



ENNADAI LAKE LONG TERM MONITORING EVENT 2020 LONG TERM MONITORING REPORT

Submitted to:



Crown-Indigenous Relations
and Northern Affairs Canada

Relations Couronne-Autochtones
et Affaires du Nord Canada

**Crown-Indigenous Relations and Northern Affairs Canada
Contaminants and Remediation Division**

P.O. Box 2200
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Prepared by:

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Project Number: 200537

March 12, 2021

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EXECUTIVE SUMMARY

The Ennadai Lake site was previously used as a signal station by the Department of National Defense (DND). It was eventually abandoned and transferred to Environment and Climate Change Canada (ECCC). Currently, ECCC operates an unmanned weather station near the site. Remediation activities of the former signal station occurred between 2014 and 2015. The remediation included the construction of the Non-Hazardous Waste Landfill (NHWL) for the disposal of demolition waste.

The objective of this project is to complete tasks for the long-term monitoring of the Ennadai Lake site as described in the *Ennadai Lake Long Term Monitoring Plan* (Indigenous and Northern Affairs Canada (INAC, 2016) (referred to as "the LTM Plan"). This includes conducting a field program for visual and environmental monitoring of the landfill as well as collecting geochemical data to perform a landfill assessment as per the *Abandoned Military Site Remediation Protocol* (AMSRP), (INAC, 2009). BluMetric executed this field program on August 27, 2020.

Visual monitoring results suggest that the NHWL is performing as expected and is in acceptable condition based on severity ratings presented in the AMSRP Volume II (INAC, 2009). The surface of the landfills did not show any evidence of frost action or erosion. There were two shallow depressions that do not appear to be impacting the integrity of the landfill. Erosion channels on the south east corner of the NHWL have not been evident since it was documented in the Year 1 Long Term Monitoring Report (2016). Evidence of erosion was documented on the access roads between the landfill and the weather station as well as between the landfill and the airstrip. Both of these features are at a distance from the NHWL and do not impact the performance of the facility. ATV tracks that were documented on and around the NHWL in previous reports have diminished and were not observed.

During the site visit and as part of the natural environment monitoring, a bald eagle as well as a ptarmigan were spotted flying overhead. An animal carcass was found near the landfill by monitoring well MWLF-3. Caribou droppings and tracks were found close to the airstrip. Multiple siksik or fox burrows were found on the road between the airstrip and landfill.

A total of three (3) groundwater samples were collected from MWLF-1 (regular sample) and MWLF-3 (regular and duplicate sample) and sent to the ALS Laboratories in Yellowknife, NT for analysis. Analytical results from monitoring well MWLF-3 and the duplicate MWLF-D have Federal Interim Groundwater Quality Guideline (FIGQG) exceedances for total and dissolved Aluminum and Copper. There were no exceedances of the calculated upper limits of acceptability (ULAs) where they were applicable. The analytical results for MWLF-1 exhibited elevated concentrations of total and dissolved metals exceeding FIGQGs and ULAs but was assumed to be



purge water and is not considered to be representative of the groundwater quality in the aquifer near the Ennadai Lake site NHWL. As per the AMSRP geochemical assessment guidelines, the landfill is performing as expected.

Based on the results of the 2020 long term monitoring event, BluMetric recommends continuing monitoring at the recommended schedule proposed in the Ennadai Lake LTM Plan. The site is deemed to be in acceptable condition as there were no observable or geochemical indications of deterioration of the landfill at the Ennadai Lake site in 2020. The next monitoring event is recommended to occur in Year 7 (2022).



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1 INTRODUCTION

BluMetric Environmental Inc. (BluMetric™) was retained by Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) – Nunavut Regional Office to conduct long term monitoring (LTM) activities at the Ennadai Lake former weather station site, Nunavut (herein referred to as “the site”). This project was completed under CIRNAC Standing Offer Number 4600001830 and order number 4500413861. The following report describes the monitoring activities completed for CIRNAC at the site in 2020, Year 5 of the monitoring schedule.

1.1 OBJECTIVE

The objective of this project is to complete tasks for the long-term monitoring of the Ennadai Lake site as described in the *Ennadai Lake Long Term Monitoring Plan*, INAC, 2016 (referred to as “the LTM Plan”).

1.2 SCOPE OF WORK

The scope of work for the 2020 long term monitoring activities includes the following:

- Produce and implement a Logistic Plan that complies with all federal, provincial/territorial and municipal health requirements, restrictions and guidance related to COVID-19.
- Produce and implement a Health and Safety Plan including risks and mitigations specific to COVID-19.
- Produce and implement a field sampling plan including Quality Assurance and Quality Control (QAQC) plan.
- Implement a field program including:
 - o Provision of wildlife monitor (with firearm) from nearby community;
 - o Monitoring of general site condition and natural environment;
 - o Visual inspection of the Non-Hazardous Waste Landfill (NHWL) documented by photographic record, visual monitoring checklist and a site map;
 - o Purge and collect groundwater samples from the three (3) monitoring wells;
 - o Collect soil samples if seepage or staining is identified during the visual inspection;
 - o Collect blind duplicates of at least 20% of samples;
 - o Submit samples to a Canadian Association for Laboratory Accreditation (CALA) accredited laboratory for analysis of petroleum hydrocarbon (PHC) fractions F1 and F2, total and dissolved metals, major ions, hardness, total dissolved solids, total suspended solids, pH, conductivity, and polychlorinated biphenyls (PCBS); and
- Submit a draft and final version of the Ennadai Lake 2020 Long Term Monitoring Report to CIRNAC.



2 BACKGROUND INFORMATION

The Ennadai Lake site is located approximately 370km west of the nearest community of Arviat, Nunavut and 400km southwest of Rankin Inlet, Nunavut. Approximate coordinates of the site are 61° 07' 51" N latitude and 100° 53' 14" W longitude. A general location map is shown in Figure 1.

In the 1950s, the Department of National Defense (DND) use the site as a signal station. In addition to this, the site was established as a weather station and was operated as a manned weather station by Transport Canada. In the 1980s to early 1990s the site was abandoned, and the weather station was transferred to Environment and Climate Change Canada (ECCC). Two smaller parcels of land on the site are Inuit Owned Land that was transferred through the Nunavut Land Claim Agreement (1993). The Crown portions of this land are administered by INAC with the IOL portions administered by Kivalliq Inuit Association (KivIA). Currently ECCC operates an unmanned weather station near the site.

Remediation activities occurred between 2014 and 2015. The remediation included the construction of the Non-hazardous Waste Landfill (NHWL), demolition and disposal of buildings, structures and other debris, as well as the cleanup of hazardous materials and contaminated waste. The NHWL is located approximately 200 m west of the main site. The landfill is approximately 22 m by 18.4 m. It was constructed of four perimeter berms constructed of granular material. The landfill was filled by lifts of 0.5 m with an intermediate granular cover of 0.15 m. Once full, the landfill was capped with a minimum of 1.0 m of granular material. Three monitoring wells were installed for long term groundwater monitoring.

2.1 PREVIOUS REPORTS AND MONITORING PROGRAMS

BluMetric Environmental reviewed the following reports prior to the field program:

- *Ennadai Lake, Long Term Monitoring Plan*, INAC, January 2016
- *Long Term Monitoring, 2016, Ennadai Lake Former Weather Station Nunavut*, Arcadis, 2017.
- *2018 Long Term Monitoring Report, Ennadai Lake Long Term Monitoring Event*, SLR, 2018.

The Ennadai Lake LTM Plan is a 25-year monitoring plan which began in 2016. Monitoring is scheduled to occur in Years 1, 3, 5, 7, 10, 15, 20 and 25 (INAC, 2016). The 2020 monitoring is considered to be Year 5 of the long term monitoring program.



3 REGULATORY GUIDELINES

BluMetric reviewed the Ennadai Lake LTM Plan as well as the Abandoned Military Site Remediation Protocol (AMSRP), (INAC 2009) to identify the applicable guidelines to be used in the LTM program. The following sections describe the regulatory guidelines selected for each type of sample collected at the site.

3.1 GROUNDWATER

3.1.1 Baseline Samples

Due to the absence of groundwater criteria, the analytical data for groundwater should be compared to available baseline data from the site. According to AMSRP, if the analytical results are within the average $\pm$ three standard deviations, the landfill is deemed acceptable and performing as expected. If the analytical results do not meet these criteria, further measures should be recommended ranging from increasing monitoring frequency to developing a new remedial plan. The AMSRP provides the following guidance for the assessment of groundwater analytical data.

An upper limit of acceptability (ULA) was calculated using the average + three (3) standard deviations of all available data. ULAs were only calculated for a limited number of parameters since baseline data is sparse, and concentrations for many parameters are below the detectable limit. Duplicates were omitted from the calculations as to not over-represent results from one monitoring well in the ULA calculation. ULAs were only calculated for parameters that had three or more data points that had detectable concentrations. Tables 1 to 5 (following the text) summarize the available historical groundwater data and the calculated ULAs (where available).

3.1.2 Federal Interim Groundwater Quality Guidelines

In addition to the ULAs, the analytical results could be compared to the Federal Interim Groundwater Quality Guidelines (FIGQG). Generally, federal contaminated sites are evaluated using the Canadian Environmental Quality Guidelines (CEQG) developed by the Canadian Council of Ministers of the Environment (CCME). There are comprehensive guidelines for various media including surface water and soil, however no CEQG exists for groundwater. In recognizing the need for a nationally-consistent approach for assessing and managing groundwater, Environment Canada developed the Federal Interim Groundwater Quality Guidelines. These guidelines are intended as an interim measure until CEQGs for groundwater are available.



The FIGQGs follow a tiered framework as follows:

- Tier 1: direct application of generic numerical guidelines, specifically, application of the lowest guideline for any pathway.
- Tier 2: allows for the development of site-specific remediation objectives through the consideration of site-specific conditions, by modifying (within limits) the numerical guidelines based on site-specific conditions and focusing on exposure pathways and receptors that are applicable to the site.
- Tier 3: use of site-specific risk assessment to develop Site-Specific Remediation Objectives.

From the FIGQGs, the guidelines from Table 2, *Generic Guidelines for Residential/Parkland Land Uses, Tier 1 Lowest Guideline for coarse-grained soil* (Table 2, Tier 1) were referenced for this report as they were deemed most representative of current site use and soil conditions. The FIGQGs typically do not apply to total metals, they have been applied to both total and dissolved metals to evaluate potential for transport of contaminants with colloidal materials in groundwater. As per the FIGQGs for certain metals (aluminum, copper, lead, and nickel) without criteria, *Canadian Water Quality Guidelines for the Protection of Aquatic Life (CWQG AW)* (CCME 1999) are used. Though typically only applied to total metals, due to the absence of applicable guidelines for dissolved metals, these were applied to both.

3.2 SOIL

3.2.1 Baseline Samples

According to previous long term monitoring reports for the Ennadai Lake site, historical baseline soil data collected during remediation activities is available in the Final Remediation Report by Stantec. No soil samples were taken in 2016, 2018 or 2020. Should future samples be collected at the site, the results should be compared to baseline data.

3.2.2 Canadian Environmental Quality Guidelines – CCME

No soil samples were collected as part of the 2020 site visit, however previous monitoring reports reference the following CCME guidelines for soil analytical results:

- Canadian Soil Quality Guidelines (CSQGs) *for the Protection of Environmental and Human Health* (CCME, 1999, with updates) for residential/parkland use, including fact sheets for benzene, toluene, ethylbenzene and xylene (BTEX), non-potable water, coarse-grained soil.
- Canada-Wide Standard (CWS) for Petroleum Hydrocarbons in Soil (CCME, 2008) – Tier 1 Residential/Parkland, non-potable water, coarse-grained soil.



The rationale for choosing these criteria are that the groundwater at the Ennadai Lake site will not be used for drinking (non-potable) and coarse-grained material is found on site. If seepage or staining occurs and soil samples are taken in future monitoring activities, the above guidelines should be used for comparison.

4 METHODOLOGY

The field program, including visual inspection and sampling, was carried out on August 27, 2020 by Matthew Kitchen, EIT and Jeff Rosnawski. They were accompanied by CIRNAC representative Selma Al-Soweydawi, and by a wildlife monitor, Anulik Akerolik, a resident of Rankin Inlet, NU who also provided knowledge of the site. The site was accessed by Twin Otter, chartered by Kenn Borek Air. Logistics were carried out as per the Logistics Plan provided under a separate cover. The summaries of daily activities and notes can be found in Appendix A.

4.1 HEALTH AND SAFETY PLAN

In preparation for the field program, a Health and Safety Plan (HASP) was produced and submitted to CIRNAC under a separate cover. The HASP identifies risks and suspected hazards associated with work on the site. It specifically addresses any known or suspected hazards and provides mitigative measures including protocols for COVID-19. Included in the HASP are emergency contacts and procedures for medical, mechanical, or weather emergencies.

Prior to the start of work, a review of the HASP was completed with all personnel involved in the field program.

4.2 LANDFILL VISUAL MONITORING

A visual inspection of the NHWL was conducted at the Ennadai Lake site during the 2020 long term monitoring event. The visual inspection looked for evidence of:

- erosion, ponding, frost action, settlement, and lateral movement;
- animal burrows, vegetation, vegetation stresses; and
- staining or seepage.

This was documented within the visual monitoring checklist and through site photographs. The results are interpreted as per the AMSRP and a severity rating of acceptable, marginal, significant, and unacceptable is assigned. This rating determines the required action ranging from continuing scheduled monitoring to implementing emergency remedial plans.



4.3 NATURAL ENVIRONMENT MONITORING

Natural environment data was collected during the 2020 long term monitoring event. The specific observations that were noted included:

- wildlife sightings (species, number, gender, juveniles);
- evidence of recent presence of wildlife (droppings, tracks, feathers/fur, carcass remains, etc.);
- wildlife activity (summering/nesting/denning, migratory/passing through); and
- qualitative assessment of relative numbers versus previous years (more, same, less).

Observations, in addition to information on land use and wildlife activity was provided by Anulik Akerolik, the wildlife monitor, and a resident of Rankin Inlet.

4.4 GROUNDWATER SAMPLE COLLECTION

The site has three (3) monitoring wells (MWLF-1, MWLF-2 and MWLF-3). All three well locks were observed to be in poor condition and were cut and replaced during the process of sampling.

The new keys were given to the CIRNAC representative. Monitoring well locations are listed in Table 1 below.

Table 4-1: Ennadai Lake Monitoring Well Locations

Monitoring Well	Latitude	Longitude
MWLF-1	61 7 56.64	-100 53 0.632
MWLF-2	61 7 56.68	-100 53 4.553
MWLF-3	61 7 58.02	-100 53 1.082

The following is the methodology that was prepared for the groundwater sampling and a similar methodology should be used for future monitoring events. The water level and depth were recorded, and an approximate well volume was calculated. A peristaltic pump and dedicated disposable polyethylene tubing were used to purge and sample the wells using a low-flow sampling methodology. Where possible, the monitoring well was purged of three well volumes prior to sampling and water quality parameters including dissolved oxygen (DO), oxidation-reduction potential (ORP), temperature, pH, conductivity, turbidity and total dissolved solids were measured using a Horiba U-52 Multi-Parameter Meter and recorded prior to sampling. The Horiba U-52 Multi-Parameter Meter was checked and/or calibrated prior to sampling.



Prior to shipping, samples were packed in a laboratory provided cooler and ice packs were to be replaced daily as necessary. The samples were shipped by Canadian North to the ALS Laboratories depot in Yellowknife where they were received and forwarded for analysis. Groundwater samples were submitted to ALS Laboratories, a Canadian Association for Laboratory Accreditation (CALA) accredited laboratory for analysis of:

- Petroleum Hydrocarbons (PHCs);
- Total and Dissolved Metals;
- Major Ions, Hardness, Total Dissolved Solids, Total Suspended Solids;
- pH, Conductivity; and
- Polychlorinated biphenyls (PCBs).

The QA/QC plan for this program included the following:

- **field duplicates** (20% of program) as per AMSRP to provide a measure of precision/repeatability of the sampling procedure, analytic technique and heterogeneity of the sample.
- **analytical method blanks** give a measure of any contamination that may be introduced during sample handling and processing and can indicate whether results are falsely inflated.
- **analytical control spike** is used to identify analytical interference associated with the sample matrix. Control spikes are evaluated by calculating a percent recovery as follows:

$$\text{Recovery (\%)} = \left(\frac{\text{measured concentration}}{\text{certified concentration}} \right) * 100$$

- **analytical duplicates** provide a measure of the precision and repeatability of the analytical method.

For field and analytical duplicates, the precision is measured by the relative percentage difference (RPD) for duplicate samples. RPD is calculated for contaminant concentrations greater than 5 times the reportable detection limit (RDL), concentrations results less than 5 times the RDL become increasingly imprecise. RPD is calculated as follows:

$$\text{RPD (\%)} = \left(\frac{\text{Dup}_1 - \text{Dup}_2}{\text{average of Dup}_1 + \text{Dup}_2} \right) * 100$$

The Guidance Manual for Environmental Site Characterization in Support of Human Health Risk Assessment, Volume I (CCME, 2016) recommends that RPDs for parameters of field duplicate groundwater samples not exceed 40% and RPDs for laboratory groundwater duplicates not exceed 20%. RPDs for soil sample field duplicates should not exceed 60% and RPDs for laboratory soil duplicates should not exceed 30%.



