			
Benzo(g,h,i)perylene	3.52	0.050 µg/L	4.44		79	58-129			
Benzo(k)fluoranthene	4.40	0.050 µg/L	4.44		99	67-128			
Chrysene	3.56	0.050 µg/L	4.44		80	58-125			
Dibenz(a,h)anthracene	3.21	0.010 µg/L	4.44		72	58-126			
Fluoranthene	3.71	0.030 µg/L	4.44		83	67-133			
Fluorene	3.21	0.050 µg/L	4.44		72	55-122			
Indeno(1,2,3-cd)pyrene	3.38	0.050 µg/L	4.44		76	62-126			
Naphthalene	2.97	0.200 µg/L	4.44		67	50-130			
Phenanthrene	3.80	0.100 µg/L	4.44		85	67-127			
Pyrene	3.74	0.020 µg/L	4.44		84	68-133			
Quinoline	5.21	0.050 µg/L	4.44		117	51-140			
Surrogate: Acridine-d9	3.01	µg/L	4.44		68	50-140			
Surrogate: Naphthalene-d8	2.51	µg/L	4.44		56	50-140			
Surrogate: Perylene-d12	3.57	µg/L	4.44		80	50-140			

LCS Dup (B711162-BSD1)

Prepared: 2017-09-18, Analyzed: 2017-09-18

Acenaphthene	2.88	0.050 µg/L	4.44		65	58-125	8	16	
Acenaphthylene	2.94	0.200 µg/L	4.44		66	54-128	5	16	
Acridine	2.24	0.050 µg/L	4.44		50	50-112	19	26	
Anthracene	2.97	0.010 µg/L	4.44		67	66-125	12	14	
Benz(a)anthracene	3.14	0.010 µg/L	4.44		71	59-123	11	23	
Benzo(a)pyrene	3.13	0.010 µg/L	4.44		70	62-116	14	16	
Benzo(b)fluoranthene	3.21	0.050 µg/L	4.44		72	68-126	3	17	
Benzo(b+j)fluoranthene	6.68	0.050 µg/L	8.89		75	69-121	8	14	
Benzo(g,h,i)perylene	3.14	0.050 µg/L	4.44		71	58-129	11	25	
Benzo(k)fluoranthene	4.25	0.050 µg/L	4.44		96	67-128	3	18	
Chrysene	3.31	0.050 µg/L	4.44		74	58-125	7	24	
Dibenz(a,h)anthracene	2.81	0.010 µg/L	4.44		63	58-126	13	23	
Fluoranthene	3.19	0.030 µg/L	4.44		72	67-133	15	18	
Fluorene	3.06	0.050 µg/L	4.44		69	55-122	5	16	
Indeno(1,2,3-cd)pyrene	2.97	0.050 µg/L	4.44		67	62-126	13	22	
Naphthalene	2.76	0.200 µg/L	4.44		62	50-130	7	18	
Phenanthrene	3.36	0.100 µg/L	4.44		76	67-127	12	14	
Pyrene	3.26	0.020 µg/L	4.44		73	68-133	14	18	
Quinoline	5.32	0.050 µg/L	4.44		120	51-140	2	12	
Surrogate: Acridine-d9	2.60	µg/L	4.44		58	50-140			
Surrogate: Naphthalene-d8	2.40	µg/L	4.44		54	50-140			
Surrogate: Perylene-d12	3.16	µg/L	4.44		71	50-140			

Total Metals, Batch B711320

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Total Metals, Batch B711320, Continued

Blank (B711320-BLK1)

Prepared: 2017-09-19, Analyzed: 2017-09-20

Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0050	0.0050 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00020	0.00020 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00040	0.00040 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0010	0.0010 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							

LCS (B711320-BS1)

Prepared: 2017-09-19, Analyzed: 2017-09-20

Aluminum, total	0.0208	0.0050 mg/L	0.0200		104	80-120			
Antimony, total	0.0206	0.00020 mg/L	0.0200		103	80-120			
Arsenic, total	0.0187	0.00050 mg/L	0.0200		93	80-120			
Barium, total	0.0193	0.0050 mg/L	0.0200		97	80-120			
Beryllium, total	0.0218	0.00010 mg/L	0.0200		109	80-120			
Bismuth, total	0.0200	0.00010 mg/L	0.0200		100	80-120			
Boron, total	0.0230	0.0050 mg/L	0.0200		115	80-120			
Cadmium, total	0.0196	0.000010 mg/L	0.0200		98	80-120			
Calcium, total	2.07	0.20 mg/L	2.00		104	80-120			
Chromium, total	0.0189	0.00050 mg/L	0.0200		94	80-120			
Cobalt, total	0.0195	0.00010 mg/L	0.0200		97	80-120			
Copper, total	0.0214	0.00040 mg/L	0.0200		107	80-120			
Iron, total	2.07	0.010 mg/L	2.00		103	80-120			
Lead, total	0.0202	0.00020 mg/L	0.0200		101	80-120			
Lithium, total	0.0223	0.00010 mg/L	0.0200		111	80-120			
Magnesium, total	2.00	0.010 mg/L	2.00		100	80-120			
Manganese, total	0.0192	0.00020 mg/L	0.0200		96	80-120			
Molybdenum, total	0.0194	0.00010 mg/L	0.0200		97	80-120			
Nickel, total	0.0195	0.00040 mg/L	0.0200		97	80-120			

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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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Total Metals, Batch B711320, Continued

LCS (B711320-BS1), Continued

Prepared: 2017-09-19, Analyzed: 2017-09-20

Phosphorus, total	1.93	0.050 mg/L	2.00		96	80-120			
Potassium, total	1.97	0.10 mg/L	2.00		98	80-120			
Selenium, total	0.0201	0.00050 mg/L	0.0200		101	80-120			
Silicon, total	1.9	1.0 mg/L	2.00		97	80-120			
Silver, total	0.0201	0.000050 mg/L	0.0200		100	80-120			
Sodium, total	2.07	0.10 mg/L	2.40		86	80-120			
Strontium, total	0.0190	0.0010 mg/L	0.0200		95	80-120			
Sulfur, total	5.0	3.0 mg/L	5.00		99	80-120			
Tellurium, total	0.0207	0.00050 mg/L	0.0200		103	80-120			
Thallium, total	0.0201	0.000020 mg/L	0.0200		100	80-120			
Thorium, total	0.0178	0.00010 mg/L	0.0200		89	80-120			
Tin, total	0.0205	0.00020 mg/L	0.0200		103	80-120			
Titanium, total	0.0220	0.0050 mg/L	0.0200		110	80-120			
Uranium, total	0.0196	0.000020 mg/L	0.0200		98	80-120			
Vanadium, total	0.0185	0.0010 mg/L	0.0200		92	80-120			
Zinc, total	0.0209	0.0040 mg/L	0.0200		105	80-120			
Zirconium, total	0.0213	0.00010 mg/L	0.0200		107	80-120			

Reference (B711320-SRM1)

Prepared: 2017-09-19, Analyzed: 2017-09-20

Aluminum, total	0.305	0.0050 mg/L	0.303		101	82-114			
Antimony, total	0.0543	0.00020 mg/L	0.0511		106	88-115			
Arsenic, total	0.116	0.00050 mg/L	0.118		98	88-111			
Barium, total	0.787	0.0050 mg/L	0.823		96	83-110			
Beryllium, total	0.0550	0.00010 mg/L	0.0496		111	80-119			
Boron, total	3.91	0.0050 mg/L	3.45		113	80-118			
Cadmium, total	0.0499	0.000010 mg/L	0.0495		101	90-110			
Calcium, total	11.7	0.20 mg/L	11.6		101	85-113			
Chromium, total	0.257	0.00050 mg/L	0.250		103	88-111			
Cobalt, total	0.0387	0.00010 mg/L	0.0377		103	90-114			
Copper, total	0.525	0.00040 mg/L	0.486		108	90-117			
Iron, total	0.502	0.010 mg/L	0.488		103	90-116			
Lead, total	0.210	0.00020 mg/L	0.204		103	90-110			
Lithium, total	0.452	0.00010 mg/L	0.403		112	79-118			
Magnesium, total	4.00	0.010 mg/L	3.79		106	88-116			
Manganese, total	0.107	0.00020 mg/L	0.109		98	88-108			
Molybdenum, total	0.199	0.00010 mg/L	0.198		101	88-110			
Nickel, total	0.247	0.00040 mg/L	0.249		99	90-112			
Phosphorus, total	0.227	0.050 mg/L	0.227		100	72-118			
Potassium, total	7.62	0.10 mg/L	7.21		106	87-116			
Selenium, total	0.125	0.00050 mg/L	0.121		103	90-122			
Sodium, total	7.94	0.10 mg/L	7.54		105	86-118			
Strontium, total	0.368	0.0010 mg/L	0.375		98	86-110			
Thallium, total	0.0847	0.000020 mg/L	0.0805		105	90-113			
Uranium, total	0.0288	0.000020 mg/L	0.0306		94	88-112			
Vanadium, total	0.389	0.0010 mg/L	0.386		101	87-110			
Zinc, total	2.54	0.0040 mg/L	2.49		102	90-113			

Total Metals, Batch B711340

Blank (B711340-BLK1)

Prepared: 2017-09-20, Analyzed: 2017-09-20

Mercury, total	< 0.000010	0.000010 mg/L							
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Blank (B711340-BLK2)

Prepared: 2017-09-20, Analyzed: 2017-09-20

Mercury, total	< 0.000010	0.000010 mg/L							
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Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Total Metals, Batch B711340, Continued									
Reference (B711340-SRM1)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Mercury, total	0.00472	0.000010 mg/L	0.00489		96	70-130			
Reference (B711340-SRM2)			Prepared: 2017-09-20, Analyzed: 2017-09-20						
Mercury, total	0.00440	0.000010 mg/L	0.00489		90	70-130			
Volatile Organic Compounds (VOC), Batch B711475									
Blank (B711475-BLK1)			Prepared: 2017-09-21, Analyzed: 2017-09-21						
Benzene	< 0.5	0.5 µg/L							
Ethylbenzene	< 1.0	1.0 µg/L							
Methyl tert-butyl ether	< 1.0	1.0 µg/L							
Toluene	< 1.0	1.0 µg/L							
Xylenes (total)	< 2.0	2.0 µg/L							
Acetone	< 10.0	10.0 µg/L							
Benzene	< 0.5	0.5 µg/L							
Bromodichloromethane	< 1.0	1.0 µg/L							
Bromoform	< 1.0	1.0 µg/L							
Bromomethane	< 2.0	2.0 µg/L							
2-Butanone (MEK)	< 5.0	5.0 µg/L							
Carbon tetrachloride	< 0.5	0.5 µg/L							
Chlorobenzene	< 1.0	1.0 µg/L							
Chloroethane	< 2.0	2.0 µg/L							
Chloroform	< 1.0	1.0 µg/L							
Chloromethane	< 2.0	2.0 µg/L							
Dibromochloromethane	< 1.0	1.0 µg/L							
Dibromomethane	< 1.0	1.0 µg/L							
1,3-Dichlorobenzene	< 1.0	1.0 µg/L							
1,4-Dichlorobenzene	< 1.0	1.0 µg/L							
1,1-Dichloroethane	< 1.0	1.0 µg/L							
1,2-Dichloroethane	< 1.0	1.0 µg/L							
1,1-Dichloroethylene	< 1.0	1.0 µg/L							
cis-1,2-Dichloroethylene	< 1.0	1.0 µg/L							
trans-1,2-Dichloroethylene	< 1.0	1.0 µg/L							
1,2-Dichloropropane	< 1.0	1.0 µg/L							
cis-1,3-Dichloropropene	< 1.0	1.0 µg/L							
trans-1,3-Dichloropropene	< 1.0	1.0 µg/L							
Ethylbenzene	< 1.0	1.0 µg/L							
Methyl tert-butyl ether	< 1.0	1.0 µg/L							
Dichloromethane	< 3.0	3.0 µg/L							
4-Methyl-2-Pentanone (MIBK)	< 10.0	10.0 µg/L							
Styrene	< 1.0	1.0 µg/L							
1,1,1,2-Tetrachloroethane	< 1.0	1.0 µg/L							
1,1,2,2-Tetrachloroethane	< 0.5	0.5 µg/L							
Tetrachloroethylene	< 1.0	1.0 µg/L							
Toluene	< 1.0	1.0 µg/L							
1,1,1-Trichloroethane	< 1.0	1.0 µg/L							
1,1,2-Trichloroethane	< 1.0	1.0 µg/L							
Trichloroethylene	< 1.0	1.0 µg/L							
Trichlorofluoromethane	< 1.0	1.0 µg/L							
Vinyl chloride	< 1.0	1.0 µg/L							
m,p-Xylene	< 1.0	1.0 µg/L							
o-Xylene	< 1.0	1.0 µg/L							
Xylenes (total)	< 2.0	2.0 µg/L							
1,2-Dibromoethane	< 0.3	0.3 µg/L							
1,2-Dichlorobenzene	< 0.5	0.5 µg/L							
Surrogate: Toluene-d8	22.2	µg/L	24.6		90	70-130			

APPENDIX 1: QUALITY CONTROL DATA

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7091294
2017-09-22

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Volatile Organic Compounds (VOC), Batch B711475, Continued									
Blank (B711475-BLK1), Continued					Prepared: 2017-09-21, Analyzed: 2017-09-21				
Surrogate: 4-Bromofluorobenzene	23.8	µg/L	25.0		95	70-130			
Surrogate: Toluene-d8	22.2	µg/L	24.6		90	70-130			
Surrogate: 4-Bromofluorobenzene	23.8	µg/L	25.0		95	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	22.2	µg/L	25.0		89	70-130			
LCS (B711475-BS1)					Prepared: 2017-09-21, Analyzed: 2017-09-21				
Benzene	23.3	0.5 µg/L	20.0		116	70-130			
Ethylbenzene	22.9	1.0 µg/L	20.0		115	70-130			
Methyl tert-butyl ether	20.2	1.0 µg/L	20.0		101	70-130			
Toluene	23.6	1.0 µg/L	20.0		118	70-130			
Xylenes (total)	70.7	2.0 µg/L	60.0		118	70-130			
Acetone	19.3	10.0 µg/L	20.0		97	60-140			
Benzene	23.3	0.5 µg/L	20.0		116	70-130			
Bromodichloromethane	22.7	1.0 µg/L	20.0		113	70-130			
Bromoform	24.0	1.0 µg/L	20.0		120	70-130			
Bromomethane	28.1	2.0 µg/L	20.0		141	60-140			SPK
2-Butanone (MEK)	21.0	5.0 µg/L	20.0		105	60-140			
Carbon tetrachloride	23.8	0.5 µg/L	20.0		119	70-130			
Chlorobenzene	22.6	1.0 µg/L	20.0		113	70-130			
Chloroethane	28.6	2.0 µg/L	20.0		143	60-140			SPK
Chloroform	23.2	1.0 µg/L	20.0		116	70-130			
Chloromethane	25.6	2.0 µg/L	20.0		128	60-140			
Dibromochloromethane	22.7	1.0 µg/L	20.0		113	70-130			
Dibromomethane	24.1	1.0 µg/L	20.0		121	70-130			
1,3-Dichlorobenzene	22.1	1.0 µg/L	20.0		110	70-130			
1,4-Dichlorobenzene	21.9	1.0 µg/L	20.0		109	70-130			
1,1-Dichloroethane	22.5	1.0 µg/L	20.0		112	70-130			
1,2-Dichloroethane	23.8	1.0 µg/L	20.0		119	70-130			
1,1-Dichloroethylene	28.1	1.0 µg/L	20.0		141	70-130			SPK
cis-1,2-Dichloroethylene	23.2	1.0 µg/L	20.0		116	70-130			
trans-1,2-Dichloroethylene	22.4	1.0 µg/L	20.0		112	70-130			
1,2-Dichloropropane	20.6	1.0 µg/L	20.0		103	70-130			
cis-1,3-Dichloropropene	19.2	1.0 µg/L	20.0		96	70-130			
trans-1,3-Dichloropropene	20.1	1.0 µg/L	20.0		100	70-130			
Ethylbenzene	22.9	1.0 µg/L	20.0		115	70-130			
Methyl tert-butyl ether	20.2	1.0 µg/L	20.0		101	70-130			
Dichloromethane	22.4	3.0 µg/L	20.0		112	70-130			
4-Methyl-2-Pentanone (MIBK)	20.1	10.0 µg/L	20.0		100	60-140			
Styrene	23.1	1.0 µg/L	20.0		116	70-130			
1,1,1,2-Tetrachloroethane	22.7	1.0 µg/L	20.0		114	70-130			
1,1,2,2-Tetrachloroethane	20.8	0.5 µg/L	20.0		104	70-130			
Tetrachloroethylene	23.7	1.0 µg/L	20.0		119	70-130			
Toluene	23.6	1.0 µg/L	20.0		118	70-130			
1,1,1-Trichloroethane	23.8	1.0 µg/L	20.0		119	70-130			
1,1,2-Trichloroethane	22.6	1.0 µg/L	20.0		113	70-130			
Trichloroethylene	23.8	1.0 µg/L	20.0		119	70-130			
Trichlorofluoromethane	28.0	1.0 µg/L	20.0		140	60-140			
Vinyl chloride	24.0	1.0 µg/L	20.0		120	60-140			
m,p-Xylene	48.2	1.0 µg/L	40.0		121	70-130			
o-Xylene	22.5	1.0 µg/L	20.0		112	70-130			
Xylenes (total)	70.7	2.0 µg/L	60.0		118	70-130			
1,2-Dibromoethane	21.4	0.3 µg/L	20.0		107	70-130			
1,2-Dichlorobenzene	22.8	0.5 µg/L	20.0		114	70-130			
Surrogate: Toluene-d8	23.6	µg/L	24.6		96	70-130			
Surrogate: 4-Bromofluorobenzene	25.2	µg/L	25.0		101	70-130			
Surrogate: Toluene-d8	23.6	µg/L	24.6		96	70-130			

APPENDIX 1: QUALITY CONTROL DATA

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7091294
2017-09-22

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
Volatile Organic Compounds (VOC), Batch B711475, Continued									
LCS (B711475-BS1), Continued					Prepared: 2017-09-21, Analyzed: 2017-09-21				
Surrogate: 4-Bromofluorobenzene	25.2	µg/L	25.0		101	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	27.5	µg/L	25.0		110	70-130			
Duplicate (B711475-DUP1)					Source: 7091294-01 Prepared: 2017-09-22, Analyzed: 2017-09-22				
Benzene	< 0.5	0.5 µg/L		< 0.5				22	
Ethylbenzene	< 1.0	1.0 µg/L		< 1.0				30	
Methyl tert-butyl ether	< 1.0	1.0 µg/L		< 1.0				20	
Toluene	< 1.0	1.0 µg/L		< 1.0				24	
Xylenes (total)	< 2.0	2.0 µg/L		< 2.0				29	
Acetone	< 10.0	10.0 µg/L		< 10.0				30	
Benzene	< 0.5	0.5 µg/L		< 0.5				22	
Bromodichloromethane	< 1.0	1.0 µg/L		< 1.0				23	
Bromoform	< 1.0	1.0 µg/L		< 1.0				23	
Bromomethane	< 2.0	2.0 µg/L		< 2.0				36	
2-Butanone (MEK)	< 5.0	5.0 µg/L		< 5.0				30	
Carbon tetrachloride	< 0.5	0.5 µg/L		< 0.5				30	
Chlorobenzene	< 2.5	1.0 µg/L		2.5				26	RA1
Chloroethane	< 2.0	2.0 µg/L		< 2.0				50	
Chloroform	< 1.0	1.0 µg/L		< 1.0				22	
Chloromethane	< 2.0	2.0 µg/L		< 2.0				50	
Dibromochloromethane	< 1.0	1.0 µg/L		< 1.0				28	
Dibromomethane	< 1.0	1.0 µg/L		< 1.0				30	
1,3-Dichlorobenzene	< 1.0	1.0 µg/L		< 1.0				30	
1,4-Dichlorobenzene	< 1.0	1.0 µg/L		< 1.0				30	
1,1-Dichloroethane	< 1.0	1.0 µg/L		< 1.0				24	
1,2-Dichloroethane	< 1.0	1.0 µg/L		< 1.0				24	
1,1-Dichloroethylene	< 1.0	1.0 µg/L		< 1.0				30	
cis-1,2-Dichloroethylene	< 1.0	1.0 µg/L		< 1.0				22	
trans-1,2-Dichloroethylene	< 1.0	1.0 µg/L		< 1.0				27	
1,2-Dichloropropane	< 1.0	1.0 µg/L		< 1.0				28	
cis-1,3-Dichloropropene	< 1.0	1.0 µg/L		< 1.0				30	
trans-1,3-Dichloropropene	< 1.0	1.0 µg/L		< 1.0				27	
Ethylbenzene	< 1.0	1.0 µg/L		< 1.0				30	
Methyl tert-butyl ether	< 1.0	1.0 µg/L		< 1.0				20	
Dichloromethane	< 3.0	3.0 µg/L		< 3.0				27	
4-Methyl-2-Pentanone (MIBK)	< 10.0	10.0 µg/L		< 10.0				29	
Styrene	< 1.0	1.0 µg/L		< 1.0				30	
1,1,1,2-Tetrachloroethane	< 1.0	1.0 µg/L		< 1.0				30	
1,1,2,2-Tetrachloroethane	< 0.5	0.5 µg/L		< 0.5				30	
Tetrachloroethylene	< 1.0	1.0 µg/L		< 1.0				30	
Toluene	< 1.0	1.0 µg/L		< 1.0				24	
1,1,1-Trichloroethane	< 1.0	1.0 µg/L		< 1.0				30	
1,1,2-Trichloroethane	< 1.0	1.0 µg/L		< 1.0				30	
Trichloroethylene	< 1.0	1.0 µg/L		< 1.0				27	
Trichlorofluoromethane	< 1.0	1.0 µg/L		< 1.0				50	
Vinyl chloride	< 1.0	1.0 µg/L		< 1.0				40	
m,p-Xylene	< 1.0	1.0 µg/L		< 1.0				30	
o-Xylene	< 1.0	1.0 µg/L		< 1.0				30	
Xylenes (total)	< 2.0	2.0 µg/L		< 2.0				29	
1,2-Dibromoethane	< 0.3	0.3 µg/L		< 0.3				30	
1,2-Dichlorobenzene	< 0.5	0.5 µg/L		< 0.5				27	
Surrogate: Toluene-d8	21.6	µg/L	24.6		88	70-130			
Surrogate: 4-Bromofluorobenzene	23.8	µg/L	25.0		95	70-130			
Surrogate: Toluene-d8	21.6	µg/L	24.6		88	70-130			
Surrogate: 4-Bromofluorobenzene	23.8	µg/L	25.0		95	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	22.7	µg/L	25.0		91	70-130			

APPENDIX 1: QUALITY CONTROL DATA

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7091294
2017-09-22

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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QC Qualifiers:

- CT2 Excessive headspace in sample container - VOC results may be compromised.
- HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
- RA1 The Reported Detection Limit (RDL) has been raised due to matrix interference.
- SPK The recovery of this analyte was outside of established control limits.