Unfortunately, due to a logistical issue, the de-ionized water for field blanks and travel blank bottles were not received in time for the site visit. As a result, the following were omitted from the program:

- **travel blanks** to test for background contaminants, contamination from transport and handling or presence of container or preservative contamination.
- **field blanks**, to provide a measure of the sampling procedure and whether cross-contamination or contamination from exposure to air has occurred.

4.5 SOIL SAMPLING

No soil samples were collected at the time of the 2020 long term monitoring event as there was no evidence of seepage or staining. The following outlines the methodology that was prepared for this program if soil sampling was required.

Soil samples were to be collected with a small trowel which will be decontaminated with a laboratory-grade biodegradable cleaner (Alconox®) and rinsed between sampling locations. Soils samples were to be collected to a maximum depth of 30cm and pack into laboratory supplied jars with minimal to no headspace. Samples were to be kept cool and packed on ice for shipment to ALS laboratories.

The following parameters were to be analysed:

- Polychlorinated Biphenyls;
- F1-F4 PHCs; and
- Metals.

5 RESULTS

5.1 PHOTOGRAPHIC RECORDS

A photographic record of the Ennadai Lake site was taken. The complete photographic record (Photos 1-218) has been provided electronically to CIRNAC via a file transfer protocol (FTP) site. The photographs referenced in the text of the document are found in Appendix B. Note that the photographs referenced in

Table 5-1 reference photos from the complete photo record. Photo viewpoints, from the complete photo record, have also been depicted on Figure 2 Ennadai Lake Non-Hazardous Waste Landfill Plan.



5.2 LANDFILL VISUAL MONITORING

The visual monitoring checklist was completed to document the inspection of the NHWL. See Appendix A for the visual monitoring checklist and notes collected on site.

Table 5-1 summarizes the features that appeared in the previous long term monitoring reports and updates the status of each feature. The features and photograph viewpoints are shown on Figure 2.

Table 5-1: Ennadai Lake Site NHWL Feature Summary

Feature Letter	Feature Type	Location	Extent	Description/Change Comments	Photograph Viewpoint
A ²	Erosion	SE Corner of NHWL	<1%	No erosional channel observed in 2020. Only observed in 2016 but not in 2018	65, 76, 108
B ²	Other	West Berm	<1%	No ATV tracks observed. Previously observed in 2016 and 2018.	59, 108
C	Settlement	NE corner NHWL	<1%	Small depression on berm. No significant change from 2018.	91
D	Erosion	Access road between NHWL and Weather Station	<1%	Erosional channel observed, no significant difference from 2018 report.	116, 118
E ²	Other	East berm, near SE Corner	<1%	No ATV tracks observed. Previously observed in 2016 and 2018.	47
F ²	Other	North berm	<1%	No ATV tracks observed. Previously observed in 2016 and 2018.	50, 60
G ³	Settlement	Cap NHWL, near south edge	<1%	Small depression observed on cap, no significant change from 2018.	80, 81
H ⁴	Erosion	Access road between NHWL and airstrip	<1%	Large 2 m wide erosional channel in access road. No impact on the landfill.	42, 98, 99, 100, 102, 103

¹Photograph numbers listed in this table reference photograph numbers from the complete photo record.

²Feature not observed during the 2020 Long Term Monitoring Event

³Feature G as documented by SLR in 2018 was found to be located closer to the south edge, feature table was corrected

⁴New feature identified during 2020 visual monitoring



Two areas of settlement were observed. Both areas were present in the previous 2018 Long Term Monitoring report by SLR. A small depression exists on the berm at the northeast corner of the NHWL (Photo 1 and 2). Another small depression is observed on the cap near the south edge of the of the NHWL (Photo 3).

No evidence of erosion was found on the landfill. Erosion on the southeast corner that was originally observed by Arcadis in 2016 was not observed by SLR in 2018, nor was it observed in the 2020 visual monitoring. Photo 4 shows the southeast corner with no evidence of erosion. The large erosional channel on the access road between the weather station and NHWL was observed and no substantial change was noted (Photo 5). An additional erosion feature on the access road between the NHWL and airstrip exists - a 2 m wide erosional channel (Photo 6 and 7) - and was noted for the first time in 2020. These instances of erosion are both located a distance from the landfill and do not have any impact on the landfill.

Other features that were not evident were all terrain vehicle (ATV) tracks that were documented in both 2016 and 2018. Photo 8 shows the cap of the landfill without the presence of ATV tracks in 2020.

There is no evidence of animal burrows near the landfill, however several fox or siksik burrows were observed on the access road to the airstrip (Photo 9 and 10). Natural vegetation was observed to be growing on the landfill. There is some evidence of revegetation on the sides of the landfill (Photo 11) but limited vegetation was observed on the cap (Photo 12).

No seepage or staining was present near the landfill. Several drums were located at the airstrip. Photo 13 and 14 show the arrangement of the drums around the site. The area was inspected for evidence of staining from the drums but no stains were noted. Small pieces of debris, wire and a tarp or liner were located on the airstrip runway. This debris does not appear to be from the landfill (Photo 15 and 16).

The surface of the landfill did not show any evidence of frost action or erosion. The settlements on the surface and side of the landfill are isolated and have not been observed to be deteriorating since 2016. As a result, the visual monitoring shows that the NHWL is in acceptable condition based on severity ratings presented in the AMSRP Volume II (INAC, 2009).

5.3 NATURAL ENVIRONMENT MONITORING

Site observations and an interview with a local resident were conducted to document the status of the natural environment. The observations and interview were noted in the natural environment monitoring checklist in Appendix A.



Wildlife sightings during the site visit included a bald eagle and a ptarmigan flying overhead. An animal carcass of what appears to be an arctic hare was found near the monitoring well MWLF-3 (Photo 17). Photos 18 and 19 are evidence of caribou droppings and tracks at the airstrip.

Evidence of revegetation was noted, as already mentioned in Section 5.2. Photos 11 and 12 show the vegetative growth on the sides and cap of the landfill.

The interview with Anulik Akerolik revealed that wildlife expected to be in the area include wolves, wolverine, grizzly bears and barren land caribou. He noted the region is used for fishing and hunting and primarily accessed in the spring by snow machine. He noted that occasionally, the area is used for wood harvesting and sometimes to harvest Christmas trees.

5.4 ANALYTICAL RESULTS

A total of three (3) groundwater samples were collected at the Ennadai Lake site in 2020. Samples were collected from monitoring wells MWLF-1, MWLF-3 and a duplicate sample at MWLF-3. A sample from monitoring well MWLF-2 could not be collected as the well was frozen. It should be noted that monitoring well MWLF-1 was not dry but water did not recharge in the well during the site visit. As a result, the purge water was sampled and sent for analysis. All three (3) samples were stored on ice and sent to ALS Laboratories in Yellowknife, NT for analysis. Appendix C presents the groundwater sample collection log including the in-situ water quality parameter results. Certificates of analysis can be found in Appendix D.

As mentioned in Section 3.1, the AMSRP suggests that analytical results be compared to the results of previous data, and if the groundwater concentrations are within the range of the average $\pm$ three standard deviations, the landfill is performing acceptably. Tables 1 through 5 provide the calculated ULAs where applicable. In addition to the ULAs, the groundwater analytical results were compared to the FIGQGs.

Tables 6 through 10 (following the text) summarize the groundwater analytical results for 2020. Analytical results for PHCs and PCBs in groundwater in 2020 were all below reportable detection limits. The analytical results for total and dissolved metals exhibited several exceedances of the FIGQGs. Table 5-2 below summarizes the exceedances of FIGQGs for groundwater samples analyzed during the 2020 long term monitoring event.

It should be noted that the FIGQGs have been updated in the historical metals table (Tables 3 and 4) to the 2018 criteria which has resulted in some additional historical exceedances.



Table 5-2 Summary of Exceedances FIGQGs

Sample ID	FIGQG Exceedances	FIGQG/CWQG AW
MWLF-1¹	Total Aluminum (0.171 mg/L)	0.005 mg/L
	Dissolved Aluminum (0.179 mg/L)	0.005 mg/L
	Total Cadmium (0.00035 mg/L)	0.00009 mg/L
	Dissolved Cadmium (0.000361 mg/L)	0.00009 mg/L
	Total Copper (0.0195 mg/L)	0.002 mg/L
	Dissolved Copper (0.0213 mg/L)	0.002 mg/L
	Total Nickel (0.101 mg/L)	0.025 mg/L
	Dissolved Nickel (0.107mg/L)	0.025 mg/L
	Total Zinc (0.0498 mg/L)	0.01 mg/L
	Dissolved Zinc (0.0588 mg/L)	0.01 mg/L
MWLF-3	Total Aluminum (0.365 mg/L)	0.005 mg/L
	Dissolved Aluminum (0.405 mg/L)	0.005 mg/L
	Total Copper (0.0282 mg/L)	0.00222 mg/L
	Dissolved Copper (0.0316 mg/L)	0.00222 mg/L
MWLF-3-D	Total Aluminum (0.335 mg/L)	0.005 mg/L
	Dissolved Aluminum (0.341 mg/L)	0.005 mg/L
	Total Copper (0.0279 mg/L)	0.00209 mg/L
	Dissolved Copper (0.0289 mg/L)	0.00209 mg/L

¹Sample from monitoring well MWLF-1 collected from purge water.

ULAs were not able to be calculated for all parameters analyzed. No dissolved metals analyses were requested during the 2014 monitoring visit and therefore there are only two (2) data points available from MWLF-3 in 2016 and 2018. Additional data from subsequent sampling rounds should be included in future monitoring rounds to allow for the ULA to be calculated for dissolved metals. Two exceedances of the calculated ULAs for total metals were reported from monitoring well MWLF-1 and no exceedances were reported from MWLF-3 and the duplicate MWLF-3-D. Table 5-3 below summarizes the exceedances of calculated ULAs for groundwater samples analyzed during the 2020 long term monitoring event.

Table 5-3: Summary of Exceedances ULA

Sample ID	ULA Exceedances	ULA
MWLF-1¹	Total Cadmium (0.00035 mg/L)	0.00024 mg/L
	Total Nickel (0.101 mg/L)	0.0558 mg/L

¹Sample from monitoring well MWLF-1 collected from purge water.

Monitoring well MWLF-1 was purged but water did not recharge in the monitoring well during the site visit. In the interest of collecting more data, a sample was collected from the purge water and sent to the laboratory for analysis for metals and PCBs. There was not enough water to analyse for the proposed suite of parameters. Sampling purge water does not follow the typical



groundwater sampling procedure and it should be noted that this analytical result may not be representative of the groundwater near the Ennadai Lake site NHWL. Elevated metals concentrations are likely skewed by purge water and as a result should not be considered in the geochemical assessment of the landfill evaluation. The low flow sampling parameters monitored during sampling such as Conductivity, Turbidity and Total Dissolved Solids (TDS) may be compared to the results of future sampling rounds to evaluate the degree of stagnation of the purge water sampling in 2020. These parameters are presented in Appendix C.

Analytical results from monitoring well MWLF-3 and the duplicate MWLF-D have only FIGQG exceedances for total and dissolved Aluminum and Copper.

According to the AMSRP, an exceedance of the ULA for two or more successive monitoring events corresponds to a low risk of failure for the NHWL in which case increasing monitoring should occur. Though there were ULA exceedances for total cadmium and nickel, the sample is assumed to be purge water and not representative of the chemistry of the aquifer. No previous exceedances of the ULAs were considered indicative of the condition of the NHWL due to the limited data set. Concentrations of parameters exceeding the FIGQGs and ULAs should continue to be monitored closely in the next sampling event to determine whether increased monitoring is required.

No soil samples were collected as no staining or seepage points were observed on site.

5.5 QA/QC DISCUSSION

5.5.1 Duplicate Samples – Relative Percent Difference

One field duplicate sample was taken from MWLF-3. RPDs were calculated for contaminant concentrations greater than 5 times the reportable detection limit (RDL). None of the calculated RPDs exceeded the 40% RPD criterion for field duplicates. Table 11 (following the text) presents the complete list of RPDs that were calculated.

5.5.2 Field Blank and Trip Blank

A field blank and trip blank were planned to be collected at the Ennadai Lake site. Unfortunately due to shipping and logistical issues, the field staff experienced a shortage of de-ionized water and trip blanks were not received. As a result no trip blanks or field blanks were analysed.



5.5.3 Analytical QA/QC

Analytical QA/QC was completed by ALS Laboratories by way of analytical method blanks, analytical control spikes and analytical duplicates. The complete analytical quality control report can be found as part of the certificate of analyses in Appendix D. Hold times for TSS, TDS, Nitrate, Nitrite, PHCs, PCBs and pH were exceeded. This was in part due to the logistical challenges of shipping from the site to ALS in Yellowknife and subsequent shipping to the southern laboratories for analysis. As stated in ALS laboratories guidance document Hold Times: General Information of Exceedances (2017), hold times are established and intended as best-practice to protect the integrity of the test samples and minimize the potential for significant changes to samples prior to analysis (ALS, 2017). If exceeded, it is common practice to apply professional judgment to assess whether the results may still be useable and fit-for-purpose. It was expected that the hold time for pH would exceed, and as a standard procedure, field measurements were collected to represent conditions at the time of sampling (Appendix A). Based on recommendations from ALS, test results with hold time exceedances less than 50% of the recommended hold time may be considered valid and defensible, with the caveat that the measurement uncertainty associated with those tests may be higher than usual. This would be applicable for the PHC and PCB analysis which were 7% and 22% over their respective recommended hold times.

For significant hold time exceedances such as the samples analysed for TDS, TSS, Nitrate and Nitrite, the environmental fate and stability characteristics of the specific sample should be considered prior to determining whether the test results are fit-for-purpose. ALS recommends that the consistency with historical or expected results or with available test results from related or similar samples be considered. Results for TDS and TSS were within the range or below historical levels. Concentrations of Nitrate were below criteria, and concentration of nitrate were below detectable limits. Therefore these hold time exceedances are not considered to significantly impact the outcomes of this monitoring event.

Logistical challenges are expected working in remote locations, and some hold time exceedances were anticipated. Reduced flight frequency during the summer of 2020 increased the potential for hold time exceedances during sampling shipping. For future monitoring programs, implementing methods to expedite sample delivery would help to reduce the uncertainty related to the results.



6 CONCLUSION

The observations made during the 2020 long term monitoring event support that the Ennadai Lake site NHWL is performing as expected. Visual monitoring results suggest that the NHWL is performing as expected and is in acceptable condition based on severity ratings presented in the AMSRP Volume II (INAC, 2009). The surface of the landfill did not show any evidence of frost action or erosion. There were two shallow depressions that do not appear to be impacting the integrity of the landfill. Erosion channels on the south east corner of the NHWL have not been evident since it was documented in the Year 1 Long Term Monitoring Report (2016). Evidence of erosion was documented on the access roads between the landfill and the weather station as well as between the landfill and the airstrip. Both these features are at a distance from the NHWL and do not impact the performance of the facility. ATV tracks that were documented on and around the NHWL in previous reports have diminished and were not observed in 2020.

During the site visit and as part of the natural environment monitoring, a bald eagle as well as a ptarmigan was spotted flying overhead. An animal carcass was found near the landfill. Caribou droppings and tracks were found close to the airstrip. Multiple siksik or fox burrows were found on the road between the airstrip and landfill.

An interview with a resident of Rankin Inlet reported that the area was used for hunting, fishing and occasionally for wood harvesting and mainly accessed via snow machine in the spring. Wildlife anticipated to be present in the area include wolves, wolverines, grizzly bears, and barren land caribou.

Three (3) groundwater samples were collected from two (2) monitoring wells. Monitoring well MWLF-1 was not dry or frozen but did not recharge during the site visit. In the interest of collecting more groundwater data, a sample was collected from the purge water and analysed for metals and PCBs. Monitoring well MWLF-2 was frozen and could not be sampled. Monitoring well MWLF-3 was performing as expected so sample and duplicate was collected. Groundwater quality in a sample obtained from MWLF-1 exceeded the FIGQGs and calculated ULAs. This sample is considered to be purge water and is not considered to be representative of the groundwater quality in the aquifer near the Ennadai Lake site NHWL. The analytical results of the samples MWLF-3 and MWLF-3-D reported exceedances of FIGQGs for total and dissolved aluminum and copper and no exceedances of the calculated ULAs. As per the AMSRP geochemical assessment, the landfill is performing as expected.



Based on the results of the 2020 long term monitoring event, BluMetric recommends continuing monitoring at the recommended schedule presented in the Ennadai Lake LTM Plan. The site is deemed to be in acceptable condition as there were no observable or geochemical indications of deterioration of the landfill at the Ennadai Lake site in 2020. The next monitoring event is recommended to occur in Year 7 (2022).

6.1 CLOSURE

The conclusions presented in this report are based upon the analysis of historical information made available to BluMetric Environmental Inc. Any additional information received after the date of delivery of this report will be analysed and submitted in a timely manner in the form of an addendum or a memorandum.

BluMetric Environmental Inc. makes no warranty as to the accuracy or completeness of the information provided by others, or of conclusions and recommendations predicated on the accuracy of that information.