CERTIFICATE OF ANALYSIS

REPORTED TO	Morrison Hershfield Limited - Burnaby 310 - 4321 Still Creek Drive Burnaby, BC V5C 6S7	WORK ORDER	7121660
ATTENTION	Josie Gilson	RECEIVED / TEMP REPORTED	2017-12-21 15:15 / 7°C 2018-01-03 11:07
PO NUMBER	721849		
PROJECT	Resort Municipality of Whister - Spring/Fall 17		
PROJECT INFO	5104016.07		

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO 17025:2005 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks



You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry



It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve



Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

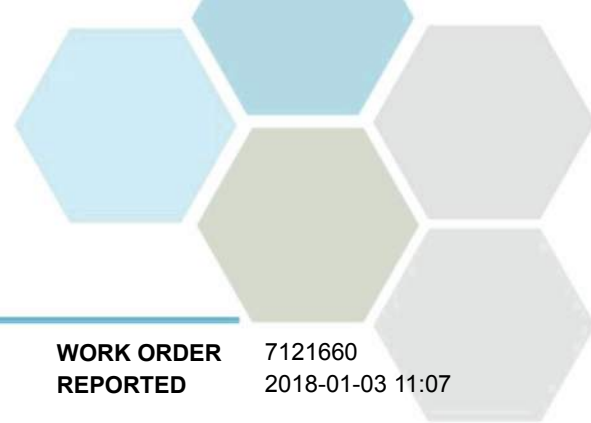
If you have any questions or concerns, please contact me at jshanko@caro.ca

Authorized By:

Jennifer Shanko, A.Sc.T.
Account Manager

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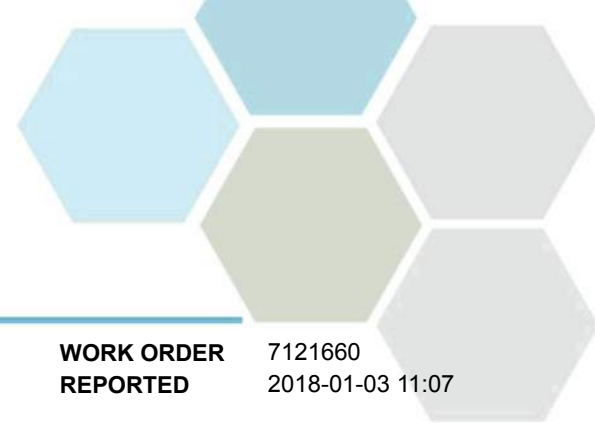


TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
MW-2D (7121660-01) Matrix: Water Sampled: 2017-12-20					
Anions					
Bromide	0.13	N/A	0.10 mg/L	2017-12-23	
Chloride	39.8	N/A	0.10 mg/L	2017-12-23	
Fluoride	0.12	N/A	0.02 mg/L	2017-12-23	
Nitrite (as N)	0.0186	N/A	0.0010 mg/L	2017-12-28	
Nitrate+Nitrite (as N)	0.0924	N/A	0.0050 mg/L	2017-12-28	
Sulfate	207	N/A	1.0 mg/L	2017-12-23	
General Parameters					
pH	6.56	N/A	0.10 pH units	2017-12-28	HT2
Conductivity (EC)	1050	N/A	2.0 µS/cm	2017-12-28	
Ammonia, Total (as N)	9.99	N/A	0.010 mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	13.0	N/A	0.050 mg/L	2017-12-28	
Alkalinity, Total (as CaCO ₃)	310	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO ₃)	310	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Chemical Oxygen Demand	22	N/A	20 mg/L	2017-12-22	
Solids, Total Suspended	712	N/A	2.0 mg/L	2017-12-27	
Phosphorus, Total (as P)	0.928	N/A	0.0020 mg/L	2017-12-29	
Calculated Parameters					
Hardness, Total (as CaCO ₃)	383	N/A	0.500 mg/L	N/A	
Nitrate (as N)	0.0738	N/A	0.00500 mg/L	N/A	
Nitrogen, Total	13.1	N/A	0.500 mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 0.0050	N/A	0.0050 mg/L	2017-12-27	
Antimony, dissolved	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Arsenic, dissolved	0.0136	N/A	0.00050 mg/L	2017-12-27	
Barium, dissolved	0.0338	N/A	0.0050 mg/L	2017-12-27	
Beryllium, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Bismuth, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Boron, dissolved	0.274	N/A	0.0050 mg/L	2017-12-27	
Cadmium, dissolved	< 0.000010	N/A	0.000010 mg/L	2017-12-27	
Calcium, dissolved	127	N/A	0.20 mg/L	2017-12-27	
Chromium, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Cobalt, dissolved	0.0125	N/A	0.00010 mg/L	2017-12-27	
Copper, dissolved	0.00094	N/A	0.00040 mg/L	2017-12-27	
Iron, dissolved	57.7	N/A	0.010 mg/L	2017-12-27	
Lead, dissolved	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Lithium, dissolved	0.00018	N/A	0.00010 mg/L	2017-12-27	
Magnesium, dissolved	15.9	N/A	0.010 mg/L	2017-12-27	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
MW-2D (7121660-01) Matrix: Water Sampled: 2017-12-20, Continued						
<i>Dissolved Metals, Continued</i>						
Manganese, dissolved	3.83	N/A	0.00020	mg/L	2017-12-27	
Molybdenum, dissolved	0.0125	N/A	0.00010	mg/L	2017-12-27	
Nickel, dissolved	< 0.00040	N/A	0.00040	mg/L	2017-12-27	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	2017-12-27	
Mercury, dissolved	< 0.000010	N/A	0.000010	mg/L	2017-12-28	
Potassium, dissolved	19.2	N/A	0.10	mg/L	2017-12-27	
Selenium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Silicon, dissolved	14.2	N/A	1.0	mg/L	2017-12-27	
Silver, dissolved	< 0.000050	N/A	0.000050	mg/L	2017-12-27	
Sodium, dissolved	34.7	N/A	0.10	mg/L	2017-12-27	
Strontium, dissolved	0.545	N/A	0.0010	mg/L	2017-12-27	
Sulfur, dissolved	66.8	N/A	3.0	mg/L	2017-12-27	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Thallium, dissolved	< 0.000020	N/A	0.000020	mg/L	2017-12-27	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Tin, dissolved	0.00021	N/A	0.00020	mg/L	2017-12-27	
Titanium, dissolved	< 0.0050	N/A	0.0050	mg/L	2017-12-27	
Tungsten, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Uranium, dissolved	0.000161	N/A	0.000020	mg/L	2017-12-27	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Zinc, dissolved	0.0069	N/A	0.0040	mg/L	2017-12-27	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	

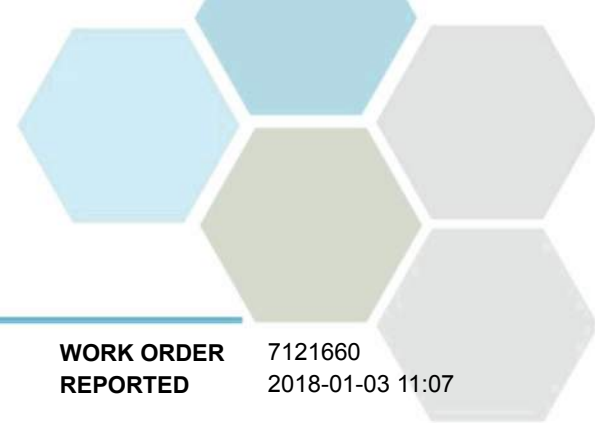
MW-2S (7121660-02) | Matrix: Water | Sampled: 2017-12-20

Anions

Bromide	< 0.10	N/A	0.10	mg/L	2017-12-23	
Chloride	10.7	N/A	0.10	mg/L	2017-12-23	
Fluoride	< 0.10	N/A	0.02	mg/L	2017-12-23	
Nitrite (as N)	0.0059	N/A	0.0010	mg/L	2017-12-28	
Nitrate+Nitrite (as N)	0.0409	N/A	0.0050	mg/L	2017-12-28	
Sulfate	74.8	N/A	1.0	mg/L	2017-12-23	

General Parameters

pH	6.51	N/A	0.10	pH units	2017-12-28	HT2
Conductivity (EC)	397	N/A	2.0	µS/cm	2017-12-28	
Ammonia, Total (as N)	4.43	N/A	0.010	mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	5.02	N/A	0.050	mg/L	2017-12-28	
Alkalinity, Total (as CaCO3)	123	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO3)	123	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	

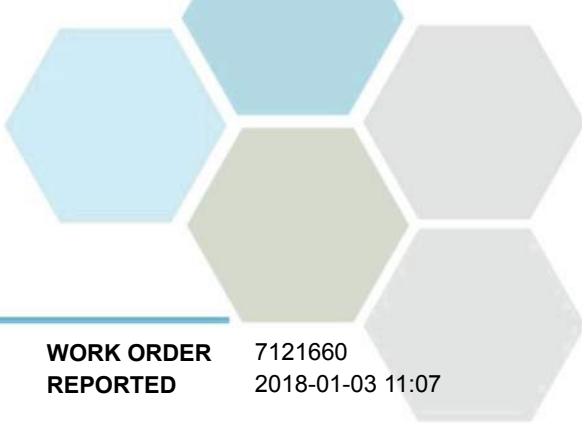


TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
MW-2S (7121660-02) Matrix: Water Sampled: 2017-12-20, Continued						
<i>General Parameters, Continued</i>						
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	2017-12-22	
Solids, Total Suspended	199	N/A	2.0	mg/L	2017-12-27	
Phosphorus, Total (as P)	0.0929	N/A	0.0020	mg/L	2017-12-29	
<i>Calculated Parameters</i>						
Hardness, Total (as CaCO ₃)	141	N/A	0.500	mg/L	N/A	
Nitrate (as N)	0.0350	N/A	0.00500	mg/L	N/A	
Nitrogen, Total	5.06	N/A	0.250	mg/L	N/A	
<i>Dissolved Metals</i>						
Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	2017-12-27	
Antimony, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Arsenic, dissolved	0.00809	N/A	0.00050	mg/L	2017-12-27	
Barium, dissolved	0.103	N/A	0.0050	mg/L	2017-12-27	
Beryllium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Boron, dissolved	0.109	N/A	0.0050	mg/L	2017-12-27	
Cadmium, dissolved	< 0.000010	N/A	0.000010	mg/L	2017-12-27	
Calcium, dissolved	44.0	N/A	0.20	mg/L	2017-12-27	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Cobalt, dissolved	0.00230	N/A	0.00010	mg/L	2017-12-27	
Copper, dissolved	< 0.00040	N/A	0.00040	mg/L	2017-12-27	
Iron, dissolved	47.6	N/A	0.010	mg/L	2017-12-27	
Lead, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Magnesium, dissolved	7.44	N/A	0.010	mg/L	2017-12-27	
Manganese, dissolved	2.39	N/A	0.00020	mg/L	2017-12-27	
Molybdenum, dissolved	0.00368	N/A	0.00010	mg/L	2017-12-27	
Nickel, dissolved	< 0.00040	N/A	0.00040	mg/L	2017-12-27	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	2017-12-27	
Mercury, dissolved	< 0.000010	N/A	0.000010	mg/L	2017-12-28	
Potassium, dissolved	8.71	N/A	0.10	mg/L	2017-12-27	
Selenium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Silicon, dissolved	9.8	N/A	1.0	mg/L	2017-12-27	
Silver, dissolved	< 0.000050	N/A	0.000050	mg/L	2017-12-27	
Sodium, dissolved	14.3	N/A	0.10	mg/L	2017-12-27	
Strontium, dissolved	0.255	N/A	0.0010	mg/L	2017-12-27	
Sulfur, dissolved	27.7	N/A	3.0	mg/L	2017-12-27	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Thallium, dissolved	< 0.000020	N/A	0.000020	mg/L	2017-12-27	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
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Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
MW-2S (7121660-02) Matrix: Water Sampled: 2017-12-20, Continued					
<i>Dissolved Metals, Continued</i>					
Titanium, dissolved	< 0.0050	N/A	0.0050 mg/L	2017-12-27	
Tungsten, dissolved	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Uranium, dissolved	0.000033	N/A	0.000020 mg/L	2017-12-27	
Vanadium, dissolved	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Zinc, dissolved	< 0.0040	N/A	0.0040 mg/L	2017-12-27	
Zirconium, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	

MW-3 (7121660-03) | Matrix: Water | Sampled: 2017-12-20

Anions

Bromide	< 0.10	N/A	0.10 mg/L	2017-12-23	
Chloride	22.7	N/A	0.10 mg/L	2017-12-23	
Fluoride	< 0.10	N/A	0.02 mg/L	2017-12-23	
Nitrite (as N)	0.0035	N/A	0.0010 mg/L	2017-12-28	
Nitrate+Nitrite (as N)	0.149	N/A	0.0050 mg/L	2017-12-28	
Sulfate	32.7	N/A	1.0 mg/L	2017-12-23	

General Parameters

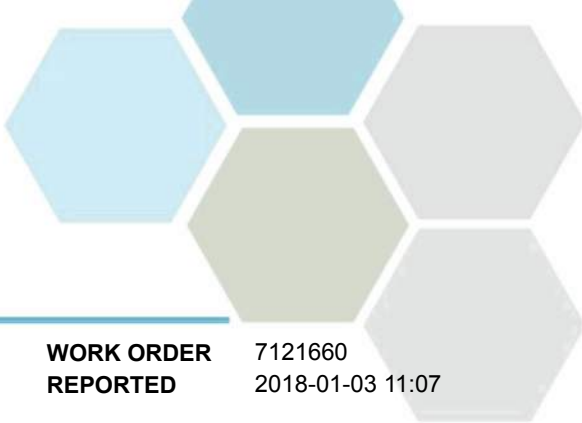
pH	6.21	N/A	0.10 pH units	2017-12-28	HT2
Conductivity (EC)	223	N/A	2.0 µS/cm	2017-12-28	
Ammonia, Total (as N)	0.539	N/A	0.010 mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	0.663	N/A	0.050 mg/L	2017-12-28	
Alkalinity, Total (as CaCO3)	31.1	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO3)	31.1	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Chemical Oxygen Demand	< 20	N/A	20 mg/L	2017-12-22	
Solids, Total Suspended	3.8	N/A	2.0 mg/L	2017-12-27	
Phosphorus, Total (as P)	0.0037	N/A	0.0020 mg/L	2017-12-29	

Calculated Parameters

Hardness, Total (as CaCO3)	54.6	N/A	0.500 mg/L	N/A	
Nitrate (as N)	0.146	N/A	0.00500 mg/L	N/A	
Nitrogen, Total	0.812	N/A	0.0500 mg/L	N/A	

Dissolved Metals

Aluminum, dissolved	0.0205	N/A	0.0050 mg/L	2017-12-27	
Antimony, dissolved	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Arsenic, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Barium, dissolved	0.0713	N/A	0.0050 mg/L	2017-12-27	
Beryllium, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Bismuth, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

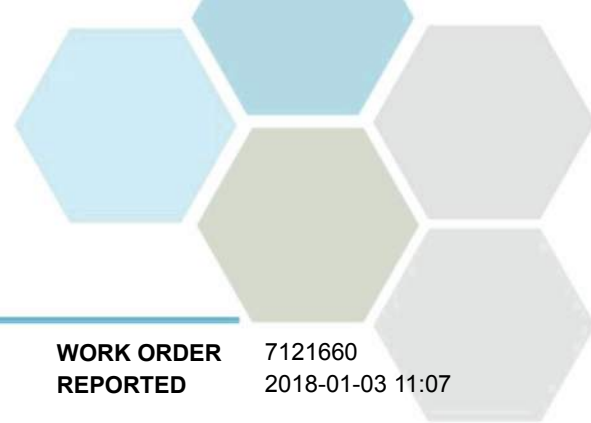
WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
MW-3 (7121660-03) Matrix: Water Sampled: 2017-12-20, Continued					
<i>Dissolved Metals, Continued</i>					
Boron, dissolved	0.0099	N/A	0.0050 mg/L	2017-12-27	
Cadmium, dissolved	0.000337	N/A	0.000010 mg/L	2017-12-27	
Calcium, dissolved	16.6	N/A	0.20 mg/L	2017-12-27	
Chromium, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Cobalt, dissolved	0.0104	N/A	0.00010 mg/L	2017-12-27	
Copper, dissolved	0.00394	N/A	0.00040 mg/L	2017-12-27	
Iron, dissolved	0.562	N/A	0.010 mg/L	2017-12-27	
Lead, dissolved	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Lithium, dissolved	0.00017	N/A	0.00010 mg/L	2017-12-27	
Magnesium, dissolved	3.18	N/A	0.010 mg/L	2017-12-27	
Manganese, dissolved	2.14	N/A	0.00020 mg/L	2017-12-27	
Molybdenum, dissolved	0.00054	N/A	0.00010 mg/L	2017-12-27	
Nickel, dissolved	< 0.00040	N/A	0.00040 mg/L	2017-12-27	
Phosphorus, dissolved	< 0.050	N/A	0.050 mg/L	2017-12-27	
Mercury, dissolved	< 0.000010	N/A	0.000010 mg/L	2017-12-28	
Potassium, dissolved	3.14	N/A	0.10 mg/L	2017-12-27	
Selenium, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Silicon, dissolved	6.8	N/A	1.0 mg/L	2017-12-27	
Silver, dissolved	< 0.000050	N/A	0.000050 mg/L	2017-12-27	
Sodium, dissolved	14.8	N/A	0.10 mg/L	2017-12-27	
Strontium, dissolved	0.131	N/A	0.0010 mg/L	2017-12-27	
Sulfur, dissolved	10.2	N/A	3.0 mg/L	2017-12-27	
Tellurium, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Thallium, dissolved	0.000119	N/A	0.000020 mg/L	2017-12-27	
Thorium, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Tin, dissolved	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Titanium, dissolved	< 0.0050	N/A	0.0050 mg/L	2017-12-27	
Tungsten, dissolved	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Uranium, dissolved	< 0.000020	N/A	0.000020 mg/L	2017-12-27	
Vanadium, dissolved	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Zinc, dissolved	0.0048	N/A	0.0040 mg/L	2017-12-27	
Zirconium, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	

MW-4 (7121660-04) | Matrix: Water | Sampled: 2017-12-20

Anions

Bromide	< 0.10	N/A	0.10 mg/L	2017-12-23	
Chloride	17.7	N/A	0.10 mg/L	2017-12-23	
Fluoride	0.16	N/A	0.02 mg/L	2017-12-23	
Nitrite (as N)	0.0047	N/A	0.0010 mg/L	2017-12-28	
Nitrate+Nitrite (as N)	0.0239	N/A	0.0050 mg/L	2017-12-28	
Sulfate	43.8	N/A	1.0 mg/L	2017-12-23	

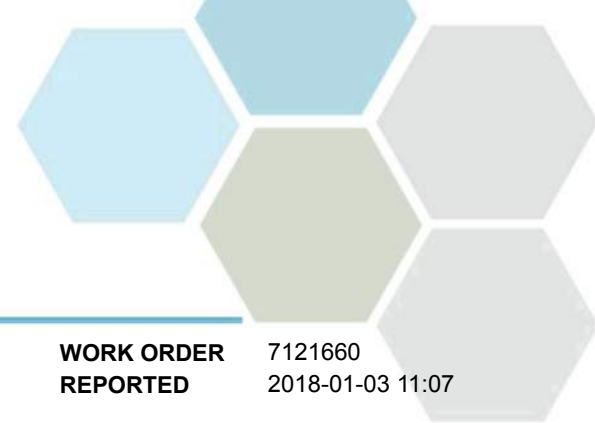


TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
MW-4 (7121660-04) Matrix: Water Sampled: 2017-12-20, Continued						
General Parameters						
pH	6.32	N/A	0.10	pH units	2017-12-28	HT2
Conductivity (EC)	351	N/A	2.0	µS/cm	2017-12-28	
Ammonia, Total (as N)	1.69	N/A	0.010	mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	3.79	N/A	0.050	mg/L	2017-12-28	
Alkalinity, Total (as CaCO3)	135	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO3)	135	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	2017-12-22	
Solids, Total Suspended	1580	N/A	2.0	mg/L	2017-12-27	
Phosphorus, Total (as P)	1.80	N/A	0.0020	mg/L	2017-12-29	
Calculated Parameters						
Hardness, Total (as CaCO3)	123	N/A	0.500	mg/L	N/A	
Nitrate (as N)	0.0192	N/A	0.00500	mg/L	N/A	
Nitrogen, Total	3.82	N/A	0.100	mg/L	N/A	
Dissolved Metals						
Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	2017-12-27	
Antimony, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Arsenic, dissolved	0.00553	N/A	0.00050	mg/L	2017-12-27	
Barium, dissolved	0.142	N/A	0.0050	mg/L	2017-12-27	
Beryllium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Boron, dissolved	0.0569	N/A	0.0050	mg/L	2017-12-27	
Cadmium, dissolved	0.000249	N/A	0.000010	mg/L	2017-12-27	
Calcium, dissolved	40.1	N/A	0.20	mg/L	2017-12-27	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Cobalt, dissolved	0.0218	N/A	0.00010	mg/L	2017-12-27	
Copper, dissolved	0.00084	N/A	0.00040	mg/L	2017-12-27	
Iron, dissolved	32.4	N/A	0.010	mg/L	2017-12-27	
Lead, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Lithium, dissolved	0.00028	N/A	0.00010	mg/L	2017-12-27	
Magnesium, dissolved	5.43	N/A	0.010	mg/L	2017-12-27	
Manganese, dissolved	2.31	N/A	0.00020	mg/L	2017-12-27	
Molybdenum, dissolved	0.0112	N/A	0.00010	mg/L	2017-12-27	
Nickel, dissolved	0.00100	N/A	0.00040	mg/L	2017-12-27	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	2017-12-27	
Mercury, dissolved	< 0.000010	N/A	0.000010	mg/L	2017-12-28	
Potassium, dissolved	5.43	N/A	0.10	mg/L	2017-12-27	
Selenium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Silicon, dissolved	10.2	N/A	1.0	mg/L	2017-12-27	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
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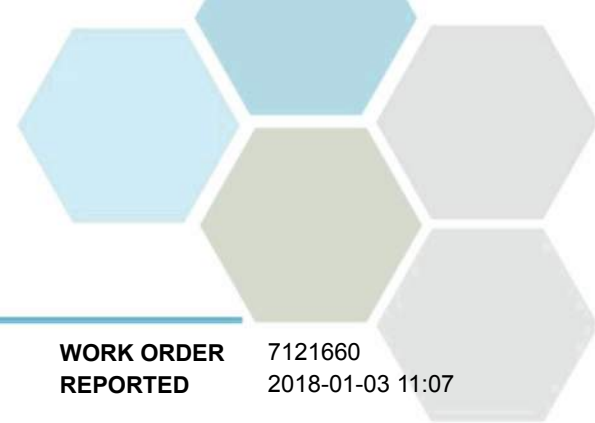
Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
MW-4 (7121660-04) Matrix: Water Sampled: 2017-12-20, Continued						
<i>Dissolved Metals, Continued</i>						
Silver, dissolved	< 0.000050	N/A	0.000050	mg/L	2017-12-27	
Sodium, dissolved	17.6	N/A	0.10	mg/L	2017-12-27	
Strontium, dissolved	0.279	N/A	0.0010	mg/L	2017-12-27	
Sulfur, dissolved	14.2	N/A	3.0	mg/L	2017-12-27	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Thallium, dissolved	0.000033	N/A	0.000020	mg/L	2017-12-27	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Titanium, dissolved	< 0.0050	N/A	0.0050	mg/L	2017-12-27	
Tungsten, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Uranium, dissolved	0.000167	N/A	0.000020	mg/L	2017-12-27	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Zinc, dissolved	0.0088	N/A	0.0040	mg/L	2017-12-27	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	

MW-6 (7121660-05) | Matrix: Water | Sampled: 2017-12-20

<i>Anions</i>						
Bromide	< 0.10	N/A	0.10	mg/L	2017-12-23	
Chloride	119	N/A	0.10	mg/L	2017-12-23	
Fluoride	0.16	N/A	0.02	mg/L	2017-12-23	
Nitrite (as N)	0.0070	N/A	0.0010	mg/L	2017-12-28	
Nitrate+Nitrite (as N)	0.324	N/A	0.0050	mg/L	2017-12-28	
Sulfate	118	N/A	1.0	mg/L	2017-12-23	

<i>General Parameters</i>						
pH	5.73	N/A	0.10	pH units	2017-12-28	HT2
Conductivity (EC)	764	N/A	2.0	µS/cm	2017-12-28	
Ammonia, Total (as N)	0.181	N/A	0.010	mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	4.12	N/A	0.050	mg/L	2017-12-28	
Alkalinity, Total (as CaCO3)	9.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO3)	9.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Chemical Oxygen Demand	51	N/A	20	mg/L	2017-12-22	
Solids, Total Suspended	954	N/A	2.0	mg/L	2017-12-27	
Phosphorus, Total (as P)	3.49	N/A	0.0020	mg/L	2017-12-29	

<i>Calculated Parameters</i>						
Hardness, Total (as CaCO3)	123	N/A	0.500	mg/L	N/A	
Nitrate (as N)	0.316	N/A	0.00500	mg/L	N/A	
Nitrogen, Total	4.44	N/A	0.250	mg/L	N/A	



TEST RESULTS

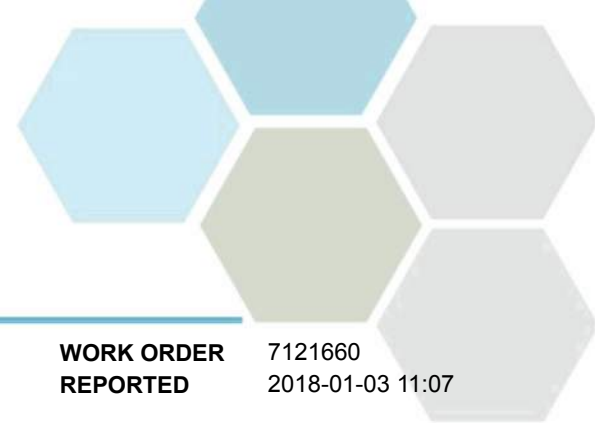
REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
MW-6 (7121660-05) Matrix: Water Sampled: 2017-12-20, Continued					
<i>Dissolved Metals</i>					
Aluminum, dissolved	0.0581	N/A	0.0050 mg/L	2017-12-27	
Antimony, dissolved	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Arsenic, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Barium, dissolved	0.0333	N/A	0.0050 mg/L	2017-12-27	
Beryllium, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Bismuth, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Boron, dissolved	0.0212	N/A	0.0050 mg/L	2017-12-27	
Cadmium, dissolved	0.000119	N/A	0.000010 mg/L	2017-12-27	
Calcium, dissolved	41.1	N/A	0.20 mg/L	2017-12-27	
Chromium, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Cobalt, dissolved	0.00023	N/A	0.00010 mg/L	2017-12-27	
Copper, dissolved	0.00173	N/A	0.00040 mg/L	2017-12-27	
Iron, dissolved	< 0.010	N/A	0.010 mg/L	2017-12-27	
Lead, dissolved	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Lithium, dissolved	0.00015	N/A	0.00010 mg/L	2017-12-27	
Magnesium, dissolved	4.87	N/A	0.010 mg/L	2017-12-27	
Manganese, dissolved	0.187	N/A	0.00020 mg/L	2017-12-27	
Molybdenum, dissolved	0.00019	N/A	0.00010 mg/L	2017-12-27	
Nickel, dissolved	< 0.00040	N/A	0.00040 mg/L	2017-12-27	
Phosphorus, dissolved	0.073	N/A	0.050 mg/L	2017-12-27	
Mercury, dissolved	< 0.000010	N/A	0.000010 mg/L	2017-12-28	
Potassium, dissolved	3.49	N/A	0.10 mg/L	2017-12-27	
Selenium, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Silicon, dissolved	5.2	N/A	1.0 mg/L	2017-12-27	
Silver, dissolved	< 0.000050	N/A	0.000050 mg/L	2017-12-27	
Sodium, dissolved	90.5	N/A	0.10 mg/L	2017-12-27	
Strontium, dissolved	0.501	N/A	0.0010 mg/L	2017-12-27	
Sulfur, dissolved	40.4	N/A	3.0 mg/L	2017-12-27	
Tellurium, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Thallium, dissolved	0.000031	N/A	0.000020 mg/L	2017-12-27	
Thorium, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Tin, dissolved	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Titanium, dissolved	< 0.0050	N/A	0.0050 mg/L	2017-12-27	
Tungsten, dissolved	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Uranium, dissolved	< 0.000020	N/A	0.000020 mg/L	2017-12-27	
Vanadium, dissolved	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Zinc, dissolved	0.0048	N/A	0.0040 mg/L	2017-12-27	
Zirconium, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	

GW Extra (GW Int. Duplicate) (7121660-06) | Matrix: Water | Sampled: 2017-12-20

Anions

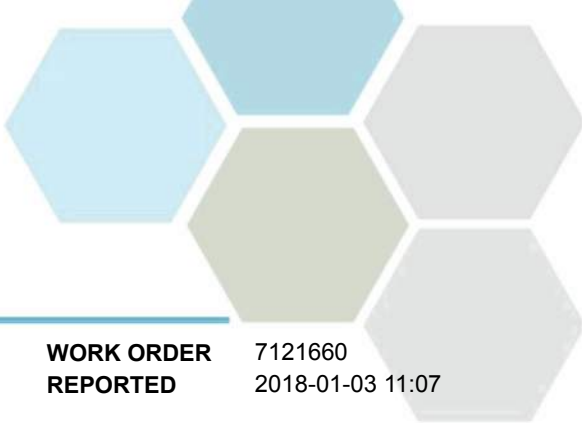


TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
GW Extra (GW Int. Duplicate) (7121660-06) Matrix: Water Sampled: 2017-12-20, Continued					
<i>Anions, Continued</i>					
Bromide	0.11	N/A	0.10 mg/L	2017-12-23	
Chloride	85.3	N/A	0.10 mg/L	2017-12-28	
Fluoride	0.12	N/A	0.02 mg/L	2017-12-23	
Nitrite (as N)	0.0391	N/A	0.0010 mg/L	2017-12-28	
Nitrate+Nitrite (as N)	1.90	N/A	0.0050 mg/L	2017-12-28	
Sulfate	242	N/A	1.0 mg/L	2017-12-28	
<i>General Parameters</i>					
pH	6.84	N/A	0.10 pH units	2017-12-28	HT2
Conductivity (EC)	1070	N/A	2.0 µS/cm	2017-12-28	
Ammonia, Total (as N)	6.75	N/A	0.010 mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	10.0	N/A	0.050 mg/L	2018-01-02	
Alkalinity, Total (as CaCO ₃)	186	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO ₃)	186	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Chemical Oxygen Demand	68	N/A	20 mg/L	2017-12-22	
Solids, Total Suspended	378	N/A	2.0 mg/L	2017-12-27	
Phosphorus, Total (as P)	1.02	N/A	0.0020 mg/L	2017-12-29	
<i>Calculated Parameters</i>					
Hardness, Total (as CaCO ₃)	366	N/A	0.500 mg/L	N/A	
Nitrate (as N)	1.86	N/A	0.0500 mg/L	N/A	
Nitrogen, Total	11.9	N/A	0.500 mg/L	N/A	
<i>Dissolved Metals</i>					
Aluminum, dissolved	0.0094	N/A	0.0050 mg/L	2017-12-27	
Antimony, dissolved	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Arsenic, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Barium, dissolved	0.0903	N/A	0.0050 mg/L	2017-12-27	
Beryllium, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Bismuth, dissolved	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Boron, dissolved	0.313	N/A	0.0050 mg/L	2017-12-27	
Cadmium, dissolved	0.000018	N/A	0.000010 mg/L	2017-12-27	
Calcium, dissolved	125	N/A	0.20 mg/L	2017-12-27	
Chromium, dissolved	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Cobalt, dissolved	0.00884	N/A	0.00010 mg/L	2017-12-27	
Copper, dissolved	0.00088	N/A	0.00040 mg/L	2017-12-27	
Iron, dissolved	18.4	N/A	0.010 mg/L	2017-12-27	
Lead, dissolved	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Lithium, dissolved	0.00050	N/A	0.00010 mg/L	2017-12-27	
Magnesium, dissolved	13.0	N/A	0.010 mg/L	2017-12-27	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
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Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
GW Extra (GW Int. Duplicate) (7121660-06) Matrix: Water Sampled: 2017-12-20, Continued						
<i>Dissolved Metals, Continued</i>						
Manganese, dissolved	2.96	N/A	0.00020	mg/L	2017-12-27	
Molybdenum, dissolved	0.00054	N/A	0.00010	mg/L	2017-12-27	
Nickel, dissolved	0.00325	N/A	0.00040	mg/L	2017-12-27	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	2017-12-27	
Mercury, dissolved	< 0.000010	N/A	0.000010	mg/L	2017-12-28	
Potassium, dissolved	11.3	N/A	0.10	mg/L	2017-12-27	
Selenium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Silicon, dissolved	8.2	N/A	1.0	mg/L	2017-12-27	
Silver, dissolved	< 0.000050	N/A	0.000050	mg/L	2017-12-27	
Sodium, dissolved	56.0	N/A	0.10	mg/L	2017-12-27	
Strontium, dissolved	0.795	N/A	0.0010	mg/L	2017-12-27	
Sulfur, dissolved	76.8	N/A	3.0	mg/L	2017-12-27	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Thallium, dissolved	< 0.000020	N/A	0.000020	mg/L	2017-12-27	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Titanium, dissolved	< 0.0050	N/A	0.0050	mg/L	2017-12-27	
Tungsten, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Uranium, dissolved	0.000048	N/A	0.000020	mg/L	2017-12-27	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Zinc, dissolved	0.0573	N/A	0.0040	mg/L	2017-12-27	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	

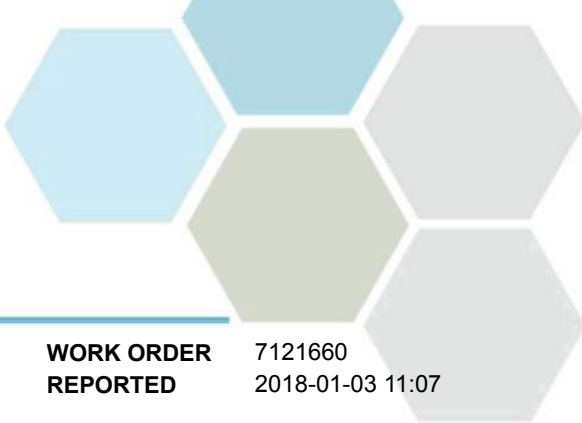
SFC-2 (7121660-07) | Matrix: Water | Sampled: 2017-12-20

Anions

Bromide	< 0.10	N/A	0.10	mg/L	2017-12-23	
Chloride	15.6	N/A	0.10	mg/L	2017-12-23	
Fluoride	0.10	N/A	0.02	mg/L	2017-12-23	
Nitrite (as N)	0.0046	N/A	0.0010	mg/L	2017-12-28	
Nitrate+Nitrite (as N)	0.298	N/A	0.0050	mg/L	2017-12-28	
Sulfate	61.8	N/A	1.0	mg/L	2017-12-23	

General Parameters

pH	6.76	N/A	0.10	pH units	2017-12-28	HT2
Conductivity (EC)	321	N/A	2.0	µS/cm	2017-12-28	
Ammonia, Total (as N)	0.634	N/A	0.010	mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	0.743	N/A	0.050	mg/L	2018-01-02	
Alkalinity, Total (as CaCO3)	58.3	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO3)	58.3	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	

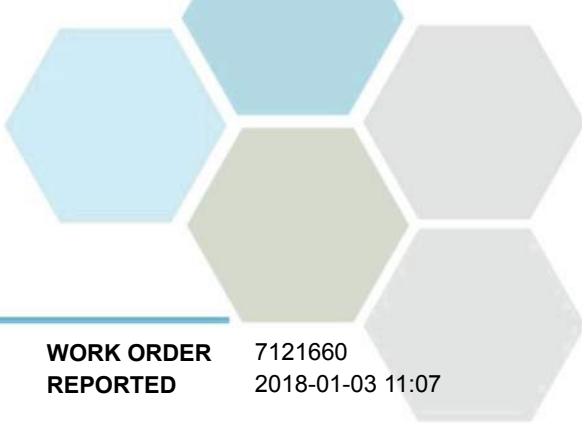


TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
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Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
SFC-2 (7121660-07) Matrix: Water Sampled: 2017-12-20, Continued					
<i>General Parameters, Continued</i>					
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Chemical Oxygen Demand	< 20	N/A	20 mg/L	2017-12-22	
Phosphorus, Total (as P)	0.0223	N/A	0.0020 mg/L	2017-12-29	
<i>Calculated Parameters</i>					
Hardness, Total (as CaCO ₃)	110	N/A	0.500 mg/L	N/A	
Nitrate (as N)	0.294	N/A	0.00500 mg/L	N/A	
Nitrogen, Total	1.04	N/A	0.0500 mg/L	N/A	
<i>Total Metals</i>					
Aluminum, total	2.14	N/A	0.0050 mg/L	2017-12-27	
Antimony, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Arsenic, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Barium, total	0.0471	N/A	0.0050 mg/L	2017-12-27	
Beryllium, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Bismuth, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Boron, total	0.0376	N/A	0.0050 mg/L	2017-12-27	
Cadmium, total	0.000073	N/A	0.000010 mg/L	2017-12-27	
Calcium, total	37.4	N/A	0.20 mg/L	2017-12-27	
Chromium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Cobalt, total	0.00816	N/A	0.00010 mg/L	2017-12-27	
Copper, total	0.0341	N/A	0.00040 mg/L	2017-12-27	
Iron, total	5.10	N/A	0.010 mg/L	2017-12-27	
Lead, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Lithium, total	0.00073	N/A	0.00010 mg/L	2017-12-27	
Magnesium, total	4.09	N/A	0.010 mg/L	2017-12-27	
Manganese, total	1.06	N/A	0.00020 mg/L	2017-12-27	
Molybdenum, total	0.00331	N/A	0.00010 mg/L	2017-12-27	
Nickel, total	0.00270	N/A	0.00040 mg/L	2017-12-27	
Phosphorus, total	< 0.050	N/A	0.050 mg/L	2017-12-27	
Potassium, total	4.07	N/A	0.10 mg/L	2017-12-27	
Selenium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Silicon, total	5.3	N/A	1.0 mg/L	2017-12-27	
Silver, total	< 0.000050	N/A	0.000050 mg/L	2017-12-27	
Sodium, total	15.9	N/A	0.10 mg/L	2017-12-27	
Strontium, total	0.222	N/A	0.0010 mg/L	2017-12-27	
Sulfur, total	24.4	N/A	3.0 mg/L	2017-12-27	
Tellurium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Thallium, total	< 0.000020	N/A	0.000020 mg/L	2017-12-27	
Thorium, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Tin, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Titanium, total	< 0.0050	N/A	0.0050 mg/L	2017-12-27	
Tungsten, total	< 0.0010	N/A	0.0010 mg/L	2017-12-27	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
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Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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SFC-2 (7121660-07) | Matrix: Water | Sampled: 2017-12-20, Continued