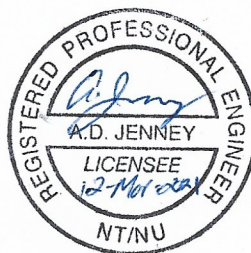
This report has been prepared for CIRNAC. Any use a third party makes of this report, any reliance on the report, or decisions based upon the report, are the responsibility of those third parties unless authorization is received from BluMetric Environmental Inc. in writing.

Respectfully Submitted,
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TABLES



CIRNAC - Ennadai Lake LTM 2020 - 200537				GW	GW	GW	GW	GW	GW	GW	Average	Standard Deviation	ULA
Table 1: Historical Analytical Chemistry Results for PHCs and VOCs in Water				MW13-2 - 2014	LF3-WS-01 - 2014	MW-LF3-WS-02 2014	MWLF-3 - 2016	MWLF-3 D - 2016	MWLF-3 - 2018	MWLF-3 D - 2018			
Parameter	Units	RDL	Criteria 1	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake			
			FCSAP-T1-Coarse-RP	Stantec	Stantec	Stantec	Arcadis	Arcadis	SLR	SLR			
				2014	2014	2014	24-Aug-16	24-Aug-16	17-Aug-18	17-Aug-18			
PHCs and VOCs													
F1 (C6-C10)	mg/L	0.1	0.81	<0.20	<0.20	<0.20	0.26	0.34	<0.10	<0.10	Not Calculated		
F1-BTEX	mg/L	0.1	0.81	-	-	-	0.26	0.34	<0.10	<0.10	Not Calculated		
F2 (C10-C16)	mg/L	0.3	1.3	<0.20	<0.20	<0.40	<0.10	<0.10	<0.10	<0.10	Not Calculated		
F3 (C16-C34)	mg/L	0.3	-	<0.30	<0.30	-	<0.20	<0.20	-	-	Not Calculated		
F4 (C34-C50)	mg/L	0.3	-	<0.30	<0.30	-	<0.20	<0.20	-	-	Not Calculated		
Benzene	mg/L	0.0005	0.14	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	-	-	Not Calculated		
Ethylbenzene	mg/L	0.0005	11	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	-	-	Not Calculated		
Toluene	mg/L	0.0005	0.083	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	-	-	Not Calculated		
Xylenes	mg/L	0.0008	3.9	<0.002	<0.002	<0.002	<0.0008	<0.0008	<0.0009	<0.0009	Not Calculated		

Notes:

Underline	indicates detection limit exceeds criteria
Grey	indicates detected concentration exceeds criteria 1

Criteria 1 - FCSAP Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites, Residential/Parkland Land Use (FIGQG), 2016. Except for Al, Cu, Pd, and Zn where Canadian Water Quality Guideline for the Protection of Aquatic Life (FW) (1999) was applied.

MW13-2-2014 This monitoring well is located at the nearby landfarm and not monitored under this project.

RDL - Refers to laboratory detection limit which may vary between sample locations and event

CIRNAC - Ennadai Lake LTM 2020 - 200537				GW	GW	GW	GW	GW	GW	Average	Standard Deviation	ULA
Table 2: Historical Analytical Chemistry Results for PCBs in Water				LF3-WS-01 - 2014	MW-LF3-WS-02 2014	MWLF-3 - 2016	MWLF-3 D - 2016	MWLF-3 - 2018	MWLF-3 D - 2018			
Parameter	Units	RDL	Criteria 1	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake			
			FCSAP-T1-Coarse-RP	Stantec	Stantec	Arcadis	Arcadis	SLR	SLR			
				2014	2014	24-Aug-16	24-Aug-16	17-Aug-18	17-Aug-18			
PCBs												
Total PCBs	mg/L	0.00004	-	-	-	<0.00005	<0.00005	<0.00005	<0.00005	Not Calculated		

Notes:

<u>Underline</u>	indicates detection limit exceeds criteria
Grey	indicates detected concentration exceeds criteria 1

Criteria 1 - FCSAP Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites, Residential/Parkland Land Use (FIGQG), 2016. Except for Al, Cu, Pd, and Zn where Canadian Water Quality Guideline for the Protection of Aquatic Life (FW) (1999) was applied.

RDL - Refers to laboratory detection limit which may vary between sample locations and event

Table 3: Historical Analytical Chemistry Results for Metals and Inorganics (Total) in Water and ULA Calculations				GW	GW	GW	GW	GW	GW	Average	Standard Deviation	ULA
				LF3-WS-01 - 2014	MW-LF3-WS-02 2014	MWLF-3 - 2016	MWLF-3 D - 2016	MWLF-3 - 2018	MWLF-3 D - 2018			
				Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake			
Parameter	Units	RDL	Criteria 1	Stantec	Stantec	Arcadis	Arcadis	SLR	SLR			
			FCSAP-T1-Coarse-RP	2014	2014	24-Aug-16	24-Aug-16	17-Aug-18	17-Aug-18			
Total Metals												
Aluminum (Al)-Total	mg/L	0.003	pH dependant	21.4	1.78	3.1	3.9	0.21	0.2	6.623	9.922	36.389
Antimony (Sb)-Total	mg/L	0.0001	2	-	-	-	-	<0.0006	<0.0006	Not Calculated		
Arsenic (As)-Total	mg/L	0.0001	0.005	0.00381	0.0005	0.00094	0.0012	0.00057	0.0004	0.001	0.002	0.006
Barium (Ba)-Total	mg/L	0.0001	0.5	-	-	-	-	0.12	0.12	Not Calculated		
Beryllium (Be)-Total	mg/L	0.0001	0.0053	-	-	-	-	<0.001	<0.001	Not Calculated		
Bismuth (Bi)-Total	mg/L	0.00005	-	-	-	-	-	-	-	Not Calculated		
Boron (B)-Total	mg/L	0.01	1.5	-	-	-	-	<0.020	<0.020	Not Calculated		
Cadmium (Cd)-Total	mg/L	0.000005	0.00009	0.000113	0.000035	0.00015	0.00015	0.000097	0.00011	0.000099	0.000048	0.000243
Calcium (Ca)-Total	mg/L	0.05	-	-	-	-	-	23	23	Not Calculated		
Cesium (Cs)-Total	mg/L	0.00001	-	-	-	-	-	-	-	Not Calculated		
Chromium (Cr)-Total	mg/L	0.0001	0.0089	0.0321	0.00276	0.012	0.014	0.0024	0.0023	0.012	0.014	0.054
Cobalt (Co)-Total	mg/L	0.0001	-	0.0122	0.0051	0.015	0.016	0.014	0.014	0.012	0.004	0.025
Copper (Cu)-Total	mg/L	0.0005	hardness depend.	0.0442	0.00605	0.015	0.016	0.018	0.019	0.021	0.016	0.070
Iron (Fe)-Total	mg/L	0.01	0.3	18.2	1.6	4.8	5.6	0.13	0.12	6.183	8.245	30.919
Lead (Pb)-Total	mg/L	0.00005	hardness depend.	0.0194	0.0023	0.0026	0.0033	<0.0002	<0.0002	0.008	0.010	0.037
Lithium (Li)-Total	mg/L	0.001	-	-	-	-	-	<0.02	<0.02	Not Calculated		
Magnesium (Mg)-Total	mg/L	0.005	-	-	-	-	-	7.8	7.9	Not Calculated		
Manganese (Mn)-Total	mg/L	0.0001	-	-	-	-	-	2	2	Not Calculated		
Mercury (Hg)-Total	mg/L	0.000005	0.000026	<0.00010	0.00004	0.000014	0.000014	-	-	Not Calculated		
Molybdenum (Mo)-Total	mg/L	0.00005	0.073	-	-	-	-	0.00031	0.00029	Not Calculated		
Nickel (Ni)-Total	mg/L	0.0005	hardness depend.	0.0247	0.00339	0.028	0.03	0.027	0.027	0.021	0.012	0.056
Phosphorus (P)-Total	mg/L	0.05	-	-	-	-	-	<0.10	<0.10	Not Calculated		
Potassium (K)-Total	mg/L	0.05	-	-	-	-	-	4.3	4.3	Not Calculated		
Rubidium (Rb)-Total	mg/L	0.0002	-	-	-	-	-	-	-	Not Calculated		
Selenium (Se)-Total	mg/L	0.00005	0.001	-	-	-	-	0.00028	0.00021	Not Calculated		
Silicon (Si)-Total	mg/L	0.1	-	-	-	-	-	7	7	Not Calculated		
Silver (Ag)-Total	mg/L	0.00001	0.00025	0.000208	<0.000020	<0.00010	0.00011	0.0001	0.00011	Not Calculated		
Sodium (Na)-Total	mg/L	0.05	-	-	-	-	-	1.2	1.2	Not Calculated		
Strontium (Sr)-Total	mg/L	0.0002	-	-	-	-	-	0.21	0.21	Not Calculated		
Sulfur (S)-Total	mg/L	0.5	-	-	-	-	-	0.6	0.66	Not Calculated		
Tellurium (Te)-Total	mg/L	0.0002	-	-	-	-	-	-	-	Not Calculated		
Thallium (Tl)-Total	mg/L	0.00001	0.0008	-	-	-	-	<0.0002	<0.0002	Not Calculated		
Thorium (Th)-Total	mg/L	0.0001	-	-	-	-	-	-	-	Not Calculated		
Tin (Sn)-Total	mg/L	0.0001	-	-	-	-	-	<0.001	<0.001	Not Calculated		
Titanium (Ti)-Total	mg/L	0.0003	0.1	-	-	-	-	0.0077	0.0071	Not Calculated		
Tungsten (W)-Total	mg/L	0.0001	-	-	-	-	-	-	-	Not Calculated		
Uranium (U)-Total	mg/L	0.00001	0.015	-	-	-	-	0.0012	0.0012	Not Calculated		
Vanadium (V)-Total	mg/L	0.0005	-	-	-	-	-	0.0013	0.0013	Not Calculated		
Zinc (Zn)-Total	mg/L	0.003	0.01	0.0373	0.0059	0.016	0.018	0.0041	0.0042	0.016	0.015	0.062
Zirconium (Zr)-Total	mg/L	0.0002	-	-	-	-	-	-	-	Not Calculated		

Notes:

Underline	Indicates detection limit exceeds criteria
Grey	Indicates detected concentration exceeds criteria 1

Criteria 1 - FCSAP Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites, Residential/Parkland Land Use (FIGQG), 2016. Except for Al, Cu, Pd, and Zn where Canadian Water Quality Guideline for the Protection of Aquatic Life (FW) (1999) was applied.

RDL - Refers to laboratory detection limit which may vary between sample locations and event

ULA - Upper Limit of Acceptability - calculated from historically collected data, average + 3 x standard deviation

Parameter	Units	CW/QG AW (1999) Variable Criteria - Calculated					
		LF3-WS-01 - 2014	MW-LF3-WS-02 2014	MWLF-3 - 2016	MWLF-3 D - 2016	MWLF-3 - 2018	MWLF-3 D - 2018
Aluminum (Al)	mg/L	0.1	0.1	0.005	0.005	0.005	0.005
Copper (Cu)	mg/L	0.002*	0.002*	0.00372	0.00372	0.00210	0.00208
Lead (Pb)	mg/L	0.001*	0.001*	0.00625	0.00625	0.00286	0.00263
Nickel (Ni)	mg/L	0.025*	0.025*	0.14305	0.14305	0.08598	0.08523

* hardness unknown therefore lowest guideline choosen (as per CCME Factsheet)



CIRNAC - Ennadai Lake LTM 2020 - 200537				GW	GW	GW	GW	GW	GW	Average	Standard Deviation	ULA
Table 4: Historical Analytical Chemistry Results for Metals and Inorganics (Dissolved) in Water and Calculated ULAs				LF3-WS-01 - 2014	MW-LF3-WS-02 2014	MWLF-3 - 2016	MWLF-3 D - 2016	MWLF-3 - 2018	MWLF-3 D - 2018			
Parameter	Units	RDL	Criteria 1	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake			
			FCSAP-T1-Coarse-RP	Stantec	Stantec	Arcadis	Arcadis	SLR	SLR			
				2014	2014	24-Aug-16	24-Aug-16	17-Aug-18	17-Aug-18			
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	0.001	0.005	-	-	0.1	0.092	0.17	0.16	Not Calculated		
Antimony (Sb)-Dissolved	mg/L	0.0001	2	-	-	-	-	<0.0006	<0.0006	Not Calculated		
Arsenic (As)-Dissolved	mg/L	0.0001	0.005	-	-	0.00044	0.00051	<0.00035	0.00048	Not Calculated		
Barium (Ba)-Dissolved	mg/L	0.0001	0.5	-	-	-	-	<0.120	<0.120	Not Calculated		
Beryllium (Be)-Dissolved	mg/L	0.0001	0.0053	-	-	-	-	<0.001	<0.001	Not Calculated		
Bismuth (Bi)-Dissolved	mg/L	0.00005	-	-	-	-	-	-	-	Not Calculated		
Boron (B)-Dissolved	mg/L	0.01	1.5	-	-	-	-	<0.020	<0.020	Not Calculated		
Cadmium (Cd)-Dissolved	mg/L	0.000005	0.00009	-	-	0.00012	0.00012	0.000082	0.000082	Not Calculated		
Calcium (Ca)-Dissolved	mg/L	0.05	-	-	-	-	-	22	22	Not Calculated		
Cesium (Cs)-Dissolved	mg/L	0.00001	-	-	-	-	-	-	-	Not Calculated		
Chromium (Cr)-Dissolved	mg/L	0.0001	0.0089	-	-	<0.0010	<0.0010	0.0018	0.0019	Not Calculated		
Cobalt (Co)-Dissolved	mg/L	0.0001	-	-	-	0.014	0.013	0.013	0.014	Not Calculated		
Copper (Cu)-Dissolved	mg/L	0.0002	hardness depend.	-	-	0.0065	0.0059	0.016	0.017	Not Calculated		
Iron (Fe)-Dissolved	mg/L	0.01	0.3	-	-	0.088	0.095	0.075	0.078	Not Calculated		
Lead (Pb)-Dissolved	mg/L	0.00005	hardness depend.	-	-	<0.0002	<0.0002	<0.0002	<0.0002	Not Calculated		
Lithium (Li)-Dissolved	mg/L	0.001	-	-	-	-	-	-	-	Not Calculated		
Magnesium (Mg)-Dissolved	mg/L	0.005	-	-	-	-	-	-	-	Not Calculated		
Manganese (Mn)-Dissolved	mg/L	0.0001	-	-	-	-	-	-	-	Not Calculated		
Mercury (Hg)-Dissolved	mg/L	0.000005	0.000026	-	-	0.0000067	0.0000067	-	-	Not Calculated		
Molybdenum (Mo)-Dissolved	mg/L	0.00005	0.073	-	-	-	-	0.00022	0.00022	Not Calculated		
Nickel (Ni)-Dissolved	mg/L	0.0005	hardness depend.	-	-	0.022	0.02	0.026	0.026	Not Calculated		
Phosphorus (P)-Dissolved	mg/L	0.05	-	-	-	-	-	<0.100	<0.100	Not Calculated		
Potassium (K)-Dissolved	mg/L	0.05	-	-	-	-	-	41	41	Not Calculated		
Rubidium (Rb)-Dissolved	mg/L	0.0002	-	-	-	-	-	-	-	Not Calculated		
Selenium (Se)-Dissolved	mg/L	0.00005	0.001	-	-	-	-	0.00023	0.00022	Not Calculated		
Silicon (Si)-Dissolved	mg/L	0.05	-	-	-	-	-	6.9	6.9	Not Calculated		
Silver (Ag)-Dissolved	mg/L	0.00001	0.00025	-	-	<0.00010	<0.00010	<0.0001	<0.0001	Not Calculated		
Sodium (Na)-Dissolved	mg/L	0.05	-	-	-	-	-	1.2	1.2	Not Calculated		
Strontium (Sr)-Dissolved	mg/L	0.0002	-	-	-	-	-	-	-	Not Calculated		
Sulfur (S)-Dissolved	mg/L	0.5	-	-	-	-	-	0.63	0.62	Not Calculated		
Tellurium (Te)-Dissolved	mg/L	0.0002	-	-	-	-	-	-	-	Not Calculated		
Thallium (Tl)-Dissolved	mg/L	0.00001	0.0008	-	-	-	-	<0.0002	<0.0002	Not Calculated		
Thorium (Th)-Dissolved	mg/L	0.0001	-	-	-	-	-	-	-	Not Calculated		
Tin (Sn)-Dissolved	mg/L	0.0001	-	-	-	-	-	<0.001	<0.001	Not Calculated		
Titanium (Ti)-Dissolved	mg/L	0.0003	0.1	-	-	-	-	0.0037	0.0025	Not Calculated		
Tungsten (W)-Dissolved	mg/L	0.0001	-	-	-	-	-	-	-	Not Calculated		
Uranium (U)-Dissolved	mg/L	0.00001	0.015	-	-	-	-	0.0011	0.00099	Not Calculated		
Vanadium (V)-Dissolved	mg/L	0.0005	-	-	-	-	-	0.0015	0.0016	Not Calculated		
Zinc (Zn)-Dissolved	mg/L	0.001	0.01	-	-	0.004	<0.0030	<0.003	0.0045	Not Calculated		
Zirconium (Zr)-Dissolved	mg/L	0.0002	-	-	-	-	-	-	-	Not Calculated		

Notes:

Underline	indicates detection limit exceeds criteria
Grey	indicates detected concentration exceeds criteria 1

Criteria 1 - FCSAP Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites, Residential/Parkland Land Use (FIGQG), 2016. Except for Al, Cu, Pd, and Zn where Canadian Water Quality Guideline for the Protection of Aquatic Life (FW) (1999) was applied.

ULA Upper Limit of Acceptability - calculated from historically collected data, average + 3 x standard deviation

Parameter	Units	CWQG AW (1999) Variable Criteria - Calculated			
		MWLF-3 - 2016	MWLF-3 D - 2016	MWLF-3 - 2018	MWLF-3 D - 2018
Aluminum (Al)	mg/L	0.005	0.005	0.005	0.005
Copper (Cu)	mg/L	0.00372	0.00372	0.00210	0.00208
Lead (Pb)	mg/L	0.00625	0.00625	0.00266	0.00263
Nickel (Ni)	mg/L	0.14305	0.14305	0.08598	0.08523

CIRNAC - Ennadai Lake LTM 2020 - 200537				GW	GW	GW	GW	GW	GW	GW	Average	Standard Deviation	ULA
Table 5: Historical Analytical Chemistry Results for General Chemistry in Water and Calculated ULAs				MW13-2 - 2014	LF3-WS-01 - 2014	MW-LF3-WS-02 2014	MWLF-3 - 2016	MWLF-3 D - 2016	MWLF-3 - 2018	MWLF-3 D - 2018			
Parameter	Units	RDL	Criteria 1	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake	Ennadai Lake			
			FCSAP-T1-Coarse-RP	Stantec	Stantec	Stantec	Arcadis	Arcadis	SLR	SLR			
				2014	2014	2014	24-Aug-16	24-Aug-16	17-Aug-18	17-Aug-18			
General Chemistry													
Conductivity	uS/cm	2	-	23	99	79	330	320	190	190	144.2	120.00	504.21
Hardness (as CaCO3)	mg/L	0.5	-	-	-	-	170	170	87	86	Not Calculated		
pH	pH	0.1	6.5-9	6.22	6.66	6.68	6.42	6.39	6.01	6.24	Not Calculated		
Total Suspended Solids	mg/L	3	-	-	-	-	110	110	1.3	1.3	Not Calculated		
Total Dissolved Solids	mg/L	13	-	12.5	58.9	54.5	220	200	93	92	87.78	79.24	325.51
Bromide (Br)	mg/L	0.05	-	-	-	-	-	-	-	-	Not Calculated		
Chloride (Cl)	mg/L	0.5	120	9.2	4.8	9.8	4.2	4.2	1.2	1.2	5.84	3.61	16.68
Fluoride (F)	mg/L	0.02	0.12	-	-	-	-	-	-	-	Not Calculated		
Nitrate (as N)	mg/L	0.005	13	<0.5	<0.5	<0.5	<0.010	<0.010	<0.10	<0.10	Not Calculated		
Nitrite (as N)	mg/L	0.001	0.06	<0.050	0.06	0.089	<0.010	<0.010	<0.10	<0.10	Not Calculated		
Sulfate (SO4)	mg/L	0.3	100	<3.0	15	3.1	<1.0	<1.0	<0.10	<0.10	Not Calculated		

Notes:

<u>Underline</u>	indicates detection limit exceeds criteria
Grey	indicates detected concentration exceeds criteria 1

Criteria 1 - FCSAP Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites, Residential/Parkland Land Use (FIGQG), 2016. Except for Al, Cu, Pd, and Zn where Canadian Water Quality Guideline for the Protection of Aquatic Life (FW) (1999) was applied.

RDL - Refers to laboratory detection limit which may vary between sample locations and event

ULA Upper Limit of Acceptability - calculated from historically collected data, average + 3 x standard deviation

MW13-2 This monitoring well is located at the nearby landfarm and not monitored under this project.

CIRNAC - Ennadai Lake LTM 2020 - 200537				Matrix	GW (purge)	GW	GW
Table 6: Analytical Chemistry Results for PHCs and VOCs in Water				Sample ID	MWLF-1	MWLF-3	MWLF-3-D
Parameter	Units	RDL	Criteria 1	Location	Ennadai Lake	Ennadai Lake	Ennadai Lake
			FCSAP-T1-Coarse-RP	Consultant	BluMetric	BluMetric	BluMetric
				Sample Date	27-Aug-20	27-Aug-20	27-Aug-20
PHCs and VOCs				Max Concentration			
F1 (C6-C10)	mg/L	0.1	0.81	<0.1	-	<0.10	<0.10
F1-BTEX	mg/L	0.1	0.81	<0.1	-	<0.10	<0.10
F2 (C10-C16)	mg/L	0.3	1.3	<0.3	-	<0.30	<0.30
F3 (C16-C34)	mg/L	0.3	-	<0.3	-	<0.30	<0.30
F4 (C34-C50)	mg/L	0.3	-	<0.3	-	<0.30	<0.30
Benzene	mg/L	0.0005	0.14	<0.0005	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.0005	11	<0.0005	-	<0.00050	<0.00050
Methyl t-butyl ether (MTBE)	mg/L	0.0005	0.34	<0.0005	-	<0.00050	<0.00050
Styrene	mg/L	0.0005	0.072	<0.0005	-	<0.00050	<0.00050
Toluene	mg/L	0.0005	0.083	<0.00045	-	<0.00045	<0.00045
ortho-Xylene	mg/L	0.0005	-	<0.0005	-	<0.00050	<0.00050
meta- & para-Xylene	mg/L	0.0005	-	<0.0005	-	<0.00050	<0.00050
Xylene Total	mg/L	0.0008	3.9	<0.00075	-	<0.00075	<0.00075

Notes:

Underline

Grey

indicates detection limit exceeds criteria
indicates detected concentration exceeds criteria 1

Criteria 1 - FCSAP Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites, Residential/Parkland Land Use (FIGQG), 2016. Except for Al, Cu, Pd, and Zn where Canadian Water Quality Guideline for the Protection of Aquatic Life (FW) (1999) was applied.

RDL - Refers to laboratory detection limit which may vary between sample locations and event

CIRNAC - Ennadai Lake LTM 2020 - 200537				Matrix	GW (purge)	GW	GW
Table 7: Analytical Chemistry Results for PCBs in Water				Sample ID	MWLF-1	MWLF-3	MWLF-3-D
Parameter	Units	RDL	Criteria 1	Location	Ennadai Lake	Ennadai Lake	Ennadai Lake
			FCSAP-T1-Coarse-RP	Consultant	BluMetric	BluMetric	BluMetric
				Sample Date	27-Aug-20	27-Aug-20	27-Aug-20
PCBs				Max Concentration			
Aroclor 1242	mg/L	0.00002	-	<0.00002	<0.000020	<0.000020	<0.000020
Aroclor 1248	mg/L	0.00002	-	<0.00002	<0.000020	<0.000020	<0.000020
Aroclor 1254	mg/L	0.00002	-	<0.00002	<0.000020	<0.000020	<0.000020
Aroclor 1260	mg/L	0.00002	-	<0.00002	<0.000020	<0.000020	<0.000020
Total PCBs	mg/L	0.00004	-	<0.00004	<0.000040	<0.000040	<0.000040

Notes:

Underline

Grey

indicates detection limit exceeds criteria

indicates detected concentration exceeds criteria 1

Criteria 1 - FCSAP Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites, Residential/Parkland Land Use (FIGQG), 2016. Except for Al, Cu, Pd, and Zn where Canadian Water Quality Guideline for the Protection of Aquatic Life (FW) (1999) was applied.

RDL - Refers to laboratory detection limit which may vary between sample locations and event

CIRNAC - Ennadai Lake LTM 2020 - 200537					Matrix	GW (purge)	GW	GW
					Sample ID	MWLF-1	MWLF-3	MWLF-3-D
Table 8: Analytical Chemistry Results for Metals and Inorganics (Total) in Water					Location	Ennadai Lake	Ennadai Lake	Ennadai Lake
Parameter	Units	RDL	Criteria 1	Criteria 2	Consultant	BluMetric	BluMetric	BluMetric
			FCSAP-T1-Coarse-RP	ULAs	Sample Date	27-Aug-20	27-Aug-20	27-Aug-20
Total Metals					Max Concentration			
Aluminum (Al)-Total	mg/L	0.003	0.005	36.389	0.365	0.171	0.365	0.335
Antimony (Sb)-Total	mg/L	0.0001	2	-	0.00019	0.00019	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.0001	0.005	0.00620	0.00062	0.00015	0.00062	0.00058
Barium (Ba)-Total	mg/L	0.0001	0.5	-	0.118	0.0614	0.118	0.113
Beryllium (Be)-Total	mg/L	0.0001	0.0053	-	<0.0001	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	mg/L	0.00005	-	-	<0.00005	<0.000050	<0.000050	<0.000050
Boron (B)-Total	mg/L	0.01	1.5	-	0.02	0.014	0.02	0.019
Cadmium (Cd)-Total	mg/L	0.000005	0.00009	0.00024	0.00035	0.00035	0.0000761	0.0000715
Calcium (Ca)-Total	mg/L	0.05	-	-	23.1	2.89	22.2	23.1
Cesium (Cs)-Total	mg/L	0.00001	-	-	0.000011	0.00001	0.000011	<0.000010
Chromium (Cr)-Total	mg/L	0.0001	0.0089	0.05407	0.00197	0.00174	0.00197	0.00189
Cobalt (Co)-Total	mg/L	0.0001	-	0.02498	0.00685	0.00278	0.00685	0.00626
Copper (Cu)-Total	mg/L	0.0005	hardness depend.	0.0700	0.0282	0.0195	0.0282	0.0279
Iron (Fe)-Total	mg/L	0.01	0.3	30.919	0.144	0.088	0.144	0.132
Lead (Pb)-Total	mg/L	0.00005	hardness depend.	0.03746	0.000364	0.000364	0.000103	0.000084
Lithium (Li)-Total	mg/L	0.001	-	-	0.0033	<0.0010	0.0028	0.0033
Magnesium (Mg)-Total	mg/L	0.005	-	-	7.73	1.04	7.73	7.73
Manganese (Mn)-Total	mg/L	0.0001	-	-	0.838	0.0437	0.838	0.798
Mercury (Hg)-Total	mg/L	0.000005	0.000026	0.00008	0.0000143	0.000005	0.0000131	0.0000143
Molybdenum (Mo)-Total	mg/L	0.00005	0.073	-	0.000272	0.000182	0.000272	0.000266
Nickel (Ni)-Total	mg/L	0.0005	hardness depend.	0.0558	0.101	0.101	0.0269	0.0266
Phosphorus (P)-Total	mg/L	0.05	-	-	<0.05	<0.050	<0.050	<0.050
Potassium (K)-Total	mg/L	0.05	-	-	4.38	0.855	4.34	4.38
Rubidium (Rb)-Total	mg/L	0.0002	-	-	0.00371	0.00299	0.00349	0.00371
Selenium (Se)-Total	mg/L	0.00005	0.001	-	0.000206	<0.000050	0.000198	0.000206
Silicon (Si)-Total	mg/L	0.1	-	-	6.73	3.18	6.73	6.7
Silver (Ag)-Total	mg/L	0.00001	0.00025	-	0.000053	0.000019	0.000049	0.000053
Sodium (Na)-Total	mg/L	0.05	-	-	5.37	5.37	2.27	2.21
Strontium (Sr)-Total	mg/L	0.0002	-	-	0.222	0.0301	0.215	0.222
Sulfur (S)-Total	mg/L	0.5	-	-	1.88	1.88	<0.50	1.06
Tellurium (Te)-Total	mg/L	0.0002	-	-	<0.0002	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.00001	0.0008	-	0.000016	0.000013	0.000012	0.000016
Thorium (Th)-Total	mg/L	0.0001	-	-	0.00043	0.00012	0.00043	0.00043
Tin (Sn)-Total	mg/L	0.0001	-	-	<0.0001	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L	0.0003	0.1	-	0.00438	0.0018	0.00438	0.00434
Tungsten (W)-Total	mg/L	0.0001	-	-	0.00021	0.00021	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.00001	0.015	-	0.00153	0.000129	0.00146	0.00153
Vanadium (V)-Total	mg/L	0.0005	-	-	0.00083	<0.00050	0.00083	0.0008
Zinc (Zn)-Total	mg/L	0.003	0.01	0.0616	0.0498	0.0498	0.0036	<0.0030
Zirconium (Zr)-Total	mg/L	0.0002	-	-	0.00267	0.00035	0.00239	0.00267

Notes:

Underline	indicates detection limit exceeds criteria
Grey	indicates detected concentration exceeds criteria 1
Red	indicates detected concentration exceeds criteria 2

Criteria 1 -

FCSAP Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites, Residential/Parkland Land Use (FIGQG), 2016. Except for Al, Cu, Pd, and Zn where Canadian Water Quality Guideline for the Protection of Aquatic Life (FW) (1999) was applied.

RDL -

Refers to laboratory detection limit which may vary between sample locations and event

ULA -

Upper Limits of Acceptability, calculated using the average + three (3) standard deviations of all available data & only calculated for parameters that had three or more data points that had detectable concentrations.

Parameter	Units	CW/QG AW (1999) Variable Criteria - Calculated		
		MWLF-1	MWLF-3	MWLF-3-D
Aluminum (Al)	mg/L	0.005	0.005	0.005
Copper (Cu)	mg/L	0.002	0.00222	0.00209
Lead (Pb)	mg/L	0.0010	0.0029	0.0026
Nickel (Ni)	mg/L	0.0250	0.0902	0.0855

CIRNAC - Ennadai Lake LTM 2020 - 200537					Matrix	GW (purge)	GW	GW
Table 9: Analytical Chemistry Results for Metals and Inorganics (Dissolved) in Water					Sample ID	MWLF-1	MWLF-3	MWLF-3-D
Parameter	Units	RDL	Criteria 1	Criteria 2	Location	Ennadai Lake	Ennadai Lake	Ennadai Lake
			FCSAP-T1-Coarse-RP	ULA	Consultant	BluMetric	BluMetric	BluMetric
					Sample Date	27-Aug-20	27-Aug-20	27-Aug-20
Dissolved Metals					Max Concentration			
Aluminum (Al)-Dissolved	mg/L	0.001	0.005	-	0.405	0.179	0.405	0.341
Antimony (Sb)-Dissolved	mg/L	0.0001	2	-	0.00021	0.00021	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L	0.0001	0.005	-	0.00072	0.00019	0.00072	0.00064
Barium (Ba)-Dissolved	mg/L	0.0001	0.5	-	0.12	0.0602	0.12	0.104
Beryllium (Be)-Dissolved	mg/L	0.0001	0.0053	-	<0.0001	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	mg/L	0.00005	-	-	<0.00005	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	mg/L	0.01	1.5	-	0.018	0.014	0.018	0.018
Cadmium (Cd)-Dissolved	mg/L	0.000005	0.00009	-	0.000361	0.000361	0.0000773	0.0000721
Calcium (Ca)-Dissolved	mg/L	0.05	-	-	22.8	2.99	22.8	22.8
Cesium (Cs)-Dissolved	mg/L	0.00001	-	-	0.00001	<0.000010	0.00001	<0.000010
Chromium (Cr)-Dissolved	mg/L	0.0001	0.0089	-	0.00197	0.00174	0.00197	0.00187
Cobalt (Co)-Dissolved	mg/L	0.0001	-	-	0.0068	0.00299	0.0068	0.00645
Copper (Cu)-Dissolved	mg/L	0.0002	hardness depend.	-	0.0316	0.0213	0.0316	0.0289
Iron (Fe)-Dissolved	mg/L	0.01	0.3	-	0.135	0.083	0.133	0.135
Lead (Pb)-Dissolved	mg/L	0.00005	hardness depend.	-	0.000418	0.000418	0.000103	0.000097
Lithium (Li)-Dissolved	mg/L	0.001	-	-	0.0031	<0.0010	0.0031	0.0029
Magnesium (Mg)-Dissolved	mg/L	0.005	-	-	8.69	1.09	8.69	7.18
Manganese (Mn)-Dissolved	mg/L	0.0001	-	-	0.902	0.0475	0.902	0.785
Mercury (Hg)-Dissolved	mg/L	0.000005	0.000026	-	0.0000149	<0.0000050	0.0000149	0.0000144
Molybdenum (Mo)-Dissolved	mg/L	0.00005	0.073	-	0.000271	0.000189	0.000271	0.000271
Nickel (Ni)-Dissolved	mg/L	0.0005	hardness depend.	-	0.107	0.107	0.0295	0.0275
Phosphorus (P)-Dissolved	mg/L	0.05	-	-	<0.05	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.05	-	-	4.73	0.961	4.73	4.3
Rubidium (Rb)-Dissolved	mg/L	0.0002	-	-	0.00424	0.00351	0.00424	0.00355
Selenium (Se)-Dissolved	mg/L	0.00005	0.001	-	0.000223	<0.000050	0.000202	0.000223
Silicon (Si)-Dissolved	mg/L	0.05	-	-	6.96	3.23	6.96	6.67
Silver (Ag)-Dissolved	mg/L	0.00001	0.00025	-	0.000047	0.000022	0.000047	0.000044
Sodium (Na)-Dissolved	mg/L	0.05	-	-	6.11	6.11	2.59	2.43
Strontium (Sr)-Dissolved	mg/L	0.0002	-	-	0.235	0.0356	0.235	0.198
Sulfur (S)-Dissolved	mg/L	0.5	-	-	1.82	1.82	0.61	0.72
Tellurium (Te)-Dissolved	mg/L	0.0002	-	-	<0.0002	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Dissolved	mg/L	0.00001	0.0008	-	0.00002	0.000013	0.000015	0.00002
Thorium (Th)-Dissolved	mg/L	0.0001	-	-	0.00054	0.00017	0.00054	0.00041
Tin (Sn)-Dissolved	mg/L	0.0001	-	-	0.00011	0.00011	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.0003	0.1	-	0.00512	0.00247	0.00512	0.0043
Tungsten (W)-Dissolved	mg/L	0.0001	-	-	0.00024	0.00024	<0.00010	<0.00010
Uranium (U)-Dissolved	mg/L	0.00001	0.015	-	0.00176	0.000137	0.00176	0.0015
Vanadium (V)-Dissolved	mg/L	0.0005	-	-	0.00072	<0.00050	0.00072	0.00063
Zinc (Zn)-Dissolved	mg/L	0.001	0.01	-	0.0588	0.0588	0.0034	0.0028
Zirconium (Zr)-Dissolved	mg/L	0.0002	-	-	0.0026	0.00035	0.0026	0.00243

Notes:

Underline	indicates detection limit exceeds criteria
Grey	indicates detected concentration exceeds criteria 1

Criteria 1 -

FCSAP Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites, Residential/Parkland Land Use (FIGQG), 2016. Except for Al, Cu, Pd, and Zn where Canadian Water Quality Guideline for the Protection of Aquatic Life (FW) (1999) was applied.