Total Metals, Continued

Uranium, total	0.000125	N/A	0.000020	mg/L	2017-12-27	
Vanadium, total	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Zinc, total	0.0121	N/A	0.0040	mg/L	2017-12-27	
Zirconium, total	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Mercury, total	< 0.000010	N/A	0.000010	mg/L	2017-12-27	

SFC-2B (7121660-08) | Matrix: Water | Sampled: 2017-12-20

Anions

Bromide	< 0.10	N/A	0.10	mg/L	2017-12-23	
Chloride	8.94	N/A	0.10	mg/L	2017-12-23	
Fluoride	0.53	N/A	0.02	mg/L	2017-12-23	
Nitrite (as N)	0.0074	N/A	0.0010	mg/L	2017-12-28	
Nitrate+Nitrite (as N)	1.19	N/A	0.0050	mg/L	2017-12-28	
Sulfate	1530	N/A	1.0	mg/L	2017-12-28	

General Parameters

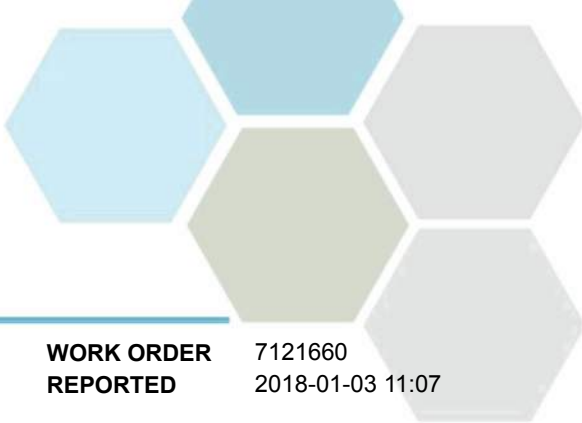
pH	3.14	N/A	0.10	pH units	2017-12-28	HT2
Conductivity (EC)	1030	N/A	2.0	µS/cm	2017-12-28	
Ammonia, Total (as N)	1.00	N/A	0.010	mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	1.25	N/A	0.050	mg/L	2018-01-02	
Alkalinity, Total (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	2017-12-22	
Phosphorus, Total (as P)	0.0520	N/A	0.0020	mg/L	2017-12-29	

Calculated Parameters

Hardness, Total (as CaCO3)	247	N/A	0.500	mg/L	N/A	
Nitrate (as N)	1.18	N/A	0.0250	mg/L	N/A	
Nitrogen, Total	2.43	N/A	0.0500	mg/L	N/A	

Total Metals

Aluminum, total	18.9	N/A	0.0050	mg/L	2017-12-27	
Antimony, total	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Arsenic, total	0.00120	N/A	0.00050	mg/L	2017-12-27	
Barium, total	0.0180	N/A	0.0050	mg/L	2017-12-27	
Beryllium, total	0.00059	N/A	0.00010	mg/L	2017-12-27	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Boron, total	0.0270	N/A	0.0050	mg/L	2017-12-27	
Cadmium, total	0.000823	N/A	0.000010	mg/L	2017-12-27	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
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SFC-2B (7121660-08) | Matrix: Water | Sampled: 2017-12-20, Continued

Total Metals, Continued

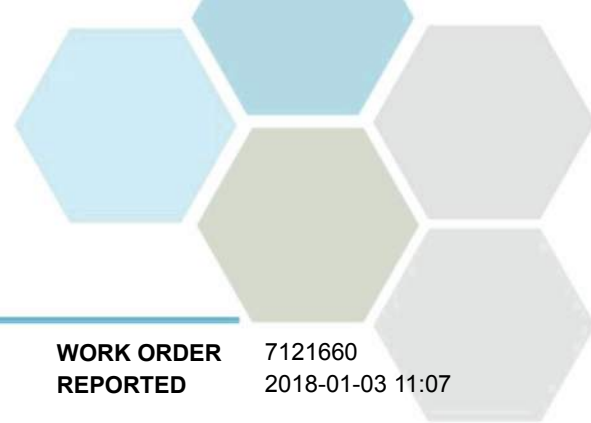
Calcium, total	67.9	N/A	0.20 mg/L	2017-12-27	
Chromium, total	0.00277	N/A	0.00050 mg/L	2017-12-27	
Cobalt, total	0.0959	N/A	0.00010 mg/L	2017-12-27	
Copper, total	0.352	N/A	0.00040 mg/L	2017-12-27	
Iron, total	42.7	N/A	0.010 mg/L	2017-12-27	
Lead, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Lithium, total	0.00644	N/A	0.00010 mg/L	2017-12-27	
Magnesium, total	18.7	N/A	0.010 mg/L	2017-12-27	
Manganese, total	3.81	N/A	0.00020 mg/L	2017-12-27	
Molybdenum, total	0.00024	N/A	0.00010 mg/L	2017-12-27	
Nickel, total	0.0421	N/A	0.00040 mg/L	2017-12-27	
Phosphorus, total	< 0.050	N/A	0.050 mg/L	2017-12-27	
Potassium, total	4.33	N/A	0.10 mg/L	2017-12-27	
Selenium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Silicon, total	13.0	N/A	1.0 mg/L	2017-12-27	
Silver, total	< 0.000050	N/A	0.000050 mg/L	2017-12-27	
Sodium, total	10.9	N/A	0.10 mg/L	2017-12-27	
Strontium, total	0.262	N/A	0.0010 mg/L	2017-12-27	
Sulfur, total	152	N/A	3.0 mg/L	2017-12-27	
Tellurium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Thallium, total	< 0.000020	N/A	0.000020 mg/L	2017-12-27	
Thorium, total	0.00164	N/A	0.00010 mg/L	2017-12-27	
Tin, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Titanium, total	< 0.0050	N/A	0.0050 mg/L	2017-12-27	
Tungsten, total	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Uranium, total	0.000912	N/A	0.000020 mg/L	2017-12-27	
Vanadium, total	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Zinc, total	0.103	N/A	0.0040 mg/L	2017-12-27	
Zirconium, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Mercury, total	< 0.000010	N/A	0.000010 mg/L	2017-12-27	

SFC-3 (7121660-09) | Matrix: Water | Sampled: 2017-12-20

Anions

Bromide	< 0.10	N/A	0.10 mg/L	2017-12-23	
Chloride	38.4	N/A	0.10 mg/L	2017-12-23	
Fluoride	< 0.10	N/A	0.02 mg/L	2017-12-23	
Nitrite (as N)	0.0040	N/A	0.0010 mg/L	2017-12-28	
Nitrate+Nitrite (as N)	0.199	N/A	0.0050 mg/L	2017-12-28	
Sulfate	24.0	N/A	1.0 mg/L	2017-12-23	

General Parameters

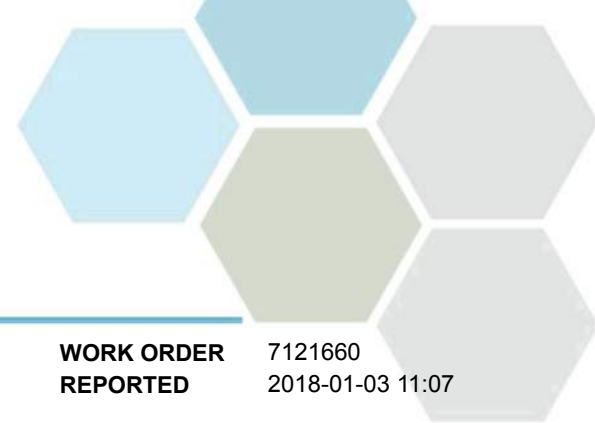


TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
SFC-3 (7121660-09) Matrix: Water Sampled: 2017-12-20, Continued						
<i>General Parameters, Continued</i>						
pH	6.84	N/A	0.10	pH units	2017-12-28	HT2
Conductivity (EC)	255	N/A	2.0	µS/cm	2017-12-28	
Ammonia, Total (as N)	0.030	N/A	0.010	mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	0.064	N/A	0.050	mg/L	2018-01-02	
Alkalinity, Total (as CaCO3)	26.2	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO3)	26.2	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	2017-12-22	
Phosphorus, Total (as P)	0.0208	N/A	0.0020	mg/L	2017-12-29	
<i>Calculated Parameters</i>						
Hardness, Total (as CaCO3)	45.9	N/A	0.500	mg/L	N/A	
Nitrate (as N)	0.195	N/A	0.00500	mg/L	N/A	
Nitrogen, Total	0.263	N/A	0.0500	mg/L	N/A	
<i>Total Metals</i>						
Aluminum, total	0.0638	N/A	0.0050	mg/L	2017-12-27	
Antimony, total	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Arsenic, total	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Barium, total	0.0224	N/A	0.0050	mg/L	2017-12-27	
Beryllium, total	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Boron, total	0.0079	N/A	0.0050	mg/L	2017-12-27	
Cadmium, total	0.000026	N/A	0.000010	mg/L	2017-12-27	
Calcium, total	15.4	N/A	0.20	mg/L	2017-12-27	
Chromium, total	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Cobalt, total	0.00035	N/A	0.00010	mg/L	2017-12-27	
Copper, total	0.00352	N/A	0.00040	mg/L	2017-12-27	
Iron, total	0.135	N/A	0.010	mg/L	2017-12-27	
Lead, total	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Lithium, total	0.00059	N/A	0.00010	mg/L	2017-12-27	
Magnesium, total	1.81	N/A	0.010	mg/L	2017-12-27	
Manganese, total	0.0137	N/A	0.00020	mg/L	2017-12-27	
Molybdenum, total	0.00037	N/A	0.00010	mg/L	2017-12-27	
Nickel, total	0.00057	N/A	0.00040	mg/L	2017-12-27	
Phosphorus, total	< 0.050	N/A	0.050	mg/L	2017-12-27	
Potassium, total	1.67	N/A	0.10	mg/L	2017-12-27	
Selenium, total	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Silicon, total	7.0	N/A	1.0	mg/L	2017-12-27	
Silver, total	< 0.000050	N/A	0.000050	mg/L	2017-12-27	
Sodium, total	28.4	N/A	0.10	mg/L	2017-12-27	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
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Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
SFC-3 (7121660-09) Matrix: Water Sampled: 2017-12-20, Continued						
<i>Total Metals, Continued</i>						
Strontium, total	0.126	N/A	0.0010	mg/L	2017-12-27	
Sulfur, total	8.7	N/A	3.0	mg/L	2017-12-27	
Tellurium, total	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Thallium, total	< 0.000020	N/A	0.000020	mg/L	2017-12-27	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Titanium, total	< 0.0050	N/A	0.0050	mg/L	2017-12-27	
Tungsten, total	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Uranium, total	< 0.000020	N/A	0.000020	mg/L	2017-12-27	
Vanadium, total	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Zinc, total	0.0049	N/A	0.0040	mg/L	2017-12-27	
Zirconium, total	0.00013	N/A	0.00010	mg/L	2017-12-27	
Mercury, total	< 0.000010	N/A	0.000010	mg/L	2017-12-27	

SFC-4B (7121660-10) | Matrix: Water | Sampled: 2017-12-20

<i>Anions</i>						
Bromide	< 0.10	N/A	0.10	mg/L	2017-12-23	
Chloride	38.5	N/A	0.10	mg/L	2017-12-23	
Fluoride	< 0.10	N/A	0.02	mg/L	2017-12-23	
Nitrite (as N)	0.0117	N/A	0.0010	mg/L	2017-12-28	
Nitrate+Nitrite (as N)	0.706	N/A	0.0050	mg/L	2017-12-28	
Sulfate	109	N/A	1.0	mg/L	2017-12-23	

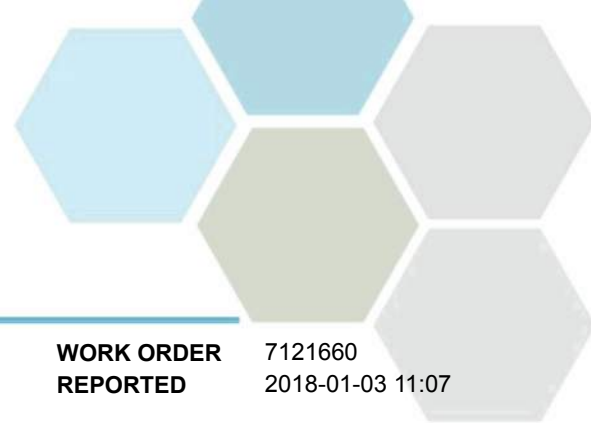
General Parameters

pH	7.30	N/A	0.10	pH units	2017-12-28	HT2
Conductivity (EC)	555	N/A	2.0	µS/cm	2017-12-28	
Ammonia, Total (as N)	1.85	N/A	0.010	mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	1.98	N/A	0.050	mg/L	2018-01-03	
Alkalinity, Total (as CaCO3)	79.1	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO3)	79.1	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	2017-12-22	
Phosphorus, Total (as P)	0.0200	N/A	0.0020	mg/L	2017-12-29	

Calculated Parameters

Hardness, Total (as CaCO3)	183	N/A	0.500	mg/L	N/A	
Nitrate (as N)	0.695	N/A	0.00500	mg/L	N/A	
Nitrogen, Total	2.68	N/A	0.0500	mg/L	N/A	

Total Metals



TEST RESULTS

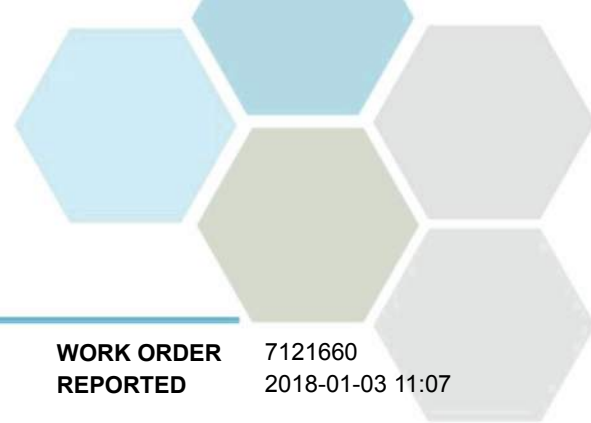
REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
SFC-4B (7121660-10) Matrix: Water Sampled: 2017-12-20, Continued					
<i>Total Metals, Continued</i>					
Aluminum, total	0.259	N/A	0.0050 mg/L	2017-12-27	
Antimony, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Arsenic, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Barium, total	0.0448	N/A	0.0050 mg/L	2017-12-27	
Beryllium, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Bismuth, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Boron, total	0.123	N/A	0.0050 mg/L	2017-12-27	
Cadmium, total	0.000049	N/A	0.000010 mg/L	2017-12-27	
Calcium, total	61.8	N/A	0.20 mg/L	2017-12-27	
Chromium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Cobalt, total	0.00444	N/A	0.00010 mg/L	2017-12-27	
Copper, total	0.00489	N/A	0.00040 mg/L	2017-12-27	
Iron, total	4.06	N/A	0.010 mg/L	2017-12-27	
Lead, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Lithium, total	0.00073	N/A	0.00010 mg/L	2017-12-27	
Magnesium, total	7.00	N/A	0.010 mg/L	2017-12-27	
Manganese, total	1.08	N/A	0.00020 mg/L	2017-12-27	
Molybdenum, total	0.00057	N/A	0.00010 mg/L	2017-12-27	
Nickel, total	0.00287	N/A	0.00040 mg/L	2017-12-27	
Phosphorus, total	< 0.050	N/A	0.050 mg/L	2017-12-27	
Potassium, total	5.52	N/A	0.10 mg/L	2017-12-27	
Selenium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Silicon, total	7.8	N/A	1.0 mg/L	2017-12-27	
Silver, total	< 0.000050	N/A	0.000050 mg/L	2017-12-27	
Sodium, total	30.1	N/A	0.10 mg/L	2017-12-27	
Strontium, total	0.461	N/A	0.0010 mg/L	2017-12-27	
Sulfur, total	40.8	N/A	3.0 mg/L	2017-12-27	
Tellurium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Thallium, total	< 0.000020	N/A	0.000020 mg/L	2017-12-27	
Thorium, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Tin, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Titanium, total	< 0.0050	N/A	0.0050 mg/L	2017-12-27	
Tungsten, total	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Uranium, total	0.000042	N/A	0.000020 mg/L	2017-12-27	
Vanadium, total	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Zinc, total	0.0228	N/A	0.0040 mg/L	2017-12-27	
Zirconium, total	0.00011	N/A	0.00010 mg/L	2017-12-27	
Mercury, total	< 0.000010	N/A	0.000010 mg/L	2017-12-27	

SFC-11 (7121660-11) | Matrix: Water | Sampled: 2017-12-20

Anions

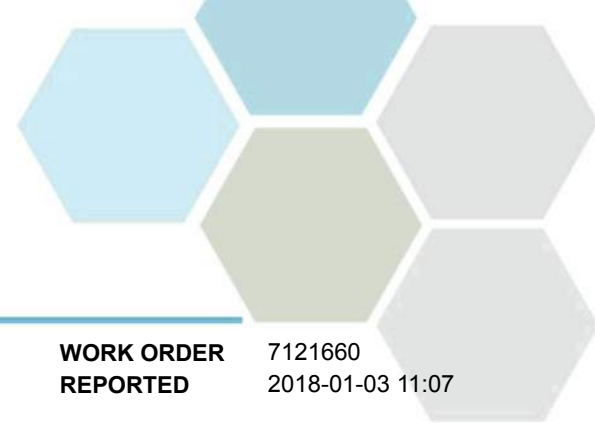


TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
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Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
SFC-11 (7121660-11) Matrix: Water Sampled: 2017-12-20, Continued					
<i>Anions, Continued</i>					
Bromide	< 0.10	N/A	0.10 mg/L	2017-12-23	
Chloride	7.92	N/A	0.10 mg/L	2017-12-23	
Fluoride	< 0.10	N/A	0.02 mg/L	2017-12-23	
Nitrite (as N)	0.0038	N/A	0.0010 mg/L	2017-12-28	
Nitrate+Nitrite (as N)	0.318	N/A	0.0050 mg/L	2017-12-28	
Sulfate	11.9	N/A	1.0 mg/L	2017-12-23	
<i>General Parameters</i>					
pH	6.79	N/A	0.10 pH units	2017-12-28	HT2
Conductivity (EC)	116	N/A	2.0 µS/cm	2017-12-28	
Ammonia, Total (as N)	0.045	N/A	0.010 mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	0.219	N/A	0.050 mg/L	2018-01-02	
Alkalinity, Total (as CaCO ₃)	27.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO ₃)	27.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Chemical Oxygen Demand	< 20	N/A	20 mg/L	2017-12-22	
Phosphorus, Total (as P)	0.0081	N/A	0.0020 mg/L	2017-12-29	
<i>Calculated Parameters</i>					
Hardness, Total (as CaCO ₃)	35.6	N/A	0.500 mg/L	N/A	
Nitrate (as N)	0.314	N/A	0.00500 mg/L	N/A	
Nitrogen, Total	0.537	N/A	0.0500 mg/L	N/A	
<i>Total Metals</i>					
Aluminum, total	0.0818	N/A	0.0050 mg/L	2017-12-27	
Antimony, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Arsenic, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Barium, total	0.0088	N/A	0.0050 mg/L	2017-12-27	
Beryllium, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Bismuth, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Boron, total	0.0118	N/A	0.0050 mg/L	2017-12-27	
Cadmium, total	0.000015	N/A	0.000010 mg/L	2017-12-27	
Calcium, total	11.3	N/A	0.20 mg/L	2017-12-27	
Chromium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Cobalt, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Copper, total	0.00089	N/A	0.00040 mg/L	2017-12-27	
Iron, total	0.058	N/A	0.010 mg/L	2017-12-27	
Lead, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Lithium, total	0.00086	N/A	0.00010 mg/L	2017-12-27	
Magnesium, total	1.79	N/A	0.010 mg/L	2017-12-27	
Manganese, total	0.00262	N/A	0.00020 mg/L	2017-12-27	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
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Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
SFC-11 (7121660-11) Matrix: Water Sampled: 2017-12-20, Continued					
<i>Total Metals, Continued</i>					
Molybdenum, total	0.00024	N/A	0.00010 mg/L	2017-12-27	
Nickel, total	< 0.00040	N/A	0.00040 mg/L	2017-12-27	
Phosphorus, total	< 0.050	N/A	0.050 mg/L	2017-12-27	
Potassium, total	0.73	N/A	0.10 mg/L	2017-12-27	
Selenium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Silicon, total	9.7	N/A	1.0 mg/L	2017-12-27	
Silver, total	< 0.000050	N/A	0.000050 mg/L	2017-12-27	
Sodium, total	7.34	N/A	0.10 mg/L	2017-12-27	
Strontium, total	0.146	N/A	0.0010 mg/L	2017-12-27	
Sulfur, total	5.0	N/A	3.0 mg/L	2017-12-27	
Tellurium, total	< 0.00050	N/A	0.00050 mg/L	2017-12-27	
Thallium, total	< 0.000020	N/A	0.000020 mg/L	2017-12-27	
Thorium, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Tin, total	< 0.00020	N/A	0.00020 mg/L	2017-12-27	
Titanium, total	< 0.0050	N/A	0.0050 mg/L	2017-12-27	
Tungsten, total	< 0.0010	N/A	0.0010 mg/L	2017-12-27	
Uranium, total	< 0.000020	N/A	0.000020 mg/L	2017-12-27	
Vanadium, total	0.0014	N/A	0.0010 mg/L	2017-12-27	
Zinc, total	< 0.0040	N/A	0.0040 mg/L	2017-12-27	
Zirconium, total	< 0.00010	N/A	0.00010 mg/L	2017-12-27	
Mercury, total	< 0.000010	N/A	0.000010 mg/L	2017-12-27	

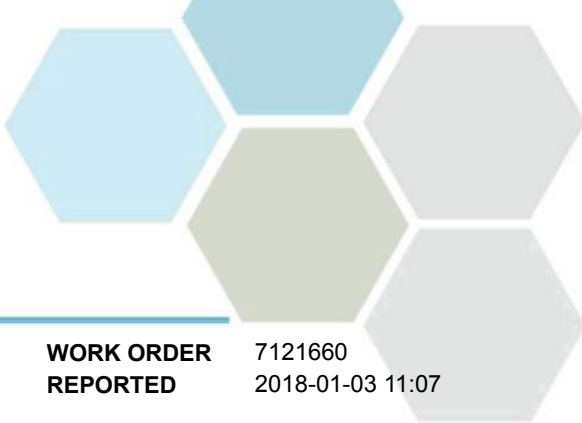
GW Int. (7121660-12) | Matrix: Water | Sampled: 2017-12-20

Anions

Bromide	< 0.10	N/A	0.10 mg/L	2017-12-23	
Chloride	73.4	N/A	0.10 mg/L	2017-12-23	
Fluoride	0.43	N/A	0.02 mg/L	2017-12-23	
Nitrite (as N)	0.0356	N/A	0.0010 mg/L	2017-12-28	
Nitrate+Nitrite (as N)	1.02	N/A	0.0050 mg/L	2017-12-28	
Sulfate	225	N/A	1.0 mg/L	2017-12-23	

General Parameters

pH	6.87	N/A	0.10 pH units	2017-12-28	HT2
Conductivity (EC)	1030	N/A	2.0 µS/cm	2017-12-28	
Ammonia, Total (as N)	4.01	N/A	0.010 mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	6.36	N/A	0.050 mg/L	2018-01-02	
Alkalinity, Total (as CaCO3)	158	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO3)	158	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0 mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0 mg/L	2017-12-22	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
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Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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GW Int. (7121660-12) | Matrix: Water | Sampled: 2017-12-20, Continued

General Parameters, Continued

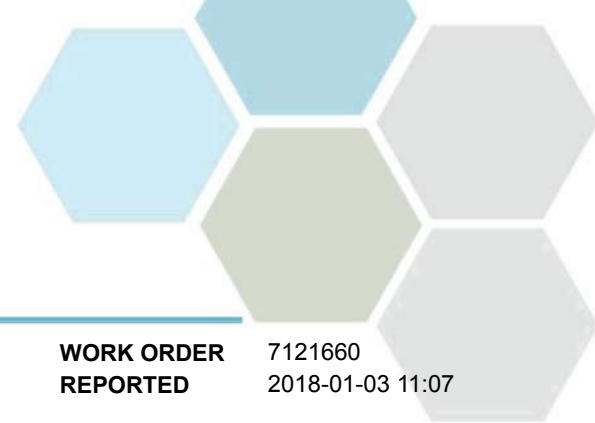
Chemical Oxygen Demand	72	N/A	20	mg/L	2017-12-22	
Solids, Total Suspended	394	N/A	2.0	mg/L	2017-12-27	
Phosphorus, Total (as P)	1.00	N/A	0.0020	mg/L	2017-12-29	

Calculated Parameters

Hardness, Total (as CaCO3)	364	N/A	0.500	mg/L	N/A	
Nitrate (as N)	0.984	N/A	0.0500	mg/L	N/A	
Nitrogen, Total	7.38	N/A	0.500	mg/L	N/A	

Dissolved Metals

Aluminum, dissolved	0.0108	N/A	0.0050	mg/L	2017-12-27	
Antimony, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Arsenic, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Barium, dissolved	0.0899	N/A	0.0050	mg/L	2017-12-27	
Beryllium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Boron, dissolved	0.314	N/A	0.0050	mg/L	2017-12-27	
Cadmium, dissolved	0.000021	N/A	0.000010	mg/L	2017-12-27	
Calcium, dissolved	124	N/A	0.20	mg/L	2017-12-27	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Cobalt, dissolved	0.00886	N/A	0.00010	mg/L	2017-12-27	
Copper, dissolved	0.00095	N/A	0.00040	mg/L	2017-12-27	
Iron, dissolved	18.4	N/A	0.010	mg/L	2017-12-27	
Lead, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Lithium, dissolved	0.00051	N/A	0.00010	mg/L	2017-12-27	
Magnesium, dissolved	12.9	N/A	0.010	mg/L	2017-12-27	
Manganese, dissolved	2.94	N/A	0.00020	mg/L	2017-12-27	
Molybdenum, dissolved	0.00052	N/A	0.00010	mg/L	2017-12-27	
Nickel, dissolved	0.00319	N/A	0.00040	mg/L	2017-12-27	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	2017-12-27	
Mercury, dissolved	< 0.000010	N/A	0.000010	mg/L	2017-12-28	
Potassium, dissolved	11.3	N/A	0.10	mg/L	2017-12-27	
Selenium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Silicon, dissolved	7.9	N/A	1.0	mg/L	2017-12-27	
Silver, dissolved	< 0.000050	N/A	0.000050	mg/L	2017-12-27	
Sodium, dissolved	55.5	N/A	0.10	mg/L	2017-12-27	
Strontium, dissolved	0.790	N/A	0.0010	mg/L	2017-12-27	
Sulfur, dissolved	77.3	N/A	3.0	mg/L	2017-12-27	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Thallium, dissolved	< 0.000020	N/A	0.000020	mg/L	2017-12-27	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Titanium, dissolved	< 0.0050	N/A	0.0050	mg/L	2017-12-27	



TEST RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
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Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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GW Int. (7121660-12) | Matrix: Water | Sampled: 2017-12-20, Continued

Dissolved Metals, Continued

Tungsten, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Uranium, dissolved	0.000045	N/A	0.000020	mg/L	2017-12-27	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Zinc, dissolved	0.0574	N/A	0.0040	mg/L	2017-12-27	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	

Trip Blank (7121660-13) | Matrix: Water | Sampled: 2017-12-20

Anions

Bromide	< 0.10	N/A	0.10	mg/L	2017-12-23	
Chloride	< 0.10	N/A	0.10	mg/L	2017-12-23	
Fluoride	< 0.10	N/A	0.02	mg/L	2017-12-23	
Nitrite (as N)	< 0.0010	N/A	0.0010	mg/L	2017-12-28	
Nitrate+Nitrite (as N)	< 0.0050	N/A	0.0050	mg/L	2017-12-28	
Sulfate	< 1.0	N/A	1.0	mg/L	2017-12-23	

General Parameters

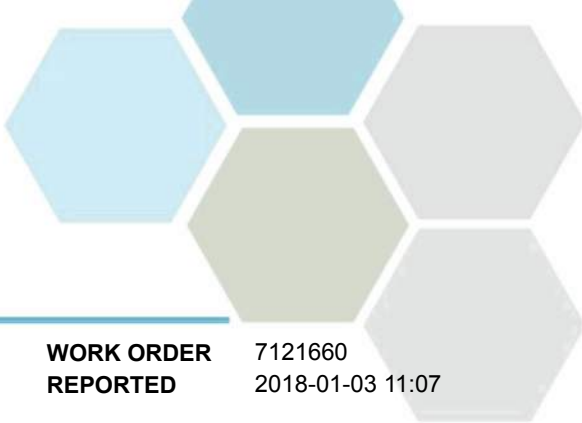
pH	5.70	N/A	0.10	pH units	2017-12-28	HT2
Conductivity (EC)	< 2.0	N/A	2.0	µS/cm	2017-12-28	
Ammonia, Total (as N)	< 0.010	N/A	0.010	mg/L	2017-12-29	
Nitrogen, Total Kjeldahl	< 0.050	N/A	0.050	mg/L	2018-01-02	
Alkalinity, Total (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2017-12-22	
Chemical Oxygen Demand	< 20	N/A	20	mg/L	2017-12-22	
Solids, Total Suspended	< 2.0	N/A	2.0	mg/L	2017-12-27	
Phosphorus, Total (as P)	< 0.0020	N/A	0.0020	mg/L	2017-12-29	

Calculated Parameters

Hardness, Total (as CaCO3)	< 0.500	N/A	0.500	mg/L	N/A	
Nitrate (as N)	< 0.00500	N/A	0.00500	mg/L	N/A	
Nitrogen, Total	< 0.0500	N/A	0.0500	mg/L	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.0050	N/A	0.0050	mg/L	2017-12-27	
Antimony, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Arsenic, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Barium, dissolved	< 0.0050	N/A	0.0050	mg/L	2017-12-27	
Beryllium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Bismuth, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Boron, dissolved	< 0.0050	N/A	0.0050	mg/L	2017-12-27	



TEST RESULTS

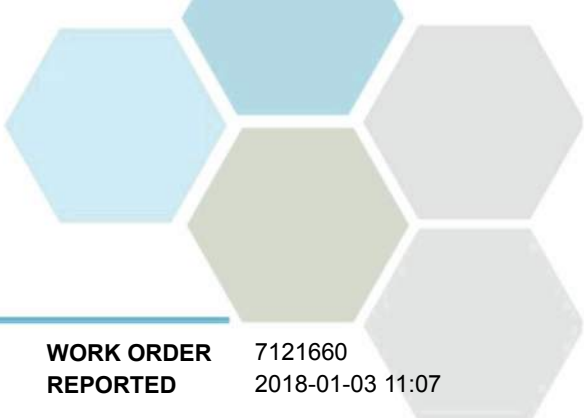
REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7121660
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Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Trip Blank (7121660-13) Matrix: Water Sampled: 2017-12-20, Continued						
<i>Dissolved Metals, Continued</i>						
Cadmium, dissolved	< 0.000010	N/A	0.000010	mg/L	2017-12-27	
Calcium, dissolved	< 0.20	N/A	0.20	mg/L	2017-12-27	
Chromium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Cobalt, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Copper, dissolved	< 0.00040	N/A	0.00040	mg/L	2017-12-27	
Iron, dissolved	< 0.010	N/A	0.010	mg/L	2017-12-27	
Lead, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Lithium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Magnesium, dissolved	< 0.010	N/A	0.010	mg/L	2017-12-27	
Manganese, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Molybdenum, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Nickel, dissolved	< 0.00040	N/A	0.00040	mg/L	2017-12-27	
Phosphorus, dissolved	< 0.050	N/A	0.050	mg/L	2017-12-27	
Mercury, dissolved	< 0.000010	N/A	0.000010	mg/L	2017-12-28	
Potassium, dissolved	< 0.10	N/A	0.10	mg/L	2017-12-27	
Selenium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Silicon, dissolved	< 1.0	N/A	1.0	mg/L	2017-12-27	
Silver, dissolved	< 0.000050	N/A	0.000050	mg/L	2017-12-27	
Sodium, dissolved	< 0.10	N/A	0.10	mg/L	2017-12-27	
Strontium, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Sulfur, dissolved	< 3.0	N/A	3.0	mg/L	2017-12-27	
Tellurium, dissolved	< 0.00050	N/A	0.00050	mg/L	2017-12-27	
Thallium, dissolved	< 0.000020	N/A	0.000020	mg/L	2017-12-27	
Thorium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	
Tin, dissolved	< 0.00020	N/A	0.00020	mg/L	2017-12-27	
Titanium, dissolved	< 0.0050	N/A	0.0050	mg/L	2017-12-27	
Tungsten, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Uranium, dissolved	< 0.000020	N/A	0.000020	mg/L	2017-12-27	
Vanadium, dissolved	< 0.0010	N/A	0.0010	mg/L	2017-12-27	
Zinc, dissolved	< 0.0040	N/A	0.0040	mg/L	2017-12-27	
Zirconium, dissolved	< 0.00010	N/A	0.00010	mg/L	2017-12-27	

Sample Qualifiers:

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.



APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
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Analysis Description	Method Ref.	Technique	Location
Alkalinity in Water	SM 2320 B* (2011)	Titration with H2SO4	Kelowna
Ammonia, Total in Water	SM 4500-NH3 G* (2011)	Automated Colorimetry (Phenate)	Kelowna
Anions in Water	SM 4110 B (2011)	Ion Chromatography	Kelowna
Chemical Oxygen Demand in Water	SM 5220 D* (2011)	Closed Reflux, Colorimetry	Kelowna
Conductivity in Water	SM 2510 B (2011)	Conductivity Meter	Richmond
Dissolved Metals in Water	EPA 200.8 / EPA 6020B	0.45 µm Filtration / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	Richmond
Hardness in Water	SM 2340 B (2011)	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	N/A
Mercury, dissolved in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
Mercury, total in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
Nitrate+Nitrite in Water	SM 4500-NO3- F (2011)	Automated Colorimetry (Cadmium Reduction)	Kelowna
Nitrite in Water	SM 4500-NO3- F (2011)	Automated Colorimetry (Cadmium Reduction)	Kelowna
Nitrogen, Total Kjeldahl in Water	SM 4500-Norg D* (2011)	Block Digestion and Flow Injection Analysis	Kelowna
pH in Water	SM 4500-H+ B (2011)	Electrometry	Richmond
Phosphorus, Total in Water	SM 4500-P B.5* (2011) / SM 4500-P F (2011)	Persulfate Digestion / Automated Colorimetry (Ascorbic Acid)	Kelowna
Solids, Total Suspended in Water	SM 2540 D* (2011)	Gravimetry (Dried at 103-105C)	Richmond
Total Metals in Water	EPA 200.2* / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	Richmond

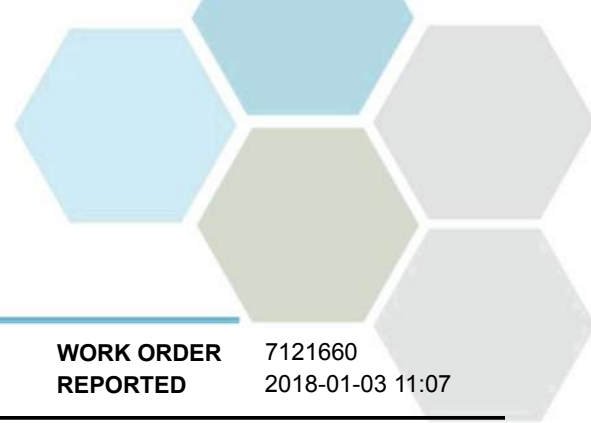
Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
mg/L	Milligrams per litre
pH units	pH < 7 = acidic, pH > 7 = basic
µS/cm	Microsiemens per centimetre
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

General Comments:

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 entirety. 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.



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

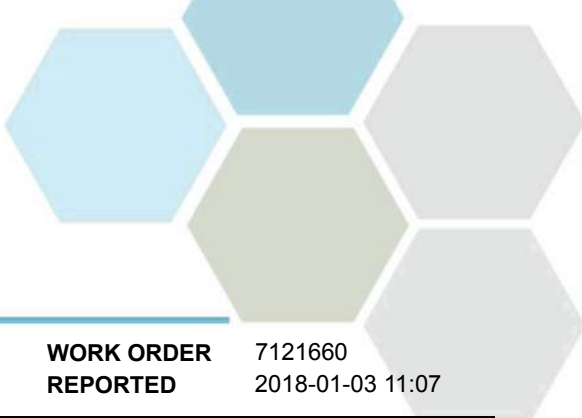
WORK ORDER REPORTED 7121660
2018-01-03 11:07

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

- **Method Blank (Blk):** A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup):** An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS):** A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS):** A second aliquot of sample is fortified with with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM):** A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 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	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B7L1567									
Blank (B7L1567-BLK1)			Prepared: 2017-12-23, Analyzed: 2017-12-23						
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Sulfate	< 1.0	1.0 mg/L							
Blank (B7L1567-BLK2)			Prepared: 2017-12-23, Analyzed: 2017-12-23						
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Sulfate	< 1.0	1.0 mg/L							
Blank (B7L1567-BLK3)			Prepared: 2017-12-24, Analyzed: 2017-12-24						
Bromide	< 0.10	0.10 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Sulfate	< 1.0	1.0 mg/L							
LCS (B7L1567-BS1)			Prepared: 2017-12-23, Analyzed: 2017-12-23						
Bromide	3.88	0.10 mg/L	4.00		97	85-115			
Chloride	16.1	0.10 mg/L	16.0		101	90-110			
Fluoride	3.98	0.10 mg/L	4.00		100	88-108			
Sulfate	15.9	1.0 mg/L	16.0		99	91-109			
LCS (B7L1567-BS2)			Prepared: 2017-12-23, Analyzed: 2017-12-23						
Bromide	3.91	0.10 mg/L	4.00		98	85-115			
Chloride	16.2	0.10 mg/L	16.0		101	90-110			
Fluoride	4.04	0.10 mg/L	4.00		101	88-108			
Sulfate	15.9	1.0 mg/L	16.0		100	91-109			
LCS (B7L1567-BS3)			Prepared: 2017-12-24, Analyzed: 2017-12-24						
Bromide	3.82	0.10 mg/L	4.00		95	85-115			
Chloride	16.0	0.10 mg/L	16.0		100	90-110			
Fluoride	4.02	0.10 mg/L	4.00		101	88-108			
Sulfate	16.0	1.0 mg/L	16.0		100	91-109			

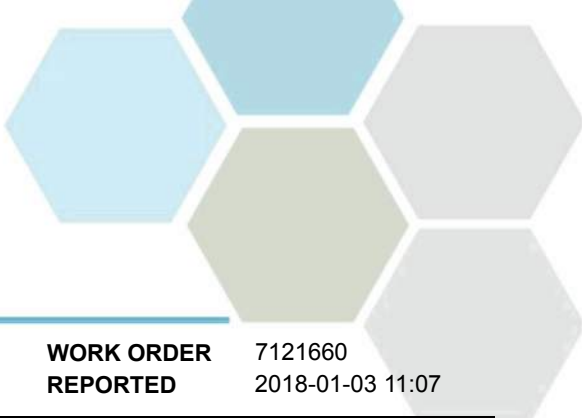


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B7L1567, Continued									
Duplicate (B7L1567-DUP2)		Source: 7121660-03		Prepared: 2017-12-23, Analyzed: 2017-12-23					
Bromide	< 0.10	0.10 mg/L		< 0.10					10
Chloride	22.4	0.10 mg/L		22.7			1		10
Fluoride	< 0.10	0.02 mg/L		< 0.10					10
Sulfate	33.0	1.0 mg/L		32.7			< 1		6
Matrix Spike (B7L1567-MS2)		Source: 7121660-03		Prepared: 2017-12-23, Analyzed: 2017-12-23					
Bromide	4.07	0.10 mg/L	4.00	< 0.10	101	80-120			
Chloride	36.8	0.10 mg/L	16.0	22.7	88	75-125			
Fluoride	4.13	0.10 mg/L	4.00	< 0.10	102	75-125			
Sulfate	44.9	1.0 mg/L	16.0	32.7	76	75-125			
Anions, Batch B7L1635									
Blank (B7L1635-BLK1)				Prepared: 2017-12-28, Analyzed: 2017-12-28					
Nitrate+Nitrite (as N)	< 0.0050	0.0050 mg/L							
Blank (B7L1635-BLK2)				Prepared: 2017-12-28, Analyzed: 2017-12-28					
Nitrate+Nitrite (as N)	< 0.0050	0.0050 mg/L							
LCS (B7L1635-BS1)				Prepared: 2017-12-28, Analyzed: 2017-12-28					
Nitrate+Nitrite (as N)	0.509	0.0050 mg/L	0.500		102	91-108			
LCS (B7L1635-BS2)				Prepared: 2017-12-28, Analyzed: 2017-12-28					
Nitrate+Nitrite (as N)	0.501	0.0050 mg/L	0.500		100	91-108			
Duplicate (B7L1635-DUP2)		Source: 7121660-01		Prepared: 2017-12-28, Analyzed: 2017-12-28					
Nitrate+Nitrite (as N)	0.0925	0.0050 mg/L		0.0924			< 1		10
Matrix Spike (B7L1635-MS2)		Source: 7121660-01		Prepared: 2017-12-28, Analyzed: 2017-12-28					
Nitrate+Nitrite (as N)	0.220	0.0050 mg/L	0.125	0.0924	102	80-120			
Anions, Batch B7L1636									
Blank (B7L1636-BLK1)				Prepared: 2017-12-28, Analyzed: 2017-12-28					
Nitrite (as N)	< 0.0010	0.0010 mg/L							
LCS (B7L1636-BS1)				Prepared: 2017-12-28, Analyzed: 2017-12-28					
Nitrite (as N)	0.506	0.0010 mg/L	0.500		101	90-110			
Duplicate (B7L1636-DUP1)		Source: 7121660-01		Prepared: 2017-12-28, Analyzed: 2017-12-28					
Nitrite (as N)	0.0189	0.0010 mg/L		0.0186			2		20
Matrix Spike (B7L1636-MS1)		Source: 7121660-01		Prepared: 2017-12-28, Analyzed: 2017-12-28					
Nitrite (as N)	0.152	0.0010 mg/L	0.125	0.0186	107	75-120			
Dissolved Metals, Batch B7L1658									
Blank (B7L1658-BLK1)				Prepared: 2017-12-27, Analyzed: 2017-12-27					
Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0050	0.0050 mg/L							