RDL -

Refers to laboratory detection limit which may vary between sample locations and event

ULA -

Upper Limits of Acceptability, calculated using the average + three (3) standard deviations of all available data & only calculated for parameters that had three or more data points that had detectable concentrations.

Parameter	Units	CWQG AW (1999) Variable Criteria - Calculated		
		MWLF-1	MWLF-3	MWLF-3-D
Aluminum (Al)	mg/L	0.005	0.005	0.005
Copper (Cu)	mg/L	0.002	0.00222	0.00209
Lead (Pb)	mg/L	0.0010	0.0029	0.0026
Nickel (Ni)	mg/L	0.0250	0.0902	0.0855

CIRNAC - Ennadai Lake LTM 2020 - 200537					Matrix	GW (purge)	GW	GW
Table 10: Analytical Chemistry Results for General Chemistry in Water					Sample ID	MWLF-1	MWLF-3	MWLF-3-D
Parameter	Units	RDL	Criteria 1	Criteria 2	Location	Ennadai Lake	Ennadai Lake	Ennadai Lake
			FCSAP-T1-Coarse-RP	ULA	Consultant	BluMetric	BluMetric	BluMetric
					Sample Date	27-Aug-20	27-Aug-20	27-Aug-20
General Chemistry					Max Concentration			
Conductivity	uS/cm	2	-	504.2	183	-	175	183
Hardness (as CaCO3)	mg/L	0.5	-	-	92.7	12	92.7	86.4
pH	pH	0.1	6.5-9	7.3	6.22	5.25*	6.22	6.2
Total Suspended Solids	mg/L	3	-	-	<3	-	<3.0	<3.0
Total Dissolved Solids	mg/L	13	-	325.5	156	-	154	156
Bromide (Br)	mg/L	0.05	-	-	0.112	-	0.112	0.111
Chloride (Cl)	mg/L	0.5	120	16.7	0.6	-	0.6	0.6
Fluoride (F)	mg/L	0.02	0.12	-	0.09	-	0.09	0.088
Nitrate (as N)	mg/L	0.005	13	-	0.0342	-	0.0342	0.0318
Nitrite (as N)	mg/L	0.001	0.06	0.136	<0.001	-	<0.0010	<0.0010
Sulfate (SO4)	mg/L	0.3	100	34.3	1.6	-	1.58	1.6

Notes:

Underline

Grey

indicates detection limit exceeds criteria

indicates detected concentration exceeds criteria 1

Criteria 1- FCSAP Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites, Residential/Parkland Land Use (FIGQG), 2016. Except for Al, Cu, Pd, and Zn where Canadian Water Quality Guideline for the Protection of Aquatic Life (FW) (1999) was applied.

* Field pH used due to lack of water volume

RDL - Refers to laboratory detection limit which may vary between sample locations and event

ULA - Upper Limits of Acceptability, calculated using the average + three (3) standard deviations of all available data & only calculated for parameters that had three or more data points that had detectable concentrations.

CIRNAC - Ennadai Lake LTM 2020 - 200537
Table 11:
Relative Percent Difference of Field Duplicates

Parameter		RDL	MWLF-3	MWLF-3-D	RPD (%)
PHCs and VOCs					
F1 (C6-C10)	mg/L	0.1	<0.10	<0.10	NA
F1-BTEX	mg/L	0.1	<0.10	<0.10	NA
F2 (C10-C16)	mg/L	0.3	<0.30	<0.30	NA
F3 (C16-C34)	mg/L	0.3	<0.30	<0.30	NA
F4 (C34-C50)	mg/L	0.3	<0.30	<0.30	NA
Benzene	mg/L	0.0005	<0.00050	<0.00050	NA
Ethylbenzene	mg/L	0.0005	<0.00050	<0.00050	NA
Methyl t-butyl ether (MTBE)	mg/L	0.0005	<0.00050	<0.00050	NA
Styrene	mg/L	0.0005	<0.00050	<0.00050	NA
Toluene	mg/L	0.00045	<0.00045	<0.00045	NA
ortho-Xylene	mg/L	0.0005	<0.00050	<0.00050	NA
meta- & para-Xylene	mg/L	0.0005	<0.00050	<0.00050	NA
Xylene Total	mg/L	0.00075	<0.00075	<0.00075	NA
PCBs					
Aroclor 1242	mg/L	0.00002	<0.000020	<0.000020	NA
Aroclor 1248	mg/L	0.00002	<0.000020	<0.000020	NA
Aroclor 1254	mg/L	0.00002	<0.000020	<0.000020	NA
Aroclor 1260	mg/L	0.00002	<0.000020	<0.000020	NA
Total PCBs	mg/L	0.00004	<0.000040	<0.000040	NA
TOTAL METALS					
Aluminum (Al)-Total	mg/L	0.003	0.365	0.335	8.57%
Antimony (Sb)-Total	mg/L	0.0001	<0.00010	<0.00010	NA
Arsenic (As)-Total	mg/L	0.0001	0.00062	0.00058	6.67%
Barium (Ba)-Total	mg/L	0.0001	0.118	0.113	4.33%
Beryllium (Be)-Total	mg/L	0.0001	<0.00010	<0.00010	NA
Bismuth (Bi)-Total	mg/L	0.00005	<0.000050	<0.000050	NA
Boron (B)-Total	mg/L	0.01	0.02	0.019	NA
Cadmium (Cd)-Total	mg/L	0.000005	0.0000761	0.0000715	6.23%
Calcium (Ca)-Total	mg/L	0.05	22.2	23.1	3.97%
Cesium (Cs)-Total	mg/L	0.00001	0.000011	<0.000010	NA
Chromium (Cr)-Total	mg/L	0.0001	0.00197	0.00189	4.15%
Cobalt (Co)-Total	mg/L	0.0001	0.00685	0.00626	9.00%
Copper (Cu)-Total	mg/L	0.0005	0.0282	0.0279	1.07%
Iron (Fe)-Total	mg/L	0.01	0.144	0.132	8.70%
Lead (Pb)-Total	mg/L	0.00005	0.000103	0.000084	NA
Lithium (Li)-Total	mg/L	0.001	0.0028	0.0033	NA
Magnesium (Mg)-Total	mg/L	0.005	7.73	7.73	0.00%
Manganese (Mn)-Total	mg/L	0.0001	0.838	0.798	4.89%
Mercury (Hg)-Total	mg/L	0.000005	0.0000131	0.0000143	NA
Molybdenum (Mo)-Total	mg/L	0.00005	0.000272	0.000266	2.23%
Nickel (Ni)-Total	mg/L	0.0005	0.0269	0.0266	1.12%
Phosphorus (P)-Total	mg/L	0.05	<0.050	<0.050	NA
Potassium (K)-Total	mg/L	0.05	4.34	4.38	0.92%
Rubidium (Rb)-Total	mg/L	0.0002	0.00349	0.00371	6.11%
Selenium (Se)-Total	mg/L	0.00005	0.000198	0.000206	NA
Silicon (Si)-Total	mg/L	0.1	6.73	6.7	0.45%
Silver (Ag)-Total	mg/L	0.00001	0.000049	0.000053	NA
Sodium (Na)-Total	mg/L	0.05	2.27	2.21	2.68%
Strontium (Sr)-Total	mg/L	0.0002	0.215	0.222	3.20%
Sulfur (S)-Total	mg/L	0.5	<0.50	1.06	NA
Tellurium (Te)-Total	mg/L	0.0002	<0.00020	<0.00020	NA
Thallium (Tl)-Total	mg/L	0.00001	0.000012	0.000016	NA
Thorium (Th)-Total	mg/L	0.0001	0.00043	0.00043	NA
Tin (Sn)-Total	mg/L	0.0001	<0.00010	<0.00010	NA
Titanium (Ti)-Total	mg/L	0.0003	0.00438	0.00434	0.92%
Tungsten (W)-Total	mg/L	0.0001	<0.00010	<0.00010	NA
Uranium (U)-Total	mg/L	0.00001	0.00146	0.00153	4.68%
Vanadium (V)-Total	mg/L	0.0005	0.00083	0.0008	NA
Zinc (Zn)-Total	mg/L	0.003	0.0036	<0.0030	NA
Zirconium (Zr)-Total	mg/L	0.0002	0.00239	0.00267	11.07%

CIRNAC - Ennadai Lake LTM 2020 - 200537
Table 11:
Relative Percent Difference of Field Duplicates

Parameter		RDL	MWLF-3	MWLF-3-D	RPD (%)
DISSOLVED METALS					
Aluminum (Al)-Dissolved	mg/L	0.001	0.405	0.341	17.16%
Antimony (Sb)-Dissolved	mg/L	0.0001	<0.00010	<0.00010	NA
Arsenic (As)-Dissolved	mg/L	0.0001	0.00072	0.00064	11.76%
Barium (Ba)-Dissolved	mg/L	0.0001	0.12	0.104	14.29%
Beryllium (Be)-Dissolved	mg/L	0.0001	<0.00010	<0.00010	NA
Bismuth (Bi)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	NA
Boron (B)-Dissolved	mg/L	0.01	0.018	0.018	NA
Cadmium (Cd)-Dissolved	mg/L	0.000005	0.0000773	0.0000721	6.96%
Calcium (Ca)-Dissolved	mg/L	0.05	22.8	22.8	0.00%
Cesium (Cs)-Dissolved	mg/L	0.00001	0.00001	<0.000010	NA
Chromium (Cr)-Dissolved	mg/L	0.0001	0.00197	0.00187	5.21%
Cobalt (Co)-Dissolved	mg/L	0.0001	0.0068	0.00645	5.28%
Copper (Cu)-Dissolved	mg/L	0.0002	0.0316	0.0289	8.93%
Iron (Fe)-Dissolved	mg/L	0.01	0.133	0.135	1.49%
Lead (Pb)-Dissolved	mg/L	0.00005	0.000103	0.000097	NA
Lithium (Li)-Dissolved	mg/L	0.001	0.0031	0.0029	NA
Magnesium (Mg)-Dissolved	mg/L	0.005	8.69	7.18	19.03%
Manganese (Mn)-Dissolved	mg/L	0.0001	0.902	0.785	13.87%
Mercury (Hg)-Dissolved	mg/L	0.000005	0.0000149	0.0000144	NA
Molybdenum (Mo)-Dissolved	mg/L	0.00005	0.000271	0.000271	0.00%
Nickel (Ni)-Dissolved	mg/L	0.0005	0.0295	0.0275	7.02%
Phosphorus (P)-Dissolved	mg/L	0.05	<0.050	<0.050	NA
Potassium (K)-Dissolved	mg/L	0.05	4.73	4.3	9.52%
Rubidium (Rb)-Dissolved	mg/L	0.0002	0.00424	0.00355	17.72%
Selenium (Se)-Dissolved	mg/L	0.00005	0.000202	0.000223	NA
Silicon (Si)-Dissolved	mg/L	0.05	6.96	6.67	4.26%
Silver (Ag)-Dissolved	mg/L	0.00001	0.000047	0.000044	NA
Sodium (Na)-Dissolved	mg/L	0.05	2.59	2.43	6.37%
Strontium (Sr)-Dissolved	mg/L	0.0002	0.235	0.198	17.09%
Sulfur (S)-Dissolved	mg/L	0.5	0.61	0.72	NA
Tellurium (Te)-Dissolved	mg/L	0.0002	<0.00020	<0.00020	NA
Thallium (Tl)-Dissolved	mg/L	0.00001	0.000015	0.00002	NA
Thorium (Th)-Dissolved	mg/L	0.0001	0.00054	0.00041	NA
Tin (Sn)-Dissolved	mg/L	0.0001	<0.00010	<0.00010	NA
Titanium (Ti)-Dissolved	mg/L	0.0003	0.00512	0.0043	17.41%
Tungsten (W)-Dissolved	mg/L	0.0001	<0.00010	<0.00010	NA
Uranium (U)-Dissolved	mg/L	0.00001	0.00176	0.0015	15.95%
Vanadium (V)-Dissolved	mg/L	0.0005	0.00072	0.00063	NA
Zinc (Zn)-Dissolved	mg/L	0.001	0.0034	0.0028	NA
Zirconium (Zr)-Dissolved	mg/L	0.0002	0.0026	0.00243	6.76%
General Chemistry					
Conductivity	uS/cm	2	175	183	4.47%
Hardness (as CaCO ₃)	mg/L	0.5	92.7	86.4	7%
pH	pH	0.1	6.22	6.2	0%
Total Suspended Solids	mg/L	3	<3.0	<3.0	NA
Total Dissolved Solids	mg/L	13	154	156	1%
Bromide (Br)	mg/L	0.05	0.112	0.111	NA
Chloride (Cl)	mg/L	0.5	0.6	0.6	NA
Fluoride (F)	mg/L	0.02	0.09	0.088	NA
Nitrate (as N)	mg/L	0.005	0.0342	0.0318	7%
Nitrite (as N)	mg/L	0.001	<0.0010	<0.0010	NA

Notes:

RDL indicates reported detection limit

RPD indicates relative percent difference

N/A indicates RPD is not applicable as the concentrations of at least one duplicate sample was non-detected or measured at a concentration less than 5 times the RDL

Bold and Red

The CCME recommends that Relative Percent Difference (RPD) values less than 40% are considered acceptable for surface water and groundwater samples.

FIGURES





LEGEND

1

REV.	DESCRIPTION	YY/MM/DD	BY	CHK
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REFERENCES

PROPRIETARY INFORMATION MAY NOT BE REPRODUCED OR DIVULGED WITHOUT PRIOR WRITTEN CONSENT OF BLUMETRIC ENVIRONMENTAL INC. DO NOT SCALE DRAWING.
THIS DRAWING MAY HAVE BEEN REDUCED. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS.