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B7L1658, Continued

Blank (B7L1658-BLK1), Continued

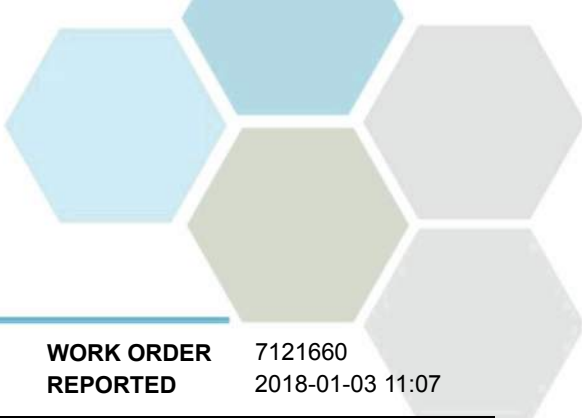
Prepared: 2017-12-27, Analyzed: 2017-12-27

Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Tungsten, dissolved	< 0.0010	0.0010 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							

LCS (B7L1658-BS1)

Prepared: 2017-12-27, Analyzed: 2017-12-27

Aluminum, dissolved	0.0216	0.0050 mg/L	0.0200		108	80-120			
Antimony, dissolved	0.0190	0.00020 mg/L	0.0200		95	80-120			
Arsenic, dissolved	0.0195	0.00050 mg/L	0.0200		97	80-120			
Barium, dissolved	0.0191	0.0050 mg/L	0.0200		96	80-120			
Beryllium, dissolved	0.0207	0.00010 mg/L	0.0200		103	80-120			
Bismuth, dissolved	0.0200	0.00010 mg/L	0.0200		100	80-120			
Boron, dissolved	0.0206	0.0050 mg/L	0.0200		103	80-120			
Cadmium, dissolved	0.0195	0.000010 mg/L	0.0200		97	80-120			
Calcium, dissolved	2.23	0.20 mg/L	2.00		112	80-120			
Chromium, dissolved	0.0197	0.00050 mg/L	0.0200		98	80-120			
Cobalt, dissolved	0.0199	0.00010 mg/L	0.0200		99	80-120			
Copper, dissolved	0.0206	0.00040 mg/L	0.0200		103	80-120			
Iron, dissolved	2.02	0.010 mg/L	2.00		101	80-120			
Lead, dissolved	0.0198	0.00020 mg/L	0.0200		99	80-120			
Lithium, dissolved	0.0207	0.00010 mg/L	0.0200		103	80-120			
Magnesium, dissolved	2.03	0.010 mg/L	2.00		102	80-120			
Manganese, dissolved	0.0198	0.00020 mg/L	0.0200		99	80-120			
Molybdenum, dissolved	0.0186	0.00010 mg/L	0.0200		93	80-120			
Nickel, dissolved	0.0173	0.00040 mg/L	0.0200		87	80-120			
Phosphorus, dissolved	1.89	0.050 mg/L	2.00		94	80-120			
Potassium, dissolved	2.10	0.10 mg/L	2.00		105	80-120			
Selenium, dissolved	0.0203	0.00050 mg/L	0.0200		101	80-120			
Silicon, dissolved	2.0	1.0 mg/L	2.00		98	80-120			
Silver, dissolved	0.0195	0.000050 mg/L	0.0200		98	80-120			



APPENDIX 2: QUALITY CONTROL RESULTS

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Resort Municipality of Whistler - Spring/Fall 17

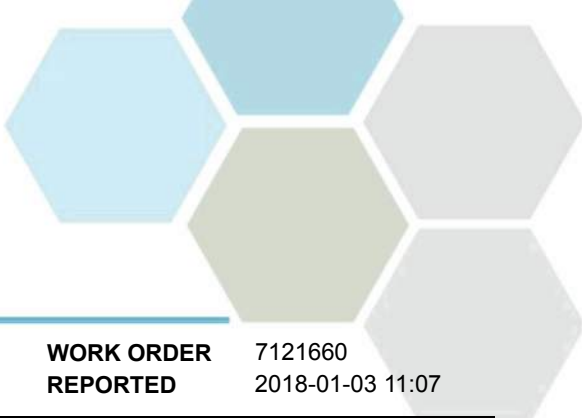
WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B7L1658, Continued									
LCS (B7L1658-BS1), Continued					Prepared: 2017-12-27, Analyzed: 2017-12-27				
Sodium, dissolved	2.11	0.10 mg/L	2.00		105	80-120			
Strontium, dissolved	0.0193	0.0010 mg/L	0.0200		97	80-120			
Sulfur, dissolved	4.9	3.0 mg/L	5.00		98	80-120			
Tellurium, dissolved	0.0187	0.00050 mg/L	0.0200		94	80-120			
Thallium, dissolved	0.0199	0.000020 mg/L	0.0200		99	80-120			
Thorium, dissolved	0.0194	0.00010 mg/L	0.0200		97	80-120			
Tin, dissolved	0.0200	0.00020 mg/L	0.0200		100	80-120			
Titanium, dissolved	0.0196	0.0050 mg/L	0.0200		98	80-120			
Tungsten, dissolved	0.0172	0.0010 mg/L	0.0200		86	80-120			
Uranium, dissolved	0.0210	0.000020 mg/L	0.0200		105	80-120			
Vanadium, dissolved	0.0193	0.0010 mg/L	0.0200		97	80-120			
Zinc, dissolved	0.0212	0.0040 mg/L	0.0200		106	80-120			
Zirconium, dissolved	0.0198	0.00010 mg/L	0.0200		99	80-120			

Reference (B7L1658-SRM1)					Prepared: 2017-12-27, Analyzed: 2017-12-27				
Aluminum, dissolved	0.234	0.0050 mg/L	0.233		100	79-114			
Antimony, dissolved	0.0444	0.00020 mg/L	0.0430		103	89-123			
Arsenic, dissolved	0.449	0.00050 mg/L	0.438		103	87-113			
Barium, dissolved	3.31	0.0050 mg/L	3.35		99	85-114			
Beryllium, dissolved	0.223	0.00010 mg/L	0.213		105	79-122			
Boron, dissolved	1.70	0.0050 mg/L	1.74		97	79-117			
Cadmium, dissolved	0.221	0.000010 mg/L	0.224		99	89-112			
Calcium, dissolved	7.70	0.20 mg/L	7.69		100	85-120			
Chromium, dissolved	0.451	0.00050 mg/L	0.437		103	87-113			
Cobalt, dissolved	0.132	0.00010 mg/L	0.128		103	90-117			
Copper, dissolved	0.868	0.00040 mg/L	0.844		103	90-115			
Iron, dissolved	1.31	0.010 mg/L	1.29		101	86-112			
Lead, dissolved	0.110	0.00020 mg/L	0.112		98	90-113			
Lithium, dissolved	0.110	0.00010 mg/L	0.104		105	77-127			
Magnesium, dissolved	7.08	0.010 mg/L	6.92		102	84-116			
Manganese, dissolved	0.354	0.00020 mg/L	0.345		103	85-113			
Molybdenum, dissolved	0.410	0.00010 mg/L	0.426		96	87-112			
Nickel, dissolved	0.854	0.00040 mg/L	0.840		102	90-114			
Phosphorus, dissolved	0.484	0.050 mg/L	0.495		98	74-119			
Potassium, dissolved	3.23	0.10 mg/L	3.19		101	78-119			
Selenium, dissolved	0.0341	0.00050 mg/L	0.0331		103	89-123			
Sodium, dissolved	19.3	0.10 mg/L	19.1		101	81-117			
Strontium, dissolved	0.910	0.0010 mg/L	0.916		99	82-111			
Thallium, dissolved	0.0390	0.000020 mg/L	0.0393		99	90-113			
Uranium, dissolved	0.258	0.000020 mg/L	0.266		97	87-113			
Vanadium, dissolved	0.870	0.0010 mg/L	0.869		100	85-110			
Zinc, dissolved	0.906	0.0040 mg/L	0.881		103	88-114			

Dissolved Metals, Batch B7L1772

Blank (B7L1772-BLK1)					Prepared: 2017-12-28, Analyzed: 2017-12-28				
Mercury, dissolved	< 0.000010	0.000010 mg/L							
Duplicate (B7L1772-DUP1)					Prepared: 2017-12-28, Analyzed: 2017-12-28				
Mercury, dissolved	< 0.000010	0.000010 mg/L		< 0.000010				20	
Matrix Spike (B7L1772-MS1)					Prepared: 2017-12-28, Analyzed: 2017-12-28				
Mercury, dissolved	0.000212	0.000010 mg/L		0.000250	< 0.000010	85		70-130	
Reference (B7L1772-SRM1)					Prepared: 2017-12-28, Analyzed: 2017-12-28				
Mercury, dissolved	0.00442	0.000010 mg/L		0.00489		90		80-120	



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B7L1772, Continued

General Parameters, Batch B7L1566

Blank (B7L1566-BLK1)			Prepared: 2017-12-22, Analyzed: 2017-12-22						
Chemical Oxygen Demand	< 5	5 mg/L							
LCS (B7L1566-BS1)			Prepared: 2017-12-22, Analyzed: 2017-12-22						
Chemical Oxygen Demand	50	5 mg/L	50.0		99	89-115			

General Parameters, Batch B7L1577

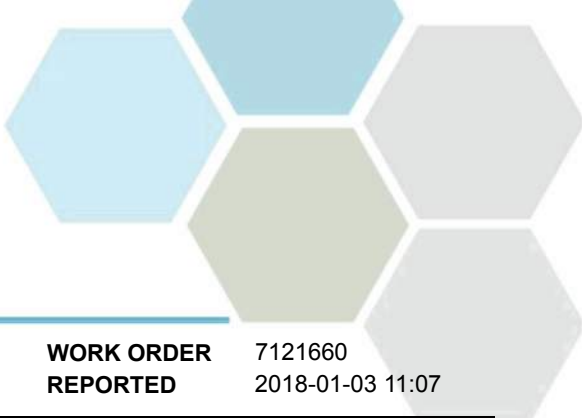
Blank (B7L1577-BLK1)			Prepared: 2017-12-22, Analyzed: 2017-12-22						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Blank (B7L1577-BLK2)			Prepared: 2017-12-22, Analyzed: 2017-12-22						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
LCS (B7L1577-BS1)			Prepared: 2017-12-22, Analyzed: 2017-12-22						
Alkalinity, Total (as CaCO3)	101	1.0 mg/L	100		101	92-106			
LCS (B7L1577-BS2)			Prepared: 2017-12-22, Analyzed: 2017-12-22						
Alkalinity, Total (as CaCO3)	99.9	1.0 mg/L	100		100	92-106			

General Parameters, Batch B7L1661

Blank (B7L1661-BLK1)			Prepared: 2017-12-27, Analyzed: 2017-12-28						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
Blank (B7L1661-BLK2)			Prepared: 2017-12-27, Analyzed: 2017-12-28						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
LCS (B7L1661-BS1)			Prepared: 2017-12-27, Analyzed: 2017-12-28						
Nitrogen, Total Kjeldahl	1.02	0.050 mg/L	1.00		102	84-121			
LCS (B7L1661-BS2)			Prepared: 2017-12-27, Analyzed: 2017-12-28						
Nitrogen, Total Kjeldahl	1.04	0.050 mg/L	1.00		104	84-121			

General Parameters, Batch B7L1675

Blank (B7L1675-BLK1)			Prepared: 2017-12-27, Analyzed: 2017-12-27						
Solids, Total Suspended	< 2.0	2.0 mg/L							
Blank (B7L1675-BLK2)			Prepared: 2017-12-27, Analyzed: 2017-12-27						
Solids, Total Suspended	< 2.0	2.0 mg/L							
LCS (B7L1675-BS1)			Prepared: 2017-12-27, Analyzed: 2017-12-27						
Solids, Total Suspended	97.0	10.0 mg/L	100		97	83-107			



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT	Morrison Hershfield Limited - Burnaby Resort Municipality of Whister - Spring/Fall 17	WORK ORDER REPORTED	7121660 2018-01-03 11:07
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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General Parameters, Batch B7L1675, Continued

LCS (B7L1675-BS2)			Prepared: 2017-12-27, Analyzed: 2017-12-27						
Solids, Total Suspended	98.0	10.0 mg/L	100		98	83-107			

General Parameters, Batch B7L1741

Blank (B7L1741-BLK1)			Prepared: 2017-12-28, Analyzed: 2017-12-28						
Conductivity (EC)	< 2.0	2.0 µS/cm							

Blank (B7L1741-BLK2)			Prepared: 2017-12-28, Analyzed: 2017-12-28						
Conductivity (EC)	< 2.0	2.0 µS/cm							

LCS (B7L1741-BS1)			Prepared: 2017-12-28, Analyzed: 2017-12-28						
Conductivity (EC)	147	2.0 µS/cm	147		100	90-110			

LCS (B7L1741-BS2)			Prepared: 2017-12-28, Analyzed: 2017-12-28						
Conductivity (EC)	146	2.0 µS/cm	147		100	90-110			

Reference (B7L1741-SRM1)			Prepared: 2017-12-28, Analyzed: 2017-12-28						
Conductivity (EC)	1020	2.0 µS/cm	1000		102	95-105			

Reference (B7L1741-SRM2)			Prepared: 2017-12-28, Analyzed: 2017-12-28						
Conductivity (EC)	1020	2.0 µS/cm	1000		102	95-105			

General Parameters, Batch B7L1766

Reference (B7L1766-SRM1)			Prepared: 2017-12-28, Analyzed: 2017-12-28						
pH	7.97	0.10 pH units	8.00		100	97.5-102.5			

Reference (B7L1766-SRM2)			Prepared: 2017-12-28, Analyzed: 2017-12-28						
pH	7.97	0.10 pH units	8.00		100	97.5-102.5			

Reference (B7L1766-SRM3)			Prepared: 2017-12-28, Analyzed: 2017-12-28						
pH	7.95	0.10 pH units	8.00		99	97.5-102.5			

General Parameters, Batch B7L1774

Blank (B7L1774-BLK1)			Prepared: 2017-12-28, Analyzed: 2017-12-29						
Phosphorus, Total (as P)	< 0.0020	0.0020 mg/L							

Blank (B7L1774-BLK2)			Prepared: 2017-12-28, Analyzed: 2017-12-29						
Phosphorus, Total (as P)	< 0.0020	0.0020 mg/L							

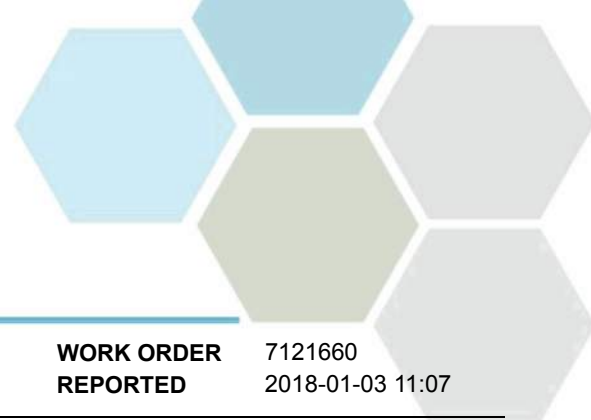
LCS (B7L1774-BS1)			Prepared: 2017-12-28, Analyzed: 2017-12-29						
Phosphorus, Total (as P)	0.0994	0.0020 mg/L	0.100		99	80-112			

LCS (B7L1774-BS2)			Prepared: 2017-12-28, Analyzed: 2017-12-29						
Phosphorus, Total (as P)	0.110	0.0020 mg/L	0.100		110	80-112			

Duplicate (B7L1774-DUP1)			Source: 7121660-09		Prepared: 2017-12-28, Analyzed: 2017-12-29				
Phosphorus, Total (as P)	0.0202	0.0020 mg/L		0.0208			3	20	

Duplicate (B7L1774-DUP2)			Source: 7121660-12		Prepared: 2017-12-28, Analyzed: 2017-12-29				
Phosphorus, Total (as P)	1.12	0.0020 mg/L		1.00			11	20	

Matrix Spike (B7L1774-MS1)			Source: 7121660-09		Prepared: 2017-12-28, Analyzed: 2017-12-29				
Phosphorus, Total (as P)	0.121	0.0020 mg/L	0.100	0.0208	100	70-122			

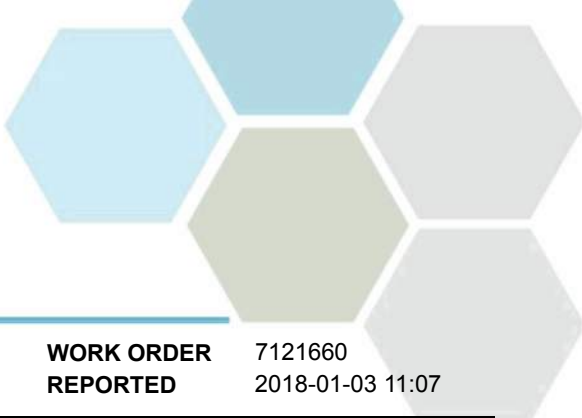


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whister - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B7L1783									
Blank (B7L1783-BLK1)			Prepared: 2017-12-29, Analyzed: 2017-12-29						
Ammonia, Total (as N)	< 0.020	0.020 mg/L							
Blank (B7L1783-BLK2)			Prepared: 2017-12-29, Analyzed: 2017-12-29						
Ammonia, Total (as N)	< 0.020	0.020 mg/L							
Blank (B7L1783-BLK3)			Prepared: 2017-12-29, Analyzed: 2017-12-29						
Ammonia, Total (as N)	< 0.020	0.020 mg/L							
LCS (B7L1783-BS1)			Prepared: 2017-12-29, Analyzed: 2017-12-29						
Ammonia, Total (as N)	0.986	0.020 mg/L	1.00		99	90-115			
LCS (B7L1783-BS2)			Prepared: 2017-12-29, Analyzed: 2017-12-29						
Ammonia, Total (as N)	1.07	0.020 mg/L	1.00		107	90-115			
LCS (B7L1783-BS3)			Prepared: 2017-12-29, Analyzed: 2017-12-29						
Ammonia, Total (as N)	1.05	0.020 mg/L	1.00		105	90-115			
Duplicate (B7L1783-DUP3)			Source: 7121660-09		Prepared: 2017-12-29, Analyzed: 2017-12-29				
Ammonia, Total (as N)	0.032	0.010 mg/L		0.030				15	
Matrix Spike (B7L1783-MS3)			Source: 7121660-09		Prepared: 2017-12-29, Analyzed: 2017-12-29				
Ammonia, Total (as N)	0.278	0.020 mg/L	0.250	0.030	99	75-125			
General Parameters, Batch B7L1845									
Blank (B7L1845-BLK1)			Prepared: 2017-12-29, Analyzed: 2018-01-02						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
Blank (B7L1845-BLK2)			Prepared: 2017-12-29, Analyzed: 2018-01-02						
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
LCS (B7L1845-BS1)			Prepared: 2017-12-29, Analyzed: 2018-01-02						
Nitrogen, Total Kjeldahl	0.992	0.050 mg/L	1.00		99	84-121			
LCS (B7L1845-BS2)			Prepared: 2017-12-29, Analyzed: 2018-01-02						
Nitrogen, Total Kjeldahl	0.953	0.050 mg/L	1.00		95	84-121			
Duplicate (B7L1845-DUP1)			Source: 7121660-07		Prepared: 2017-12-29, Analyzed: 2018-01-02				
Nitrogen, Total Kjeldahl	0.664	0.050 mg/L		0.743			11	16	
Matrix Spike (B7L1845-MS1)			Source: 7121660-07		Prepared: 2017-12-29, Analyzed: 2018-01-02				
Nitrogen, Total Kjeldahl	1.62	0.050 mg/L	1.00	0.743	88	65-135			
Total Metals, Batch B7L1657									
Blank (B7L1657-BLK1)			Prepared: 2017-12-27, Analyzed: 2017-12-27						
Mercury, total	< 0.000010	0.000010 mg/L							
Reference (B7L1657-SRM1)			Prepared: 2017-12-27, Analyzed: 2017-12-27						
Mercury, total	0.00448	0.000010 mg/L	0.00489		92	80-120			
Total Metals, Batch B7L1689									
Blank (B7L1689-BLK1)			Prepared: 2017-12-27, Analyzed: 2017-12-27						
Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Total Metals, Batch B7L1689, Continued

Blank (B7L1689-BLK1), Continued

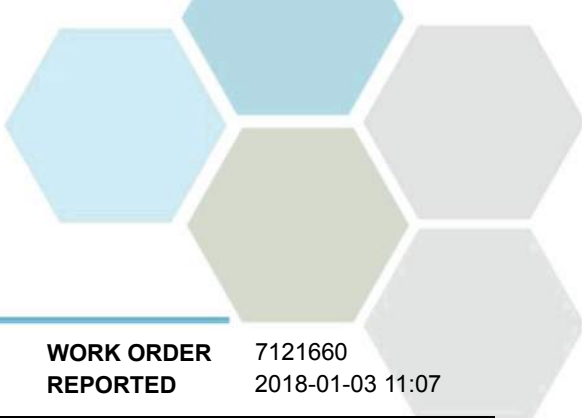
Prepared: 2017-12-27, Analyzed: 2017-12-27

Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0050	0.0050 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00020	0.00020 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00040	0.00040 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Tungsten, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0010	0.0010 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							

LCS (B7L1689-BS1)

Prepared: 2017-12-27, Analyzed: 2017-12-27

Aluminum, total	0.0211	0.0050 mg/L	0.0200	105	80-120
Antimony, total	0.0197	0.00020 mg/L	0.0200	98	80-120
Arsenic, total	0.0208	0.00050 mg/L	0.0200	104	80-120
Barium, total	0.0189	0.0050 mg/L	0.0200	94	80-120
Beryllium, total	0.0201	0.00010 mg/L	0.0200	101	80-120
Bismuth, total	0.0201	0.00010 mg/L	0.0200	101	80-120
Boron, total	0.0207	0.0050 mg/L	0.0200	103	80-120
Cadmium, total	0.0195	0.000010 mg/L	0.0200	97	80-120
Calcium, total	2.30	0.20 mg/L	2.00	115	80-120
Chromium, total	0.0210	0.00050 mg/L	0.0200	105	80-120
Cobalt, total	0.0207	0.00010 mg/L	0.0200	103	80-120
Copper, total	0.0217	0.00040 mg/L	0.0200	109	80-120
Iron, total	2.12	0.010 mg/L	2.00	106	80-120
Lead, total	0.0199	0.00020 mg/L	0.0200	99	80-120
Lithium, total	0.0205	0.00010 mg/L	0.0200	102	80-120
Magnesium, total	2.07	0.010 mg/L	2.00	104	80-120
Manganese, total	0.0210	0.00020 mg/L	0.0200	105	80-120
Molybdenum, total	0.0191	0.00010 mg/L	0.0200	95	80-120
Nickel, total	0.0206	0.00040 mg/L	0.0200	103	80-120



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Morrison Hershfield Limited - Burnaby
Resort Municipality of Whistler - Spring/Fall 17

WORK ORDER REPORTED 7121660
2018-01-03 11:07

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B7L1689, Continued									
LCS (B7L1689-BS1), Continued					Prepared: 2017-12-27, Analyzed: 2017-12-27				
Phosphorus, total	2.03	0.050 mg/L	2.00		101	80-120			
Potassium, total	2.16	0.10 mg/L	2.00		108	80-120			
Selenium, total	0.0210	0.00050 mg/L	0.0200		105	80-120			
Silicon, total	2.1	1.0 mg/L	2.00		105	80-120			
Silver, total	0.0197	0.000050 mg/L	0.0200		99	80-120			
Sodium, total	2.35	0.10 mg/L	2.00		117	80-120			
Strontium, total	0.0202	0.0010 mg/L	0.0200		101	80-120			
Sulfur, total	5.3	3.0 mg/L	5.00		107	80-120			
Tellurium, total	0.0187	0.00050 mg/L	0.0200		94	80-120			
Thallium, total	0.0202	0.000020 mg/L	0.0200		101	80-120			
Thorium, total	0.0196	0.00010 mg/L	0.0200		98	80-120			
Tin, total	0.0204	0.00020 mg/L	0.0200		102	80-120			
Titanium, total	0.0209	0.0050 mg/L	0.0200		104	80-120			
Tungsten, total	0.0204	0.0010 mg/L	0.0200		102	80-120			
Uranium, total	0.0212	0.000020 mg/L	0.0200		106	80-120			
Vanadium, total	0.0210	0.0010 mg/L	0.0200		105	80-120			
Zinc, total	0.0231	0.0040 mg/L	0.0200		116	80-120			
Zirconium, total	0.0203	0.00010 mg/L	0.0200		101	80-120			
Reference (B7L1689-SRM1)					Prepared: 2017-12-27, Analyzed: 2017-12-27				
Aluminum, total	0.302	0.0050 mg/L	0.303		100	82-114			
Antimony, total	0.0498	0.00020 mg/L	0.0511		97	88-115			
Arsenic, total	0.124	0.00050 mg/L	0.118		105	88-111			
Barium, total	0.746	0.0050 mg/L	0.823		91	83-110			
Beryllium, total	0.0509	0.00010 mg/L	0.0496		103	80-119			
Boron, total	3.55	0.0050 mg/L	3.45		103	80-118			
Cadmium, total	0.0476	0.000010 mg/L	0.0495		96	90-110			
Calcium, total	11.6	0.20 mg/L	11.6		100	85-113			
Chromium, total	0.263	0.00050 mg/L	0.250		105	88-111			
Cobalt, total	0.0400	0.00010 mg/L	0.0377		106	90-114			
Copper, total	0.525	0.00040 mg/L	0.486		108	90-117			
Iron, total	0.528	0.010 mg/L	0.488		108	90-116			
Lead, total	0.201	0.00020 mg/L	0.204		98	90-110			
Lithium, total	0.403	0.00010 mg/L	0.403		100	79-118			
Magnesium, total	4.01	0.010 mg/L	3.79		106	88-116			
Manganese, total	0.112	0.00020 mg/L	0.109		103	88-108			
Molybdenum, total	0.189	0.00010 mg/L	0.198		95	88-110			
Nickel, total	0.257	0.00040 mg/L	0.249		103	90-112			
Phosphorus, total	0.191	0.050 mg/L	0.227		84	72-118			
Potassium, total	7.88	0.10 mg/L	7.21		109	87-116			
Selenium, total	0.126	0.00050 mg/L	0.121		104	90-122			
Sodium, total	8.46	0.10 mg/L	7.54		112	86-118			
Strontium, total	0.377	0.0010 mg/L	0.375		100	86-110			
Thallium, total	0.0825	0.000020 mg/L	0.0805		102	90-113			
Uranium, total	0.0299	0.000020 mg/L	0.0306		98	88-112			
Vanadium, total	0.410	0.0010 mg/L	0.386		106	87-110			
Zinc, total	2.65	0.0040 mg/L	2.49		106	90-113			

**APPENDIX B: Field Data Collection Results for Leachate,
Groundwater, and Surface Water Monitoring**

Well ID	Date	Groundwater Levels				Water Quality						Comments
		Ground Surface Elevation	Top of Well Riser Elevation	Depth to Water	Static Water Level Elevation	Conductivity	Temp	pH	D.O.	ORP		
		mASML	mASML	m below top of well riser	mASL	uS/cm	C		mg/l			
MW2S	25-Mar-16	603.84	604.94	5.38	599.56	362.60	7.9	6.96	35.10%	-39.3	Needs new tubing for next visit.	
MW2D	25-Mar-16	603.84	604.9	5.43	599.47	766.0	8.1	6.67	19.40%	-40.3		
MW3	30-Mar-17	600.61	601.47	1.3	600.17	126.80	7.6	6.57	29.40%	18.6		
MW4	30-Mar-17	596.54	677.54	3.8	673.74	335.30	7.6	6.94	38.60%	21.7		
MW6	30-Mar-17	610.88	610.88		610.88						Well casing was full of ice, could not sample.	
SFC2	30-Mar-17					168.50	5.5	6.29	81.80%	95.5		
SFC2B	30-Mar-17					260.20	6.4	3.95	77.30%	284.7	Duplicate collected at this location	
SFC3	30-Mar-17					169.90	3.5	6.83	94.90%	87.6	Very high flows	
SFC11	30-Mar-17					45.10	3.8	7.23	99.90%	65.1	Very high flows	
SFC4B	30-Mar-17					110.3	3.7	6.94	99.50%	51.5	Water was quite turbid.	
Leachate Manhole	30-Mar-17					142.40	3.8	6.49	66.60%	37.5		
GW Interceptor	30-Mar-17					723.00	7.5	6	9.30%	140.5	Groundwater seeps visible on the slope downgradient from the collection point.	
MW2D	22-Jun-17	603.84	604.9	6.41	598.49	1181	8.8	6.58	30.2	-40.9		
MW2S	22-Jun-17	603.84	604.94	6.36	598.58	358	8.7	6.18	13.8	-12.9	Duplicate collected at this location	
MW3	22-Jun-17	600.61	601.47	1.69	599.78	156.3	8.9	7.36	40.2	26		
MW4	22-Jun-17	596.54	677.54	4.1	673.44	560.8	8.4	6.7	17.5	-77.4		
MW6	22-Jun-17	610.88	610.88	-		-	-	-	-	-	Was not able to sample due to construction - buried. Substrate covered in orange residue, water contained suds/bubbles	
SFC2	20-Jun-17					315.8	8.4	6.31	71.7	150.8		
SFC2B	20-Jun-17					1240	10.8	3.28	46.6	410.8		
SFC3	20-Jun-17					198.8	7.4	6.48	95.2	146.9		
SFC11	20-Jun-17					191.1	7.3	6.51	90.1	147		
SFC4B	20-Jun-17					209.9	8.4	6.31	9.3	182.4	Water is clear - low flow	
GW Interceptor	20-Jun-17					885	8	5.67	3.2	191.2		
MW2D	13-Sep-17	603.84	604.9	6.75	598.15	774	8.7	6.5	1.6	149	Meter only measured DO as % converted using a chart with temp and DO%.	
MW2S	13-Sep-17	603.84	604.94	6.69	598.25	267.2	8.3	6.83	0.3	107.3		
MW3	13-Sep-17	600.61	601.47	2.25	599.22	94.7	9.2	6.59	0.3	84.5		
MW4	13-Sep-17	596.54	677.54	4.37	673.17	215.2	8.6	6.76	2.2	140		
MW6	13-Sep-17	610.88	610.88	5.92	604.96	607	9	5.62	4.5	166.6		
SFC2	13-Sep-17					208	9.8	6.97	8.4	127.6		
SFC2B	13-Sep-17					627	10.3	4.18	6.2	364.2		
SFC3	13-Sep-17					100.3	9.9	6.41	6.5	126.5	V. Low water level and lots of algae growth	
SFC11	13-Sep-17					87.6	6.7	6.44	8.6	133.9	V. Low water level.	
SFC4B	13-Sep-17					254.7	10.2	7.07	9.3	123.7		
GW Interceptor	13-Sep-17					644	11.6	6.2	0.2	168.2		
Leachate Manhole	13-Sep-17										No sample - not enough flow.	
MW2D	20-Dec-17	603.84	604.9	6.03	598.87	1136	7.3	6.52	2.47	136.7		
MW2S	20-Dec-17	603.84	604.94	6.3	598.64	497.3	5	6.82	4.05	117.6		
MW3	20-Dec-17	600.61	601.47	1.56	599.91	223.1	7.1	6.18	254	118.1		
MW4	20-Dec-17	596.54	677.54	4.24	673.3	432.5	7.2	6.66	3.36	160		
MW6	20-Dec-17	610.88	610.88	5.07	605.81	705.2	6.2	5.72	7.29	7.13	possibly some grit/sand could have gone down the well due to well cap.	
SFC2	20-Dec-17					317.4	7	6.85	7.12	110.3		
SFC2B	20-Dec-17					932	1.2	3.48	6.86	189.2		
SFC3	20-Dec-17					249.9	3	5.95	10.54	178.9		
SFC11	20-Dec-17					105.9	4.7	6.24	10.9	158.7		
SFC4B	20-Dec-17					551.7	3.3	7.24	9.99	119.7		
GW Interceptor	20-Dec-17										no field parameters measured	
Leachate Manhole	20-Dec-17					500	6.1	5.01	5.1	60.3		

APPENDIX C: List of Analytical Parameters

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DATE May-06-15

Packages and their Respective Analyses:

Package: BTEX/VH/VPH in Water Pkg	TAT (Days): 5
Container(s): 2 x 40 mL AG - NaHSO4	HT (Days): 14
Calculated Analyte(s) Included: VPHw	
Analyses Included:	
BTEX in Water	VH in Water

Package: Dissolved Metals by ICPMS (low) Pkg	TAT (Days): 5
Container(s): 125 mL HDPE - Filtered + HNO3	HT (Days): 180
Calculated Analyte(s) Included: Hardness, Total (Diss. as CaCO3)	
Analyses Included:	
Aluminum, dissolved by ICPMS (low)	Antimony, dissolved by ICPMS (low)
Barium, dissolved by ICPMS (low)	Beryllium, dissolved by ICPMS (low)
Boron, dissolved by ICPMS (low)	Cadmium, dissolved by ICPMS (low)
Chromium, dissolved by ICPMS (low)	Cobalt, dissolved by ICPMS (low)
Iron, dissolved by ICPMS (low)	Lead, dissolved by ICPMS (low)
Magnesium, dissolved by ICPMS (low)	Manganese, dissolved by ICPMS (low)
Nickel, dissolved by ICPMS (low)	Phosphorus, dissolved by ICPMS (low)
Selenium, dissolved by ICPMS (low)	Silicon, dissolved by ICPMS (low)
Sodium, dissolved by ICPMS (low)	Strontium, dissolved by ICPMS (low)
Tellurium, dissolved by ICPMS (low)	Thallium, dissolved by ICPMS (low)
Tin, dissolved by ICPMS (low)	Titanium, dissolved by ICPMS (low)
Vanadium, dissolved by ICPMS (low)	Zinc, dissolved by ICPMS (low)
	Arsenic, dissolved by ICPMS (low)
	Bismuth, dissolved by ICPMS (low)
	Calcium, dissolved by ICPMS (low)
	Copper, dissolved by ICPMS (low)
	Lithium, dissolved by ICPMS (low)
	Molybdenum, dissolved by ICPMS (low)
	Potassium, dissolved by ICPMS (low)
	Silver, dissolved by ICPMS (low)
	Sulfur, dissolved by ICPMS (low)
	Thorium, dissolved by ICPMS (low)
	Uranium, dissolved by ICPMS (low)
	Zirconium, dissolved by ICPMS (low)

Package: Dissolved Metals by ICPMS (ultra low) Pkg	TAT (Days): 5
Container(s): 125 mL HDPE - Filtered + HNO3	HT (Days): 180
Calculated Analyte(s) Included: Hardness, Total (Diss. as CaCO3)	
Analyses Included:	
Aluminum, dissolved by ICPMS (ultra low)	Antimony, dissolved by ICPMS (ultra low)
Barium, dissolved by ICPMS (ultra low)	Beryllium, dissolved by ICPMS (ultra low)
Boron, dissolved by ICPMS (ultra low)	Cadmium, dissolved by ICPMS (ultra low)
Chromium, dissolved by ICPMS (ultra low)	Cobalt, dissolved by ICPMS (ultra low)
Iron, dissolved by ICPMS (ultra low)	Lead, dissolved by ICPMS (ultra low)
Magnesium, dissolved by ICPMS (ultra low)	Manganese, dissolved by ICPMS (ultra low)
Nickel, dissolved by ICPMS (ultra low)	Phosphorus, dissolved by ICPMS (ultra low)
Selenium, dissolved by ICPMS (ultra low)	Silicon, dissolved by ICPMS (ultra low)
Sodium, dissolved by ICPMS (ultra low)	Strontium, dissolved by ICPMS (ultra low)
Tellurium, dissolved by ICPMS (ultra low)	Thallium, dissolved by ICPMS (ultra low)
Tin, dissolved by ICPMS (ultra low)	Titanium, dissolved by ICPMS (ultra low)
Vanadium, dissolved by ICPMS (ultra low)	Zinc, dissolved by ICPMS (ultra low)
	Arsenic, dissolved by ICPMS (ultra low)
	Bismuth, dissolved by ICPMS (ultra low)
	Calcium, dissolved by ICPMS (ultra low)
	Copper, dissolved by ICPMS (ultra low)
	Lithium, dissolved by ICPMS (ultra low)
	Molybdenum, dissolved by ICPMS (ultra low)
	Potassium, dissolved by ICPMS (ultra low)
	Silver, dissolved by ICPMS (ultra low)
	Sulfur, dissolved by ICPMS (ultra low)
	Thorium, dissolved by ICPMS (ultra low)
	Uranium, dissolved by ICPMS (ultra low)
	Zirconium, dissolved by ICPMS (ultra low)

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Packages and their Respective Analyses:

Package: Dissolved Metals by ICPMS Pkg		TAT (Days): 5
Container(s): 125 mL HDPE - Filtered + HNO3		HT (Days): 180
Calculated Analyte(s) Included: Hardness, Total (Diss. as CaCO3)		
Analyses Included:		
Aluminum, dissolved by ICPMS	Antimony, dissolved by ICPMS	Arsenic, dissolved by ICPMS
Barium, dissolved by ICPMS	Beryllium, dissolved by ICPMS	Bismuth, dissolved by ICPMS
Boron, dissolved by ICPMS	Cadmium, dissolved by ICPMS	Calcium, dissolved by ICPMS
Chromium, dissolved by ICPMS	Cobalt, dissolved by ICPMS	Copper, dissolved by ICPMS
Iron, dissolved by ICPMS	Lead, dissolved by ICPMS	Lithium, dissolved by ICPMS
Magnesium, dissolved by ICPMS	Manganese, dissolved by ICPMS	Molybdenum, dissolved by ICPMS
Nickel, dissolved by ICPMS	Phosphorus, dissolved by ICPMS	Potassium, dissolved by ICPMS
Selenium, dissolved by ICPMS	Silicon, dissolved by ICPMS	Silver, dissolved by ICPMS
Sodium, dissolved by ICPMS	Strontium, dissolved by ICPMS	Sulfur, dissolved by ICPMS
Tellurium, dissolved by ICPMS	Thallium, dissolved by ICPMS	Thorium, dissolved by ICPMS
Tin, dissolved by ICPMS	Titanium, dissolved by ICPMS	Uranium, dissolved by ICPMS
Vanadium, dissolved by ICPMS	Zinc, dissolved by ICPMS	Zirconium, dissolved by ICPMS
Package: L/HEPH in Water Pkg		TAT (Days): 5
Container(s): 1 L AG - NaHSO4		HT (Days): 14
Calculated Analyte(s) Included: LEPHw; HEPHw; Total PAH		
Analyses Included:		
EPH in Water	PAH in Water	
Package: Total Nitrogen in Water Pkg		TAT (Days): 5
Container(s): 125 mL HDPE - H2SO4	500 mL HDPE - Unpreserved	HT (Days): 3
Analyses Included:		
Nitrate+Nitrite-N in Water	Nitrite-N in Water, colorimetric	Total Kjeldahl Nitrogen
Package: Total Recoverable Metals by ICPMS (low) Pkg		TAT (Days): 5
Container(s): 125 mL HDPE - HNO3		HT (Days): 180
Calculated Analyte(s) Included: Hardness, Total (Total as CaCO3)		
Analyses Included:		
Aluminum, total by ICPMS (low)	Antimony, total by ICPMS (low)	Arsenic, total by ICPMS (low)
Barium, total by ICPMS (low)	Beryllium, total by ICPMS (low)	Bismuth, total by ICPMS (low)
Boron, total by ICPMS (low)	Cadmium, total by ICPMS (low)	Calcium, total by ICPMS (low)
Chromium, total by ICPMS (low)	Cobalt, total by ICPMS (low)	Copper, total by ICPMS (low)
Iron, total by ICPMS (low)	Lead, total by ICPMS (low)	Lithium, total by ICPMS (low)
Magnesium, total by ICPMS (low)	Manganese, total by ICPMS (low)	Molybdenum, total by ICPMS (low)
Nickel, total by ICPMS (low)	Phosphorus, total by ICPMS (low)	Potassium, total by ICPMS (low)
Selenium, total by ICPMS (low)	Silicon, total by ICPMS (low)	Silver, total by ICPMS (low)
Sodium, total by ICPMS (low)	Strontium, total by ICPMS (low)	Sulfur, total by ICPMS (low)
Tellurium, total by ICPMS (low)	Thallium, total by ICPMS (low)	Thorium, total by ICPMS (low)
Tin, total by ICPMS (low)	Titanium, total by ICPMS (low)	Uranium, total by ICPMS (low)
Vanadium, total by ICPMS (low)	Zinc, total by ICPMS (low)	Zirconium, total by ICPMS (low)