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Metres

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CLIENT

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

PROJECT

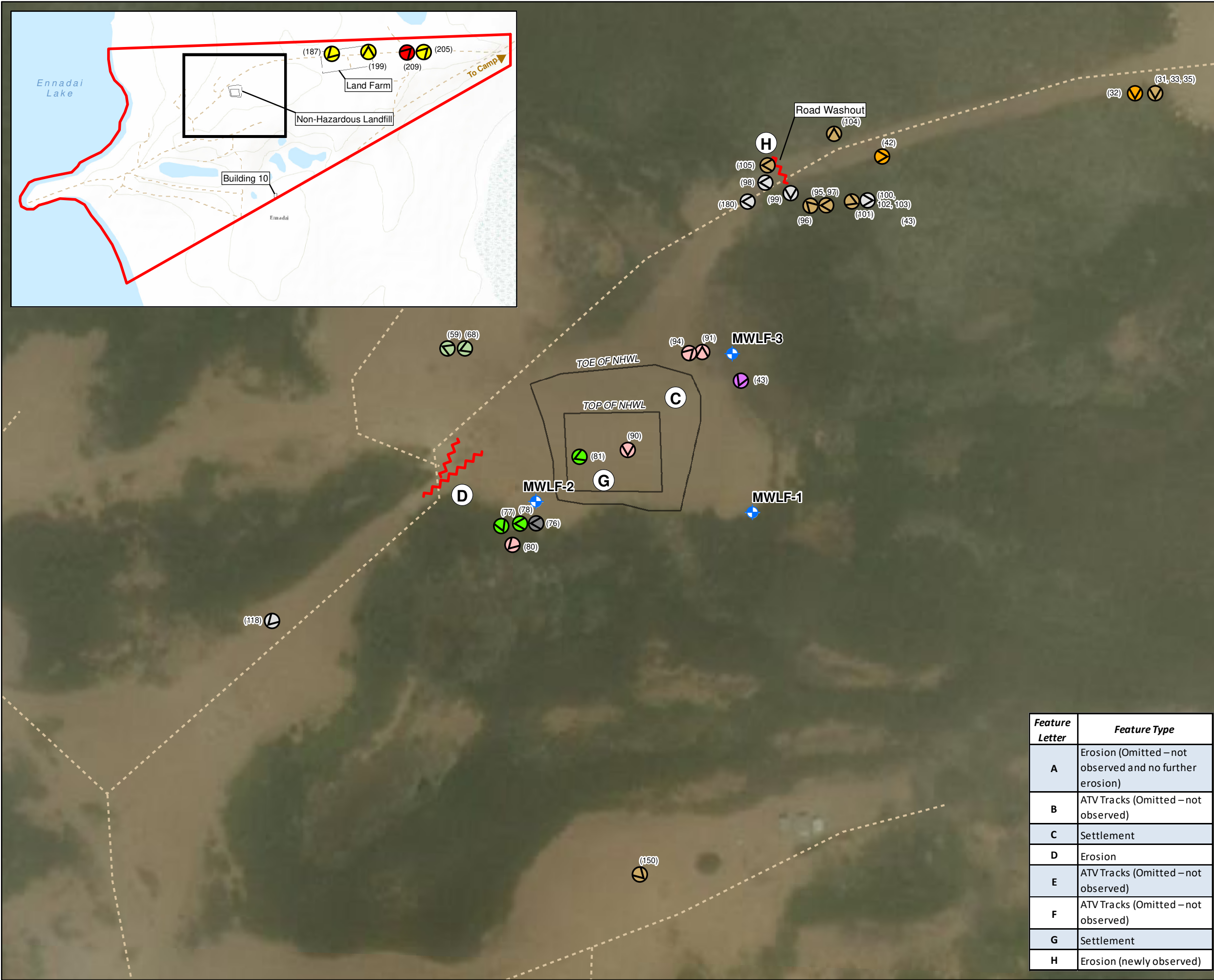
Long-Term Monitoring 2020
Ennadai Lake, Nunavut

TITLE

Site Location

4916 49th Street,
PO Box 11086
Yellowknife, NT, X1A 1P3
TEL: (867) 873-3500
FAX: (867) 873-3499
Email: info@blumetric.ca
Web: http://www.blumetric.ca

PROJECT # 200537		DATE February 12, 2021	
DRAWN KH	CHECKED KP	FIG NO. 01	REV 0



LEGEND

Photo Location and Evidence Type

- Animal Burrow
- Absence of Erosion
- Evidence of Erosion
- Evidence of Revegetation
- Evidence of Settlement
- Exposed Debris
- Staining Present
- Vegetation Present
- Wildlife Evidence
- Wildlife Sighting
- Monitoring Well
- Erosion
- Road/Trail
- Landfill Limit
- Site Boundary

FIELD OF VIEW

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

REFERENCES

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CLIENT

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

PROJECT

**Long-Term Monitoring 2020
Ennadai Lake, Nunavut**

TITLE

**Ennadai Lake Non-Hazardous
Waste Landfill Plan**

BluMetric™ Environmental

4916 49th Street,
PO Box 11086
Yellowknife, NT, X1A 1P3
TEL: (867) 873-3500
FAX: (867) 873-3499
Email: info@blumetric.ca
Web: http://www.blumetric.ca

PROJECT # 200537		DATE February 12, 2021	
DRAWN KH	CHECKED KP	FIG NO. 02	REV 0

APPENDIX A

Monitoring Checklists and Daily Field Report

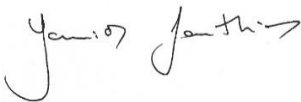


Daily Activities

Date:	Thursday August 27, 2020				
Project Name:	2020 Long Term Monitoring				
BluMetric Project #	200537				
Client:	CIRNAC				
BluMetric Personnel on site:	Matt Kitchen Jeff Rosnawski				
Client personnel on site:	Selma Al-Soweydawi				
Site Visited:	Ennadai Lake				
Start time (on site):	12:30				
End time (off site):	15:30				
Weather conditions:	10 C, overcast, light rain				
Project Activities completed today:	Visual inspection of NHWS – completed. Wildlife Monitor Interview – completed. No Staining Observed. The groundwater monitoring program was completed. - MWLF-1 was not frozen or dry but no recharge, sampled metals and PCBs - MWLF-2 was frozen - MWLF-3 was sampled for the full suite and was used as the blind duplicate				
Health and Safety:	Daily tailgate meeting theme was slips, trips, falls. No incidents or near misses to report.				
Visitors and Third Party Enquiries:	n/a				
Wildlife Sightings	No bear sightings. Recon flight getting to site no bears sighted.				
Project activities planned for tomorrow:	Complete the CAM-E field program.				
Labour Hour Tracking					
Name	Position	From	To	Hours	Notes
Anulik Akerolik	Wildlife Monitor	9:00	17:30 pm	8.5	
Equipment Tracking					
Name	Model	From	To	Hours	Notes

Sample Summary

Samples Collected	Total # Samples	Analysis								
		Metals	PHCs	VOCs	PAHs	PFAS	PCBs	Lead Paint	Asbestos	Other
Soil										
Sediment										
Surface Water										
Groundwater	2+ dup	2	1	1	1		2			
Vegetation										
Grain Size										
Building Material										
Other										

Other Notes/Comments	
Prepared by (print):	Matt Kitchen
Reviewed by (print):	Yannick Lanthier
Signature:	

NATURAL ENVIRONMENT CHECKLIST

Date:		27/Aug/20	
Site:		Ennadai Lake	
Note	Response	Extent	Description
	Y/N	Provide information as applicable (i.e. length/width/depth/type)	Features of note, photographic reference with scale, point of view and direction.
Wildlife Sightings	Y	- Bald Eagle - Dead arctic hare near MWLF-3 - Ptarmigan	Photo 43
Evidence of Wildlife	Y	- Caribou tracks and droppings - Sik sik/fox holes	Photos 31, 32, 35, and 42.
Wildlife Activity	Y	- Flyover - Denning	
Relative Number	Y	- 1 Bald eagle - 1 ptarmigan	
Evidence of Revegetation	Y	-Sparse grasses present on and around landfill	Photos 77, 78, 80, and 81

Wildlife Monitor Notes

- Potential Wildlife:
 - o Wolf, wolverine, grizzly bear, and barren land caribou
- Region used for fishing and hunting
- Primarily accessed in spring by snow machine
- Occasionally used for wood (Sometimes Christmas Trees)

VISUAL MONITORING CHECKLIST

Date:		27/Aug/20	
Landfill Location:		Ennadai Lake	
Note	Response	Extent	Description
	Y/N	Provide information as applicable (i.e. length/width/depth/type)	Features of note, photographic reference with scale, point of view and direction.
Evidence of Settlement	Y	Two potholes	80, 90, 91
Evidence of Erosion	Y	10 foot wide 2 foot deep erosion through access road. Erosion through road to weather	Photos 98-100, 102, 103 and 180
Evidence of Frost Action	N		
Animal Burrows	Y	Sik Sik or fox burrows in access road.	Photos 95-97, 101, 104, 105, 150
Vegetation Present	Y	Vegetation on flanks, limited on cap.	Photos 59, 68, 77 and 81
Vegetation Stresses	N		
Staining Present	N	Non visible, none around drums.	Photo 209
Seepage Points	N	None visible	
Exposed Debris	Y	Small pieces of debris, wire and a tarp or liner on the runway.	Photos 187 and 199
Condition of Instruments		In good condition	
Other Features			

APPENDIX B

Site Photographs





Photo 1: Small Depression at Northeast Corner of NHL, Viewpoint 94



Photo 2: Northeast Corner, Viewpoint 91



Photo 3: Small Depression Cap near South Edge, Viewpoint 81



Photo 4: Southeast Corner, Absence of Erosion Channel, Viewpoint 76



Photo 5: Erosion on Access Road to Weather Station, Viewpoint 118



Photo 4: Erosional Channel between Landfill and Airstrip, Viewpoint 98



Photo 7: Close Up of Erosion Channel, Viewpoint 100



Photo 8: Surface of Landfill, Absence of ATV Tracks, Viewpoint 98



Photo 9: Siksik Burrows, Viewpoint 95



Photo 10: Siksik Burrows, Viewpoint 101



Photo 11: Vegetation on Flanks of Landfill, Viewpoint 59



Photo 12: Limited Vegetation on Cap of Landfill, Viewpoint 81



Photo 13: Drums Present on Site near Airstrip, Viewpoint 209



Photo 14: Drums Present on Site near Airstrip, Viewpoint 205



Photo 15: Exposed liner on airstrip, Viewpoint 187



Photo 16: Exposed Wire Debris, Viewpoint 199



Photo 17: Arctic Hare Carcass near MWLF-3, Viewpoint 43



Photo 18: Caribou Droppings, Viewpoint 32



Photo 19: Caribou Tracks, Viewpoint 33

APPENDIX C

Groundwater Sampling Logs



Water Sampling Log

Page ____ of ____

Project Number: 200537 Date: 2020-August-27 Samplers Names: Jeff Rosanowski
Location: Ennadai Lake Start 13:30 End 13:55 Sample Type: GW

Well ID	Depth to Bottom	Water Level Depth	Well Volume	Water Description	DO	ORP	Temp	pH	Cond	Turbidity	TDS
eg. MW-19-01	mbtp	mbtp	Litres = H(m)x2.03	Colour, sheen, odour, etc	mg/L		C		ms/cm	NTU	g/L
MWLF-3	2.41	1.41	2.03	No odour, clear	1.53	241	12.08	4.8	0.093	5.9	0.06
MWLF-3	2.41	1.41	2.03	No odour, clear	1.34	228	11.67	4.56	0.095	2.2	0.063
MWLF-3	2.41	1.41	2.03	No odour, clear	1.35	225	11.45	4.43	0.097	1.5	0.063
MWLF-3	2.41	1.41	2.03	No odour, clear	1.34	222	11.26	4.39	0.099	1.6	0.064
MWLF-3	2.41	1.41	2.03	No odour, clear	1.42	220	11.08	4.38	0.102	1.6	0.067
MWLF-3	2.41	1.41	2.03	No odour, clear	1.42	219	10.9	4.37	0.105	1.1	0.069
MWLF-3	2.41	1.41	2.03	No odour, clear	1.47	217	10.77	4.36	0.108	0.2	0.07
MWLF-3	2.41	1.41	2.03	No odour, clear	1.44	216	10.64	4.36	0.11	0	0.072
MWLF-3	2.41	1.41		No odour, clear	1.48	215	10.53	4.36	0.111	0	0.072
MWLF-3	2.41	1.41	2.03	No odour, clear	1.49	214	10.44	4.36	0.114	0	0.074

Notes: Top of casing to top of pipe 0.14 m. Top pf casing to ground level 0.66m. Duplicate sample taken here.

Water Sampling Log

Project Number: 200537 Date: 2020-August-27 Samplers Names: Jeff Rosanowski

Location:	Ennadai Lake	Start	14:40	End	14:50	Sample Type: GW
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[illegible]

Notes: Insufficient water to purge. Sample taken after 2 readings.

APPENDIX D

Certificate of Analysis





BluMetric Environmental Inc. (Ottawa)
ATTN: Karen Phong
4916 49 St
Yellowknife NT X1A 1P3

Date Received: 03-SEP-20
Report Date: 17-SEP-20 15:09 (MT)
Version: FINAL

Client Phone: 647-207-7765

Certificate of Analysis

Lab Work Order #: L2498615
Project P.O. #: NOT SUBMITTED
Job Reference: 200537
C of C Numbers:
Legal Site Desc:

Emily Smith
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 190 Colonnade Road, Unit 7, Ottawa, ON K2E 7J5 Canada | Phone: +1 613 225 8279 | Fax: +1 613 225 2801
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-1 MWLF-3								
Sampled By: CLIENT on 27-AUG-20 @ 12:00								
Matrix: WATER								
Physical Tests								
Conductivity		175		2.0	uS/cm		12-SEP-20	R5223184
Hardness (as CaCO3)		92.7		0.50	mg/L		14-SEP-20	
pH		6.22		0.10	pH		12-SEP-20	R5223184
Total Suspended Solids		<3.0		3.0	mg/L		11-SEP-20	R5222647
Total Dissolved Solids		154		13	mg/L		11-SEP-20	R5223182
Anions and Nutrients								
Bromide (Br)		0.112		0.050	mg/L		14-SEP-20	R5224181
Chloride (Cl)		0.60		0.50	mg/L		14-SEP-20	R5224181
Fluoride (F)		0.090		0.020	mg/L		14-SEP-20	R5224181
Nitrate (as N)		0.0342		0.0050	mg/L		14-SEP-20	R5224181
Nitrite (as N)		<0.0010		0.0010	mg/L		14-SEP-20	R5224181
Sulfate (SO4)		1.58		0.30	mg/L		14-SEP-20	R5224181
Total Metals								
Aluminum (Al)-Total		0.365		0.0030	mg/L		14-SEP-20	R5223324
Antimony (Sb)-Total		<0.00010		0.00010	mg/L		14-SEP-20	R5223324
Arsenic (As)-Total		0.00062		0.00010	mg/L		14-SEP-20	R5223324
Barium (Ba)-Total		0.118		0.00010	mg/L		14-SEP-20	R5223324
Beryllium (Be)-Total		<0.00010		0.00010	mg/L		14-SEP-20	R5223324
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L		14-SEP-20	R5223324
Boron (B)-Total		0.020		0.010	mg/L		14-SEP-20	R5223324
Cadmium (Cd)-Total		0.0000761		0.0000050	mg/L		14-SEP-20	R5223324
Calcium (Ca)-Total		22.2		0.050	mg/L		14-SEP-20	R5223324
Cesium (Cs)-Total		0.000011		0.000010	mg/L		14-SEP-20	R5223324
Chromium (Cr)-Total		0.00197		0.00010	mg/L		14-SEP-20	R5223324
Cobalt (Co)-Total		0.00685		0.00010	mg/L		14-SEP-20	R5223324
Copper (Cu)-Total		0.0282		0.00050	mg/L		14-SEP-20	R5223324
Iron (Fe)-Total		0.144		0.010	mg/L		14-SEP-20	R5223324
Lead (Pb)-Total		0.000103		0.000050	mg/L		14-SEP-20	R5223324
Lithium (Li)-Total		0.0028		0.0010	mg/L		14-SEP-20	R5223324
Magnesium (Mg)-Total		7.73		0.0050	mg/L		14-SEP-20	R5223324
Manganese (Mn)-Total		0.838		0.00010	mg/L		14-SEP-20	R5223324
Mercury (Hg)-Total		0.0000131		0.0000050	mg/L		15-SEP-20	R5223601
Molybdenum (Mo)-Total		0.000272		0.000050	mg/L		14-SEP-20	R5223324
Nickel (Ni)-Total		0.0269		0.00050	mg/L		14-SEP-20	R5223324
Phosphorus (P)-Total		<0.050		0.050	mg/L		14-SEP-20	R5223324
Potassium (K)-Total		4.34		0.050	mg/L		14-SEP-20	R5223324
Rubidium (Rb)-Total		0.00349		0.00020	mg/L		14-SEP-20	R5223324
Selenium (Se)-Total		0.000198		0.000050	mg/L		14-SEP-20	R5223324
Silicon (Si)-Total		6.73		0.10	mg/L		14-SEP-20	R5223324
Silver (Ag)-Total		0.000049		0.000010	mg/L		14-SEP-20	R5223324
Sodium (Na)-Total		2.27		0.050	mg/L		14-SEP-20	R5223324

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-1	MWLF-3							
Sampled By: CLIENT on 27-AUG-20 @ 12:00								
Matrix: WATER								
Total Metals								
Strontium (Sr)-Total		0.215		0.00020	mg/L		14-SEP-20	R5223324
Sulfur (S)-Total		<0.50		0.50	mg/L		14-SEP-20	R5223324
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		14-SEP-20	R5223324
Thallium (Tl)-Total		0.000012		0.000010	mg/L		14-SEP-20	R5223324
Thorium (Th)-Total		0.00043		0.00010	mg/L		14-SEP-20	R5223324
Tin (Sn)-Total		<0.00010		0.00010	mg/L		14-SEP-20	R5223324
Titanium (Ti)-Total		0.00438		0.00030	mg/L		14-SEP-20	R5223324
Tungsten (W)-Total		<0.00010		0.00010	mg/L		14-SEP-20	R5223324
Uranium (U)-Total		0.00146		0.000010	mg/L		14-SEP-20	R5223324
Vanadium (V)-Total		0.00083		0.00050	mg/L		14-SEP-20	R5223324
Zinc (Zn)-Total		0.0036		0.0030	mg/L		14-SEP-20	R5223324
Zirconium (Zr)-Total		0.00239		0.00020	mg/L		14-SEP-20	R5223324
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					15-SEP-20	R5223539
Dissolved Metals Filtration Location		FIELD					11-SEP-20	R5222500
Aluminum (Al)-Dissolved		0.405		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Antimony (Sb)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Arsenic (As)-Dissolved		0.00072		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Barium (Ba)-Dissolved		0.120		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Beryllium (Be)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Bismuth (Bi)-Dissolved		<0.000050		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Boron (B)-Dissolved		0.018		0.010	mg/L	11-SEP-20	11-SEP-20	R5223444
Cadmium (Cd)-Dissolved		0.0000773		0.0000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Calcium (Ca)-Dissolved		22.8		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Cesium (Cs)-Dissolved		0.000010		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Chromium (Cr)-Dissolved		0.00197		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Cobalt (Co)-Dissolved		0.00680		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Copper (Cu)-Dissolved		0.0316		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Iron (Fe)-Dissolved		0.133		0.010	mg/L	11-SEP-20	11-SEP-20	R5223444
Lead (Pb)-Dissolved		0.000103		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Lithium (Li)-Dissolved		0.0031		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Magnesium (Mg)-Dissolved		8.69		0.0050	mg/L	11-SEP-20	11-SEP-20	R5223444
Manganese (Mn)-Dissolved		0.902		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Mercury (Hg)-Dissolved		0.0000149		0.0000050	mg/L	15-SEP-20	15-SEP-20	R5223601
Molybdenum (Mo)-Dissolved		0.000271		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Nickel (Ni)-Dissolved		0.0295		0.00050	mg/L	11-SEP-20	11-SEP-20	R5223444
Phosphorus (P)-Dissolved		<0.050		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Potassium (K)-Dissolved		4.73		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Rubidium (Rb)-Dissolved		0.00424		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Selenium (Se)-Dissolved		0.000202		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Silicon (Si)-Dissolved		6.96		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-1 MWLF-3								
Sampled By: CLIENT on 27-AUG-20 @ 12:00								
Matrix: WATER								
Dissolved Metals								
Silver (Ag)-Dissolved		0.000047		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Sodium (Na)-Dissolved		2.59		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Strontium (Sr)-Dissolved		0.235		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Sulfur (S)-Dissolved		0.61		0.50	mg/L	11-SEP-20	11-SEP-20	R5223444
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Thallium (Tl)-Dissolved		0.000015		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Thorium (Th)-Dissolved		0.00054		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Tin (Sn)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Titanium (Ti)-Dissolved		0.00512		0.00030	mg/L	11-SEP-20	11-SEP-20	R5223444
Tungsten (W)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Uranium (U)-Dissolved		0.00176		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Vanadium (V)-Dissolved		0.00072		0.00050	mg/L	11-SEP-20	11-SEP-20	R5223444
Zinc (Zn)-Dissolved		0.0034		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Zirconium (Zr)-Dissolved		0.00260		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Volatile Organic Compounds								
Benzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Ethylbenzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Methyl t-butyl ether (MTBE)		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Styrene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Toluene		<0.00045		0.00045	mg/L	10-SEP-20	11-SEP-20	R5203993
ortho-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
meta- & para-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Xylenes		<0.00075		0.00075	mg/L		11-SEP-20	
F1 (C6-C10)		<0.10		0.10	mg/L	10-SEP-20	11-SEP-20	R5204137
Surrogate: 4-Bromofluorobenzene (SS)		85.5		70-130	%		11-SEP-20	R5203993
Surrogate: 1,4-Difluorobenzene (SS)		108.9		70-130	%		11-SEP-20	R5203993
Hydrocarbons								
F1-BTEX		<0.10		0.10	mg/L		11-SEP-20	
F2 (C10-C16)		<0.30		0.30	mg/L	11-SEP-20	11-SEP-20	R5200147
F3 (C16-C34)		<0.30		0.30	mg/L	11-SEP-20	11-SEP-20	R5200147
F4 (C34-C50)		<0.30		0.30	mg/L	11-SEP-20	11-SEP-20	R5200147
Surrogate: 2-Bromobenzotrifluoride, F2-F4		79.7		60-140	%	11-SEP-20	11-SEP-20	R5200147
Surrogate: 3,4-Dichlorotoluene (SS)		94.9		70-130	%		11-SEP-20	R5204137
Polychlorinated Biphenyls								
Aroclor 1242		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1248		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1254		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1260		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Decachlorobiphenyl		60.3		50-150	%	15-SEP-20	15-SEP-20	R5224193
Total PCBs		<0.000040		0.000040	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Tetrachloro-m-xylene		88.6		50-150	%	15-SEP-20	15-SEP-20	R5224193
MWLF-3-D								

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-2 MWLF-3-D								
Sampled By: CLIENT on 27-AUG-20 @ 12:00								
Matrix: WATER								
Physical Tests								
Conductivity		183		2.0	uS/cm		12-SEP-20	R5223184
Hardness (as CaCO3)		86.4		0.50	mg/L		16-SEP-20	
pH		6.20		0.10	pH		12-SEP-20	R5223184
Total Suspended Solids		<3.0		3.0	mg/L		11-SEP-20	R5222647
Total Dissolved Solids		156		13	mg/L		11-SEP-20	R5223182
Anions and Nutrients								
Bromide (Br)		0.111		0.050	mg/L		14-SEP-20	R5224181
Chloride (Cl)		0.60		0.50	mg/L		14-SEP-20	R5224181
Fluoride (F)		0.088		0.020	mg/L		14-SEP-20	R5224181
Nitrate (as N)		0.0318		0.0050	mg/L		14-SEP-20	R5224181
Nitrite (as N)		<0.0010		0.0010	mg/L		14-SEP-20	R5224181
Sulfate (SO4)		1.60		0.30	mg/L		14-SEP-20	R5224181
Total Metals								
Aluminum (Al)-Total		0.335		0.0030	mg/L		16-SEP-20	R5224805
Antimony (Sb)-Total		<0.00010		0.00010	mg/L		16-SEP-20	R5224805
Arsenic (As)-Total		0.00058		0.00010	mg/L		16-SEP-20	R5224805
Barium (Ba)-Total		0.113		0.00010	mg/L		16-SEP-20	R5224805
Beryllium (Be)-Total		<0.00010		0.00010	mg/L		16-SEP-20	R5224805
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L		16-SEP-20	R5224805
Boron (B)-Total		0.019		0.010	mg/L		16-SEP-20	R5224805
Cadmium (Cd)-Total		0.0000715		0.0000050	mg/L		16-SEP-20	R5224805
Calcium (Ca)-Total		23.1		0.050	mg/L		16-SEP-20	R5224805
Cesium (Cs)-Total		<0.000010		0.000010	mg/L		16-SEP-20	R5224805
Chromium (Cr)-Total		0.00189		0.00010	mg/L		16-SEP-20	R5224805
Cobalt (Co)-Total		0.00626		0.00010	mg/L		16-SEP-20	R5224805
Copper (Cu)-Total		0.0279		0.00050	mg/L		16-SEP-20	R5224805
Iron (Fe)-Total		0.132		0.010	mg/L		16-SEP-20	R5224805
Lead (Pb)-Total		0.000084		0.000050	mg/L		16-SEP-20	R5224805
Lithium (Li)-Total		0.0033		0.0010	mg/L		16-SEP-20	R5224805
Magnesium (Mg)-Total		7.73		0.0050	mg/L		16-SEP-20	R5224805
Manganese (Mn)-Total		0.798		0.00010	mg/L		16-SEP-20	R5224805
Mercury (Hg)-Total		0.0000143		0.0000050	mg/L		15-SEP-20	R5223601
Molybdenum (Mo)-Total		0.000266		0.000050	mg/L		16-SEP-20	R5224805
Nickel (Ni)-Total		0.0266		0.00050	mg/L		16-SEP-20	R5224805
Phosphorus (P)-Total		<0.050		0.050	mg/L		16-SEP-20	R5224805
Potassium (K)-Total		4.38		0.050	mg/L		16-SEP-20	R5224805
Rubidium (Rb)-Total		0.00371		0.00020	mg/L		16-SEP-20	R5224805
Selenium (Se)-Total		0.000206		0.000050	mg/L		16-SEP-20	R5224805
Silicon (Si)-Total		6.70		0.10	mg/L		16-SEP-20	R5224805
Silver (Ag)-Total		0.000053		0.000010	mg/L		16-SEP-20	R5224805
Sodium (Na)-Total		2.21		0.050	mg/L		16-SEP-20	R5224805

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-2	MWLF-3-D							
Sampled By:	CLIENT on 27-AUG-20 @ 12:00							
Matrix:	WATER							
Total Metals								
Strontium (Sr)-Total		0.222		0.00020	mg/L		16-SEP-20	R5224805
Sulfur (S)-Total		1.06		0.50	mg/L		16-SEP-20	R5224805
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		16-SEP-20	R5224805
Thallium (Tl)-Total		0.000016		0.000010	mg/L		16-SEP-20	R5224805
Thorium (Th)-Total		0.00043		0.00010	mg/L		16-SEP-20	R5224805
Tin (Sn)-Total		<0.00010		0.00010	mg/L		16-SEP-20	R5224805
Titanium (Ti)-Total		0.00434		0.00030	mg/L		16-SEP-20	R5224805
Tungsten (W)-Total		<0.00010		0.00010	mg/L		16-SEP-20	R5224805
Uranium (U)-Total		0.00153		0.000010	mg/L		16-SEP-20	R5224805
Vanadium (V)-Total		0.00080		0.00050	mg/L		16-SEP-20	R5224805
Zinc (Zn)-Total		<0.0030		0.0030	mg/L		16-SEP-20	R5224805
Zirconium (Zr)-Total		0.00267		0.00020	mg/L		16-SEP-20	R5224805
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					15-SEP-20	R5223539
Dissolved Metals Filtration Location		FIELD					15-SEP-20	R5224256
Aluminum (Al)-Dissolved		0.341		0.0010	mg/L	15-SEP-20	16-SEP-20	R5224908
Antimony (Sb)-Dissolved		<0.00010		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Arsenic (As)-Dissolved		0.00064		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Barium (Ba)-Dissolved		0.104		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Beryllium (Be)-Dissolved		<0.00010		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Bismuth (Bi)-Dissolved		<0.000050		0.000050	mg/L	15-SEP-20	16-SEP-20	R5224908
Boron (B)-Dissolved		0.018		0.010	mg/L	15-SEP-20	16-SEP-20	R5224908
Cadmium (Cd)-Dissolved		0.0000721		0.0000050	mg/L	15-SEP-20	16-SEP-20	R5224908
Calcium (Ca)-Dissolved		22.8		0.050	mg/L	15-SEP-20	16-SEP-20	R5224908
Cesium (Cs)-Dissolved		<0.000010		0.000010	mg/L	15-SEP-20	16-SEP-20	R5224908
Chromium (Cr)-Dissolved		0.00187		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Cobalt (Co)-Dissolved		0.00645		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Copper (Cu)-Dissolved		0.0289		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Iron (Fe)-Dissolved		0.135		0.010	mg/L	15-SEP-20	16-SEP-20	R5224908
Lead (Pb)-Dissolved		0.000097		0.000050	mg/L	15-SEP-20	16-SEP-20	R5224908
Lithium (Li)-Dissolved		0.0029		0.0010	mg/L	15-SEP-20	16-SEP-20	R5224908
Magnesium (Mg)-Dissolved		7.18		0.0050	mg/L	15-SEP-20	16-SEP-20	R5224908
Manganese (Mn)-Dissolved		0.785		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Mercury (Hg)-Dissolved		0.0000144		0.0000050	mg/L	15-SEP-20	15-SEP-20	R5223601
Molybdenum (Mo)-Dissolved		0.000271		0.000050	mg/L	15-SEP-20	16-SEP-20	R5224908
Nickel (Ni)-Dissolved		0.0275		0.00050	mg/L	15-SEP-20	16-SEP-20	R5224908
Phosphorus (P)-Dissolved		<0.050		0.050	mg/L	15-SEP-20	16-SEP-20	R5224908
Potassium (K)-Dissolved		4.30		0.050	mg/L	15-SEP-20	16-SEP-20	R5224908
Rubidium (Rb)-Dissolved		0.00355		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Selenium (Se)-Dissolved		0.000223		0.000050	mg/L	15-SEP-20	16-SEP-20	R5224908
Silicon (Si)-Dissolved		6.67		0.050	mg/L	15-SEP-20	16-SEP-20	R5224908

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-2 MWLF-3-D								
Sampled By: CLIENT on 27-AUG-20 @ 12:00								
Matrix: WATER								
Dissolved Metals								
Silver (Ag)-Dissolved		0.000044		0.000010	mg/L	15-SEP-20	16-SEP-20	R5224908
Sodium (Na)-Dissolved		2.43		0.050	mg/L	15-SEP-20	16-SEP-20	R5224908
Strontium (Sr)-Dissolved		0.198		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Sulfur (S)-Dissolved		0.72		0.50	mg/L	15-SEP-20	16-SEP-20	R5224908
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Thallium (Tl)-Dissolved		0.000020		0.000010	mg/L	15-SEP-20	16-SEP-20	R5224908
Thorium (Th)-Dissolved		0.00041		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Tin (Sn)-Dissolved		<0.00010		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Titanium (Ti)-Dissolved		0.00430		0.00030	mg/L	15-SEP-20	16-SEP-20	R5224908
Tungsten (W)-Dissolved		<0.00010		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Uranium (U)-Dissolved		0.00150		0.000010	mg/L	15-SEP-20	16-SEP-20	R5224908
Vanadium (V)-Dissolved		0.00063		0.00050	mg/L	15-SEP-20	16-SEP-20	R5224908
Zinc (Zn)-Dissolved		0.0028		0.0010	mg/L	15-SEP-20	16-SEP-20	R5224908
Zirconium (Zr)-Dissolved		0.00243		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Volatile Organic Compounds								
Benzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Ethylbenzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Methyl t-butyl ether (MTBE)		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Styrene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Toluene		<0.00045		0.00045	mg/L	10-SEP-20	11-SEP-20	R5203993
ortho-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
meta- & para-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Xylenes		<0.00075		0.00075	mg/L		11-SEP-20	
F1 (C6-C10)		<0.10		0.10	mg/L	10-SEP-20	11-SEP-20	R5204137
Surrogate: 4-Bromofluorobenzene (SS)		90.1		70-130	%		11-SEP-20	R5203993
Surrogate: 1,4-Difluorobenzene (SS)		113.4		70-130	%		11-SEP-20	R5203993
Hydrocarbons								
F1-BTEX		<0.10		0.10	mg/L		11-SEP-20	
F2 (C10-C16)		<0.30		0.30	mg/L	11-SEP-20	11-SEP-20	R5200147
F3 (C16-C34)		<0.30		0.30	mg/L	11-SEP-20	11-SEP-20	R5200147
F4 (C34-C50)		<0.30		0.30	mg/L	11-SEP-20	11-SEP-20	R5200147
Surrogate: 2-Bromobenzotrifluoride, F2-F4		81.7		60-140	%	11-SEP-20	11-SEP-20	R5200147
Surrogate: 3,4-Dichlorotoluene (SS)		89.9		70-130	%		11-SEP-20	R5204137
Polychlorinated Biphenyls								
Aroclor 1242		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1248		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1254		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1260		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Decachlorobiphenyl		56.2		50-150	%	15-SEP-20	15-SEP-20	R5224193
Total PCBs		<0.000040		0.000040	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Tetrachloro-m-xylene		90.1		50-150	%	15-SEP-20	15-SEP-20	R5224193
MWLF-1								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-3 MWLF-1								
Sampled By: CLIENT on 27-AUG-20 @ 12:00								
Matrix: WATER								
Physical Tests								
Hardness (as CaCO3)		12.0		0.50	mg/L		15-SEP-20	
Total Metals								
Aluminum (Al)-Total		0.171		0.0030	mg/L		15-SEP-20	R5224180
Antimony (Sb)-Total		0.00019		0.00010	mg/L		15-SEP-20	R5224180
Arsenic (As)-Total		0.00015		0.00010	mg/L		15-SEP-20	R5224180
Barium (Ba)-Total		0.0614		0.00010	mg/L		15-SEP-20	R5224180
Beryllium (Be)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L		15-SEP-20	R5224180
Boron (B)-Total		0.014		0.010	mg/L		15-SEP-20	R5224180
Cadmium (Cd)-Total		0.000350		0.0000050	mg/L		15-SEP-20	R5224180
Calcium (Ca)-Total		2.89		0.050	mg/L		15-SEP-20	R5224180
Cesium (Cs)-Total		0.000010		0.000010	mg/L		15-SEP-20	R5224180
Chromium (Cr)-Total		0.00174		0.00010	mg/L		15-SEP-20	R5224180
Cobalt (Co)-Total		0.00278		0.00010	mg/L		15-SEP-20	R5224180
Copper (Cu)-Total		0.0195		0.00050	mg/L		15-SEP-20	R5224180
Iron (Fe)-Total		0.088		0.010	mg/L		15-SEP-20	R5224180
Lead (Pb)-Total		0.000364		0.000050	mg/L		15-SEP-20	R5224180
Lithium (Li)-Total		<0.0010		0.0010	mg/L		15-SEP-20	R5224180
Magnesium (Mg)-Total		1.04		0.0050	mg/L		15-SEP-20	R5224180
Manganese (Mn)-Total		0.0437		0.00010	mg/L		15-SEP-20	R5224180
Mercury (Hg)-Total		0.0000050		0.0000050	mg/L		15-SEP-20	R5223601
Molybdenum (Mo)-Total		0.000182		0.000050	mg/L		15-SEP-20	R5224180
Nickel (Ni)-Total		0.101		0.00050	mg/L		15-SEP-20	R5224180
Phosphorus (P)-Total		<0.050		0.050	mg/L		15-SEP-20	R5224180
Potassium (K)-Total		0.855		0.050	mg/L		15-SEP-20	R5224180
Rubidium (Rb)-Total		0.00299		0.00020	mg/L		15-SEP-20	R5224180
Selenium (Se)-Total		<0.000050		0.000050	mg/L		15-SEP-20	R5224180
Silicon (Si)-Total		3.18		0.10	mg/L		15-SEP-20	R5224180
Silver (Ag)-Total		0.000019		0.000010	mg/L		15-SEP-20	R5224180
Sodium (Na)-Total		5.37		0.050	mg/L		15-SEP-20	R5224180
Strontium (Sr)-Total		0.0301		0.00020	mg/L		15-SEP-20	R5224180
Sulfur (S)-Total		1.88		0.50	mg/L		15-SEP-20	R5224180
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		15-SEP-20	R5224180
Thallium (Tl)-Total		0.000013		0.000010	mg/L		15-SEP-20	R5224180
Thorium (Th)-Total		0.00012		0.00010	mg/L		15-SEP-20	R5224180
Tin (Sn)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Titanium (Ti)-Total		0.00180		0.00030	mg/L		15-SEP-20	R5224180
Tungsten (W)-Total		0.00021		0.00010	mg/L		15-SEP-20	R5224180
Uranium (U)-Total		0.000129		0.000010	mg/L		15-SEP-20	R5224180
Vanadium (V)-Total		<0.00050		0.00050	mg/L		15-SEP-20	R5224180
Zinc (Zn)-Total		0.0498		0.0030	mg/L		15-SEP-20	R5224180