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Packages and their Respective Analyses:

Package: Total Recoverable Metals by ICPMS (ultra low) Pkg			TAT (Days): 5
Container(s): 125 mL HDPE - HNO3			HT (Days): 180
Calculated Analyte(s) Included:	Hardness, Total (Total as CaCO3)		
Analyses Included:			
Aluminum, total by ICPMS (ultra low)	Antimony, total by ICPMS (ultra low)	Arsenic, total by ICPMS (ultra low)	
Barium, total by ICPMS (ultra low)	Beryllium, total by ICPMS (ultra low)	Bismuth, total by ICPMS (ultra low)	
Boron, total by ICPMS (ultra low)	Cadmium, total by ICPMS (ultra low)	Calcium, total by ICPMS (ultra low)	
Chromium, total by ICPMS (ultra low)	Cobalt, total by ICPMS (ultra low)	Copper, total by ICPMS (ultra low)	
Iron, total by ICPMS (ultra low)	Lead, total by ICPMS (ultra low)	Lithium, total by ICPMS (ultra low)	
Magnesium, total by ICPMS (ultra low)	Manganese, total by ICPMS (ultra low)	Molybdenum, total by ICPMS (Ultra low)	
Nickel, total by ICPMS (ultra low)	Phosphorus, total by ICPMS (ultra low)	Potassium, total by ICPMS (ultra low)	
Selenium, total by ICPMS (ultra low)	Silicon, total by ICPMS (ultra low)	Silver, total by ICPMS (ultra low)	
Sodium, total by ICPMS (ultra low)	Strontium, total by ICPMS (ultra low)	Sulfur, total by ICPMS (ultra low)	
Tellurium, total by ICPMS (ultra low)	Thallium, total by ICPMS (ultra low)	Thorium, total by ICPMS (ultra low)	
Tin, total by ICPMS (ultra low)	Titanium, total by ICPMS (ultra low)	Uranium, total by ICPMS (ultra low)	
Vanadium, total by ICPMS (ultra low)	Zinc, total by ICPMS (ultra low)	Zirconium, total by ICPMS (ultra low)	
Package: Total Recoverable Metals by ICPMS Pkg			TAT (Days): 5
Container(s): 125 mL HDPE - HNO3			HT (Days): 180
Calculated Analyte(s) Included:	Hardness, Total (Total as CaCO3)		
Analyses Included:			
Aluminum, total by ICPMS	Antimony, total by ICPMS	Arsenic, total by ICPMS	
Barium, total by ICPMS	Beryllium, total by ICPMS	Bismuth, total by ICPMS	
Boron, total by ICPMS	Cadmium, total by ICPMS	Calcium, total by ICPMS	
Chromium, total by ICPMS	Cobalt, total by ICPMS	Copper, total by ICPMS	
Iron, total by ICPMS	Lead, total by ICPMS	Lithium, total by ICPMS	
Magnesium, total by ICPMS	Manganese, total by ICPMS	Molybdenum, total by ICPMS	
Nickel, total by ICPMS	Phosphorus, total by ICPMS	Potassium, total by ICPMS	
Selenium, total by ICPMS	Silicon, total by ICPMS	Silver, total by ICPMS	
Sodium, total by ICPMS	Strontium, total by ICPMS	Sulfur, total by ICPMS	
Tellurium, total by ICPMS	Thallium, total by ICPMS	Thorium, total by ICPMS	
Tin, total by ICPMS	Titanium, total by ICPMS	Uranium, total by ICPMS	
Vanadium, total by ICPMS	Zinc, total by ICPMS	Zirconium, total by ICPMS	
Package: VOC/VH/VP in Water Pkg			TAT (Days): 5
Container(s): 2 x 40 mL AG - NaHSO4			HT (Days): 14
Calculated Analyte(s) Included:	VPHw		
Analyses Included:			
VH in Water	VOC in Water		

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Analysis Details:

Analysis:	Bromide in Water by IC		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	mg/L	Location:	Kelowna	HT (Days):	28
Analysis Ref:	APHA 4110 B	Prep Ref:	KEL	Container:	500 mL HDPE - Unpreserved		
Analyte / Default RDL:							
Bromide	0.05						

Analysis:	BTEX in Water		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	ug/L	Location:	Richmond	HT (Days):	14
Analysis Ref:	EPA 8260B	Prep Ref:	N/A	Container:	2 x 40 mL AG - NaHSO4		
Analyte / Default RDL:							
Benzene	0.5	Ethylbenzene	0.5	Methyl tert-butyl ether	0.5		
Styrene	0.5	Toluene	0.5	Xylenes (total)	1		

Analysis:	Chemical Oxygen Demand		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	mg/L	Location:	Kelowna	HT (Days):	28
Analysis Ref:	APHA 5220 D	Prep Ref:	N/A	Container:	125 mL HDPE - H2SO4		
Analyte / Default RDL:							
Chemical Oxygen Demand	20						

Analysis:	Chloride in Water by IC		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	mg/L	Location:	Kelowna	HT (Days):	28
Analysis Ref:	APHA 4110 B	Prep Ref:	KEL	Container:	500 mL HDPE - Unpreserved		
Analyte / Default RDL:							
Chloride	0.05						

Analysis:	Conductivity in Water		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	uS/cm	Location:	Richmond	HT (Days):	28
Analysis Ref:	APHA 2510 B	Prep Ref:	N/A	Container:	1 L HDPE - Unpreserved		
Analyte / Default RDL:							
Conductivity (EC)	1						

Analysis:	Dissolved Metals by ICPMS		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	mg/L	Location:	Richmond	HT (Days):	180
Analysis Ref:	APHA 3125 B	Prep Ref:	N/A	Container:	125 mL HDPE - Filtered + HNO3		
Analyte / Default RDL:							
Aluminum, dissolved	0.05	Antimony, dissolved	0.001	Arsenic, dissolved	0.005		
Barium, dissolved	0.05	Beryllium, dissolved	0.001	Bismuth, dissolved	0.001		
Boron, dissolved	0.04	Cadmium, dissolved	0.0001	Calcium, dissolved	2		
Chromium, dissolved	0.005	Cobalt, dissolved	0.0005	Copper, dissolved	0.002		
Iron, dissolved	0.1	Lead, dissolved	0.001	Lithium, dissolved	0.001		
Magnesium, dissolved	0.1	Manganese, dissolved	0.002	Molybdenum, dissolved	0.001		
Nickel, dissolved	0.002	Phosphorus, dissolved	0.2	Potassium, dissolved	0.2		
Selenium, dissolved	0.005	Silicon, dissolved	5	Silver, dissolved	0.0005		
Sodium, dissolved	0.2	Strontium, dissolved	0.01	Tellurium, dissolved	0.002		
Thallium, dissolved	0.0002	Thorium, dissolved	0.001	Tin, dissolved	0.002		
Titanium, dissolved	0.05	Uranium, dissolved	0.0002	Vanadium, dissolved	0.01		
Zinc, dissolved	0.04	Zirconium, dissolved	0.001				

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Analysis Details:

Analysis:	Dissolved Metals by ICPMS (Low)	Matrix:	Water	TAT (Days):	5
Version:	Default	Units:	mg/L	Location:	Richmond
Analysis Ref:	APHA 3125 B	Prep Ref:	N/A	HT (Days):	180
		Container:	125 mL HDPE - Filtered + HNO3		

Analyte / Default RDL:					
Aluminum, dissolved	0.005	Antimony, dissolved	0.0001	Arsenic, dissolved	0.0005
Barium, dissolved	0.005	Beryllium, dissolved	0.0001	Bismuth, dissolved	0.0001
Boron, dissolved	0.004	Cadmium, dissolved	0.00001	Calcium, dissolved	0.2
Chromium, dissolved	0.0005	Cobalt, dissolved	0.00005	Copper, dissolved	0.0002
Iron, dissolved	0.01	Lead, dissolved	0.0001	Lithium, dissolved	0.0001
Magnesium, dissolved	0.01	Manganese, dissolved	0.0002	Molybdenum, dissolved	0.0001
Nickel, dissolved	0.0002	Phosphorus, dissolved	0.02	Potassium, dissolved	0.02
Selenium, dissolved	0.0005	Silicon, dissolved	0.5	Silver, dissolved	0.00005
Sodium, dissolved	0.02	Strontium, dissolved	0.001	Sulfur, dissolved	1
Tellurium, dissolved	0.0002	Thallium, dissolved	0.00002	Thorium, dissolved	0.0001
Tin, dissolved	0.0002	Titanium, dissolved	0.005	Uranium, dissolved	0.00002
Vanadium, dissolved	0.001	Zinc, dissolved	0.004	Zirconium, dissolved	0.0001

Analysis:	Dissolved Metals by ICPMS (Ultra Low)	Matrix:	Water	TAT (Days):	5
Version:	Default	Units:	ug/L	Location:	Richmond
Analysis Ref:	APHA 3125 B	Prep Ref:	N/A	HT (Days):	180
		Container:	125 mL HDPE - Filtered + HNO3		

Analyte / Default RDL:					
Aluminum, dissolved	1	Antimony, dissolved	0.05	Arsenic, dissolved	0.05
Barium, dissolved	0.1	Beryllium, dissolved	0.01	Bismuth, dissolved	0.01
Boron, dissolved	1	Cadmium, dissolved	0.002	Calcium, dissolved	40
Chromium, dissolved	0.1	Cobalt, dissolved	0.005	Copper, dissolved	0.1
Iron, dissolved	2	Lead, dissolved	0.05	Lithium, dissolved	0.05
Magnesium, dissolved	5	Manganese, dissolved	0.05	Molybdenum, dissolved	0.01
Nickel, dissolved	0.02	Phosphorus, dissolved	10	Potassium, dissolved	10
Selenium, dissolved	0.1	Silicon, dissolved	50	Silver, dissolved	0.01
Sodium, dissolved	10	Strontium, dissolved	0.1	Sulfur, dissolved	500
Tellurium, dissolved	0.05	Thallium, dissolved	0.004	Thorium, dissolved	0.01
Tin, dissolved	0.05	Titanium, dissolved	0.2	Uranium, dissolved	0.001
Vanadium, dissolved	0.2	Zinc, dissolved	1	Zirconium, dissolved	0.01

Analysis:	EPH in Water	Matrix:	Water	TAT (Days):	5
Version:	Default	Units:	ug/L	Location:	Richmond
Analysis Ref:	BCMOE EPHw	Prep Ref:	Base/Neutral	HT (Days):	14
		Container:	1 L AG - NaHSO4		

Analyte / Default RDL:			
EPHw (10-19)	50	EPHw (19-32)	50

Analysis:	Fluoride in Water by IC	Matrix:	Water	TAT (Days):	5
Version:	Default	Units:	mg/L	Location:	Kelowna
Analysis Ref:	APHA 4110 B	Prep Ref:	KEL	HT (Days):	28
		Container:	500 mL HDPE - Unpreserved		

Analyte / Default RDL:	
Fluoride	0.05

Analysis:	Nitrate+Nitrite-N in Water	Matrix:	Water	TAT (Days):	5
Version:	Default	Units:	mg/L	Location:	Kelowna
Analysis Ref:	APHA 4500-NO3- F	Prep Ref:	N/A	HT (Days):	28
		Container:	125 mL HDPE - H2SO4		

Analyte / Default RDL:	
Nitrate+Nitrite as N	0.002

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Analysis Details:

Analysis:	Nitrite-N in Water, colorimetric		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	mg/L	Location:	Kelowna	HT (Days):	3
Analysis Ref:	APHA 4500-NO2 B	Prep Ref:	N/A	Container:	500 mL HDPE - Unpreserved		
Analyte / Default RDL:							
Nitrite as N	0.002						

Analysis:	PAH in Water		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	ug/L	Location:	Richmond	HT (Days):	14
Analysis Ref:	EPA 8270D	Prep Ref:	Base/Neutral	Container:	1 L AG - NaHSO4		
Analyte / Default RDL:							
Acenaphthene	0.05	Acenaphthylene	0.05	Acridine	0.05		
Anthracene	0.05	Benz (a) anthracene	0.05	Benzo (a) pyrene	0.01		
Benzo (b) fluoranthene	0.05	Benzo (g,h,i) perylene	0.05	Benzo (k) fluoranthene	0.05		
Chrysene	0.05	Dibenz (a,h) anthracene	0.05	Fluoranthene	0.05		
Fluorene	0.05	Indeno (1,2,3-cd) pyrene	0.05	Naphthalene	0.3		
Phenanthrene	0.1	Pyrene	0.02	Quinoline	0.1		

Analysis:	pH in Water		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	pH units	Location:	Richmond	HT (Days):	0.01
Analysis Ref:	APHA 4500-H+ B	Prep Ref:	N/A	Container:	1 L HDPE - Unpreserved		
Analyte / Default RDL:							
pH	0.01						

Analysis:	Phosphorus, Total (persulfate)		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	mg/L	Location:	Kelowna	HT (Days):	28
Analysis Ref:	APHA 4500-P H	Prep Ref:	N/A	Container:	125 mL HDPE - H2SO4		
Analyte / Default RDL:							
Phosphorus, Total as P	0.001						

Analysis:	Sulfate in Water by IC		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	mg/L	Location:	Kelowna	HT (Days):	28
Analysis Ref:	APHA 4110 B	Prep Ref:	KEL	Container:	500 mL HDPE - Unpreserved		
Analyte / Default RDL:							
Sulfate	0.2						

Analysis:	Total Recoverable Metals by ICPMS		Matrix:	Water	TAT (Days):	5	
Version:	Default	Units:	mg/L	Location:	Richmond	HT (Days):	180
Analysis Ref:	APHA 3125 B	Prep Ref:	N/A	Container:	125 mL HDPE - HNO3		
Analyte / Default RDL:							
Aluminum, total	0.05	Antimony, total	0.001	Arsenic, total	0.005		
Barium, total	0.05	Beryllium, total	0.001	Bismuth, total	0.001		
Boron, total	0.04	Cadmium, total	0.0001	Calcium, total	2		
Chromium, total	0.005	Cobalt, total	0.0005	Copper, total	0.002		
Iron, total	0.1	Lead, total	0.001	Lithium, total	0.001		
Magnesium, total	0.1	Manganese, total	0.002	Molybdenum, total	0.001		
Nickel, total	0.002	Phosphorus, total	0.2	Potassium, total	0.2		
Selenium, total	0.005	Silicon, total	5	Silver, total	0.0005		
Sodium, total	0.2	Strontium, total	0.01	Sulfur, total	10		
Tellurium, total	0.002	Thallium, total	0.0002	Thorium, total	0.001		
Tin, total	0.002	Titanium, total	0.05	Uranium, total	0.0002		
Vanadium, total	0.01	Zinc, total	0.04	Zirconium, total	0.001		

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Analysis Details:

Analysis:	Total Recoverable Metals by ICPMS (Low)		Matrix:	Water	TAT (Days): 5
Version:	Default	Units:	mg/L	Location:	Richmond
Analysis Ref:	APHA 3125 B	Prep Ref:	N/A	Container:	125 mL HDPE - HNO3
Analyte / Default RDL:					
Aluminum, total	0.005	Antimony, total	0.0001	Arsenic, total	0.0005
Barium, total	0.005	Beryllium, total	0.0001	Bismuth, total	0.0001
Boron, total	0.004	Cadmium, total	0.00001	Calcium, total	0.2
Chromium, total	0.0005	Cobalt, total	0.00005	Copper, total	0.0002
Iron, total	0.01	Lead, total	0.0001	Lithium, total	0.0001
Magnesium, total	0.01	Manganese, total	0.0002	Molybdenum, total	0.0001
Nickel, total	0.0002	Phosphorus, total	0.02	Potassium, total	0.02
Selenium, total	0.0005	Silicon, total	0.5	Silver, total	0.00005
Sodium, total	0.02	Strontium, total	0.001	Sulfur, total	1
Tellurium, total	0.0002	Thallium, total	0.00002	Thorium, total	0.0001
Tin, total	0.0002	Titanium, total	0.005	Uranium, total	0.00002
Vanadium, total	0.001	Zinc, total	0.004	Zirconium, total	0.0001

Analysis:	Total Recoverable Metals by ICPMS (Ultra Low)		Matrix:	Water	TAT (Days): 5
Version:	Default	Units:	ug/L	Location:	Richmond
Analysis Ref:	APHA 3125 B	Prep Ref:	N/A	Container:	125 mL HDPE - HNO3
Analyte / Default RDL:					
Aluminum, total	1	Antimony, total	0.05	Arsenic, total	0.05
Barium, total	0.1	Beryllium, total	0.01	Bismuth, total	0.01
Boron, total	1	Cadmium, total	0.002	Calcium, total	40
Chromium, total	0.1	Cobalt, total	0.005	Copper, total	0.1
Iron, total	2	Lead, total	0.05	Lithium, total	0.05
Magnesium, total	5	Manganese, total	0.05	Molybdenum, total	0.01
Nickel, total	0.02	Phosphorus, total	10	Potassium, total	10
Selenium, total	0.1	Silicon, total	50	Silver, total	0.01
Sodium, total	10	Strontium, total	0.1	Sulfur, total	500
Tellurium, total	0.05	Thallium, total	0.004	Thorium, total	0.01
Tin, total	0.05	Titanium, total	0.2	Uranium, total	0.001
Vanadium, total	0.2	Zinc, total	1	Zirconium, total	0.01

Analysis:	Total Suspended Solids		Matrix:	Water	TAT (Days): 5
Version:	Default	Units:	mg/L	Location:	Edmonton
Analysis Ref:	APHA 2540 D*	Prep Ref:	N/A	Container:	1 L HDPE - Unpreserved
Analyte / Default RDL:					
Solids, Total Suspended	1				

Analysis:	VH in Water		Matrix:	Water	TAT (Days): 5
Version:	Default	Units:	ug/L	Location:	Richmond
Analysis Ref:	BCMOE VHw	Prep Ref:	N/A	Container:	2 x 40 mL AG - NaHSO4
Analyte / Default RDL:					
VHw (6-10)	100				

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Analysis Details:

Analysis:	VOC in Water		Matrix:	Water	TAT (Days):	5
Version:	Default		Location:	Richmond	HT (Days):	14
Analysis Ref:	EPA 8260B	Units:	ug/L	Container:	2 x 40 mL AG - NaHSO4	
		Prep Ref:	N/A			
Analyte / Default RDL:						
Benzene	0.5	Bromodichloromethane	0.5	Bromoform	0.5	
Carbon tetrachloride	0.5	Chlorobenzene	0.5	Chloroethane	1	
Chloroform	0.5	Dibromochloromethane	0.5	1,2-Dibromoethane	0.3	
Dibromomethane	1	1,2-Dichlorobenzene	0.5	1,3-Dichlorobenzene	0.5	
1,4-Dichlorobenzene	0.5	1,1-Dichloroethane	0.5	1,2-Dichloroethane	0.5	
1,1-Dichloroethene	1	cis-1,2-Dichloroethene	0.5	trans-1,2-Dichloroethene	0.5	
1,2-Dichloropropane	0.5	cis-1,3-Dichloropropene	0.5	trans-1,3-Dichloropropene	0.5	
Ethylbenzene	0.5	Methyl tert-butyl ether	0.5	Methylene chloride	1	
Styrene	0.5	1,1,2,2-Tetrachloroethane	0.5	Tetrachloroethene	0.5	
Toluene	0.5	1,1,1-Trichloroethane	0.5	1,1,2-Trichloroethane	0.5	
Trichloroethene	0.5	Trichlorofluoromethane	1	Vinyl chloride	1	
Xylenes (total)	1					

* in Analysis/Prep Ref indicates that modifications have been made from the reference method