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-3	MWLF-1							
Sampled By: CLIENT on 27-AUG-20 @ 12:00								
Matrix: WATER								
Total Metals								
Zirconium (Zr)-Total		0.00035		0.00020	mg/L		15-SEP-20	R5224180
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					15-SEP-20	R5223539
Dissolved Metals Filtration Location		FIELD					11-SEP-20	R5222500
Aluminum (Al)-Dissolved		0.179		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Antimony (Sb)-Dissolved		0.00021		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Arsenic (As)-Dissolved		0.00019		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Barium (Ba)-Dissolved		0.0602		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Beryllium (Be)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Bismuth (Bi)-Dissolved		<0.000050		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Boron (B)-Dissolved		0.014		0.010	mg/L	11-SEP-20	11-SEP-20	R5223444
Cadmium (Cd)-Dissolved		0.000361		0.0000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Calcium (Ca)-Dissolved		2.99		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Cesium (Cs)-Dissolved		<0.000010		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Chromium (Cr)-Dissolved		0.00174		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Cobalt (Co)-Dissolved		0.00299		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Copper (Cu)-Dissolved		0.0213		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Iron (Fe)-Dissolved		0.083		0.010	mg/L	11-SEP-20	11-SEP-20	R5223444
Lead (Pb)-Dissolved		0.000418		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Lithium (Li)-Dissolved		<0.0010		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Magnesium (Mg)-Dissolved		1.09		0.0050	mg/L	11-SEP-20	11-SEP-20	R5223444
Manganese (Mn)-Dissolved		0.0475		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	15-SEP-20	15-SEP-20	R5223601
Molybdenum (Mo)-Dissolved		0.000189		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Nickel (Ni)-Dissolved		0.107		0.00050	mg/L	11-SEP-20	11-SEP-20	R5223444
Phosphorus (P)-Dissolved		<0.050		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Potassium (K)-Dissolved		0.961		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Rubidium (Rb)-Dissolved		0.00351		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Selenium (Se)-Dissolved		<0.000050		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Silicon (Si)-Dissolved		3.23		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Silver (Ag)-Dissolved		0.000022		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Sodium (Na)-Dissolved		6.11		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Strontium (Sr)-Dissolved		0.0356		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Sulfur (S)-Dissolved		1.82		0.50	mg/L	11-SEP-20	11-SEP-20	R5223444
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Thallium (Tl)-Dissolved		0.000013		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Thorium (Th)-Dissolved		0.00017		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Tin (Sn)-Dissolved		0.00011		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Titanium (Ti)-Dissolved		0.00247	DTMF	0.00030	mg/L	11-SEP-20	11-SEP-20	R5223444
Tungsten (W)-Dissolved		0.00024		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Uranium (U)-Dissolved		0.000137		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-3 MWLF-1 Sampled By: CLIENT on 27-AUG-20 @ 12:00 Matrix: WATER Dissolved Metals Vanadium (V)-Dissolved Zinc (Zn)-Dissolved Zirconium (Zr)-Dissolved Polychlorinated Biphenyls Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Surrogate: Decachlorobiphenyl Total PCBs Surrogate: Tetrachloro-m-xylene								
		<0.00050		0.00050	mg/L	11-SEP-20	11-SEP-20	R5223444
		0.0588		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
		0.00035		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
		74.3		50-150	%	15-SEP-20	15-SEP-20	R5224193
		<0.000040		0.000040	mg/L	15-SEP-20	15-SEP-20	R5224193
		91.4		50-150	%	15-SEP-20	15-SEP-20	R5224193
L2498615-4 MW01 Sampled By: CLIENT on 28-AUG-20 @ 12:00 Matrix: WATER Physical Tests Conductivity Hardness (as CaCO3) pH Total Suspended Solids Total Dissolved Solids Anions and Nutrients Bromide (Br) Chloride (Cl) Fluoride (F) Nitrate (as N) Nitrite (as N) Sulfate (SO4) Total Metals Aluminum (Al)-Total Antimony (Sb)-Total Arsenic (As)-Total Barium (Ba)-Total Beryllium (Be)-Total Bismuth (Bi)-Total Boron (B)-Total Cadmium (Cd)-Total Calcium (Ca)-Total Cesium (Cs)-Total Chromium (Cr)-Total Cobalt (Co)-Total Copper (Cu)-Total Iron (Fe)-Total								
		2830		2.0	uS/cm		12-SEP-20	R5223184
		408		0.50	mg/L		16-SEP-20	
		8.10		0.10	pH		12-SEP-20	R5223184
		6.9		3.0	mg/L		11-SEP-20	R5222647
		1980		20	mg/L		11-SEP-20	R5223182
		<1.0	DLDS	1.0	mg/L		14-SEP-20	R5224181
		119		10	mg/L		14-SEP-20	R5224181
		0.86		0.40	mg/L		14-SEP-20	R5224181
		0.44		0.10	mg/L		14-SEP-20	R5224181
		<0.020	DLDS	0.020	mg/L		14-SEP-20	R5224181
		1020		6.0	mg/L		14-SEP-20	R5224181
		0.155		0.0030	mg/L		16-SEP-20	R5224942
		0.00106		0.00010	mg/L		16-SEP-20	R5224942
		0.00202		0.00010	mg/L		16-SEP-20	R5224942
		0.0130		0.00010	mg/L		16-SEP-20	R5224942
		<0.00010		0.00010	mg/L		16-SEP-20	R5224942
		0.000299		0.000050	mg/L		16-SEP-20	R5224942
		0.060		0.010	mg/L		16-SEP-20	R5224942
		0.000126		0.0000050	mg/L		16-SEP-20	R5224942
		58.6		0.050	mg/L		16-SEP-20	R5224942
		0.000061		0.000010	mg/L		16-SEP-20	R5224942
		0.00221		0.00010	mg/L		16-SEP-20	R5224942
		0.00039		0.00010	mg/L		16-SEP-20	R5224942
		0.0107		0.00050	mg/L		16-SEP-20	R5224942
		0.117		0.010	mg/L		16-SEP-20	R5224942

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-4	MW01							
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Total Metals								
Lead (Pb)-Total		0.000357		0.000050	mg/L		16-SEP-20	R5224942
Lithium (Li)-Total		0.107		0.0010	mg/L		16-SEP-20	R5224942
Magnesium (Mg)-Total		53.9		0.0050	mg/L		16-SEP-20	R5224942
Manganese (Mn)-Total		0.0872		0.00010	mg/L		16-SEP-20	R5224942
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		15-SEP-20	R5223601
Molybdenum (Mo)-Total		0.0451		0.000050	mg/L		16-SEP-20	R5224942
Nickel (Ni)-Total		0.0159		0.00050	mg/L		16-SEP-20	R5224942
Phosphorus (P)-Total		<0.050		0.050	mg/L		16-SEP-20	R5224942
Potassium (K)-Total		20.6		0.050	mg/L		16-SEP-20	R5224942
Rubidium (Rb)-Total		0.00502		0.00020	mg/L		16-SEP-20	R5224942
Selenium (Se)-Total		0.00156		0.000050	mg/L		16-SEP-20	R5224942
Silicon (Si)-Total		4.84		0.10	mg/L		16-SEP-20	R5224942
Silver (Ag)-Total		<0.000010		0.000010	mg/L		16-SEP-20	R5224942
Sodium (Na)-Total		511		0.050	mg/L		16-SEP-20	R5224942
Strontium (Sr)-Total		0.494		0.00020	mg/L		16-SEP-20	R5224942
Sulfur (S)-Total		350		0.50	mg/L		16-SEP-20	R5224942
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		16-SEP-20	R5224942
Thallium (Tl)-Total		0.000068		0.000010	mg/L		16-SEP-20	R5224942
Thorium (Th)-Total		0.00010		0.00010	mg/L		16-SEP-20	R5224942
Tin (Sn)-Total		0.00019		0.00010	mg/L		16-SEP-20	R5224942
Titanium (Ti)-Total		0.00609		0.00030	mg/L		16-SEP-20	R5224942
Tungsten (W)-Total		0.00188		0.00010	mg/L		16-SEP-20	R5224942
Uranium (U)-Total		0.214		0.000010	mg/L		16-SEP-20	R5224942
Vanadium (V)-Total		0.00082		0.00050	mg/L		16-SEP-20	R5224942
Zinc (Zn)-Total		0.0062		0.0030	mg/L		16-SEP-20	R5224942
Zirconium (Zr)-Total		0.00047		0.00020	mg/L		16-SEP-20	R5224942
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					15-SEP-20	R5223539
Dissolved Metals Filtration Location		FIELD					15-SEP-20	R5224256
Aluminum (Al)-Dissolved		0.0903		0.0020	mg/L	15-SEP-20	16-SEP-20	R5224908
Antimony (Sb)-Dissolved		0.00124		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Arsenic (As)-Dissolved		0.00158		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Barium (Ba)-Dissolved		0.0119		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Beryllium (Be)-Dissolved		<0.00020	DLA	0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Bismuth (Bi)-Dissolved		0.00031		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Boron (B)-Dissolved		0.068		0.020	mg/L	15-SEP-20	16-SEP-20	R5224908
Cadmium (Cd)-Dissolved		<0.000075	DLM	0.000075	mg/L	15-SEP-20	16-SEP-20	R5224908
Calcium (Ca)-Dissolved		70.3		0.10	mg/L	15-SEP-20	16-SEP-20	R5224908
Cesium (Cs)-Dissolved		0.000061		0.000020	mg/L	15-SEP-20	16-SEP-20	R5224908
Chromium (Cr)-Dissolved		0.00103		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Cobalt (Co)-Dissolved		0.00041		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-4 MW01								
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Dissolved Metals								
Copper (Cu)-Dissolved		0.0168	DTC	0.00040	mg/L	15-SEP-20	16-SEP-20	R5224908
Iron (Fe)-Dissolved		0.097		0.020	mg/L	15-SEP-20	16-SEP-20	R5224908
Lead (Pb)-Dissolved		0.00066	DTC	0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Lithium (Li)-Dissolved		0.108		0.0020	mg/L	15-SEP-20	16-SEP-20	R5224908
Magnesium (Mg)-Dissolved		56.4		0.010	mg/L	15-SEP-20	16-SEP-20	R5224908
Manganese (Mn)-Dissolved		0.0537		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	15-SEP-20	15-SEP-20	R5223601
Molybdenum (Mo)-Dissolved		0.0485		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Nickel (Ni)-Dissolved		0.0203		0.0010	mg/L	15-SEP-20	16-SEP-20	R5224908
Phosphorus (P)-Dissolved		<0.10	DLA	0.10	mg/L	15-SEP-20	16-SEP-20	R5224908
Potassium (K)-Dissolved		20.2		0.10	mg/L	15-SEP-20	16-SEP-20	R5224908
Rubidium (Rb)-Dissolved		0.00582		0.00040	mg/L	15-SEP-20	16-SEP-20	R5224908
Selenium (Se)-Dissolved		0.00183		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Silicon (Si)-Dissolved		4.78		0.10	mg/L	15-SEP-20	16-SEP-20	R5224908
Silver (Ag)-Dissolved		<0.000020	DLA	0.000020	mg/L	15-SEP-20	16-SEP-20	R5224908
Sodium (Na)-Dissolved		625		0.10	mg/L	15-SEP-20	16-SEP-20	R5224908
Strontium (Sr)-Dissolved		0.574		0.00040	mg/L	15-SEP-20	16-SEP-20	R5224908
Sulfur (S)-Dissolved		428		1.0	mg/L	15-SEP-20	16-SEP-20	R5224908
Tellurium (Te)-Dissolved		<0.00040	DLA	0.00040	mg/L	15-SEP-20	16-SEP-20	R5224908
Thallium (Tl)-Dissolved		0.000056		0.000020	mg/L	15-SEP-20	16-SEP-20	R5224908
Thorium (Th)-Dissolved		<0.00020	DLA	0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Tin (Sn)-Dissolved		<0.00020	DLA	0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Titanium (Ti)-Dissolved		0.00464		0.00060	mg/L	15-SEP-20	16-SEP-20	R5224908
Tungsten (W)-Dissolved		0.00509	DTC	0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Uranium (U)-Dissolved		0.186		0.000020	mg/L	15-SEP-20	16-SEP-20	R5224908
Vanadium (V)-Dissolved		<0.0010	DLA	0.0010	mg/L	15-SEP-20	16-SEP-20	R5224908
Zinc (Zn)-Dissolved		0.0035		0.0020	mg/L	15-SEP-20	16-SEP-20	R5224908
Zirconium (Zr)-Dissolved		<0.00040	DLA	0.00040	mg/L	15-SEP-20	16-SEP-20	R5224908
Volatile Organic Compounds								
Benzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Ethylbenzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Methyl t-butyl ether (MTBE)		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Styrene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Toluene		<0.00045		0.00045	mg/L	10-SEP-20	11-SEP-20	R5203993
ortho-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
meta- & para-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Xylenes		<0.00075		0.00075	mg/L		11-SEP-20	
F1 (C6-C10)		<0.10		0.10	mg/L	10-SEP-20	11-SEP-20	R5204137
Surrogate: 4-Bromofluorobenzene (SS)		81.7		70-130	%		11-SEP-20	R5203993
Surrogate: 1,4-Difluorobenzene (SS)		113.0		70-130	%		11-SEP-20	R5203993
Hydrocarbons								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-4 MW01 Sampled By: CLIENT on 28-AUG-20 @ 12:00 Matrix: WATER								
Hydrocarbons								
F1-BTEX		<0.10		0.10	mg/L		11-SEP-20	
F2 (C10-C16)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
F3 (C16-C34)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
F4 (C34-C50)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
Surrogate: 2-Bromobenzotrifluoride, F2-F4		78.6		60-140	%	11-SEP-20	15-SEP-20	R5200147
Surrogate: 3,4-Dichlorotoluene (SS)		79.6		70-130	%		11-SEP-20	R5204137
Polychlorinated Biphenyls								
Aroclor 1242		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1248		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1254		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1260		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Decachlorobiphenyl		85.6		50-150	%	15-SEP-20	15-SEP-20	R5224193
Total PCBs		<0.000040		0.000040	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Tetrachloro-m-xylene		88.5		50-150	%	15-SEP-20	15-SEP-20	R5224193
L2498615-5 MW02 Sampled By: CLIENT on 28-AUG-20 @ 12:00 Matrix: WATER								
Physical Tests								
Conductivity		1110		2.0	uS/cm		12-SEP-20	R5223184
Hardness (as CaCO3)		523		0.50	mg/L		15-SEP-20	
pH		7.59		0.10	pH		12-SEP-20	R5223184
Total Suspended Solids		<3.0		3.0	mg/L		11-SEP-20	R5222647
Total Dissolved Solids		743		20	mg/L		11-SEP-20	R5223182
Anions and Nutrients								
Bromide (Br)		<0.25	DLDS	0.25	mg/L		14-SEP-20	R5224181
Chloride (Cl)		52.5		2.5	mg/L		14-SEP-20	R5224181
Fluoride (F)		0.72		0.10	mg/L		14-SEP-20	R5224181
Nitrate (as N)		1.31		0.025	mg/L		14-SEP-20	R5224181
Nitrite (as N)		<0.0050	DLDS	0.0050	mg/L		14-SEP-20	R5224181
Sulfate (SO4)		248		1.5	mg/L		14-SEP-20	R5224181
Total Metals								
Aluminum (Al)-Total		0.0183		0.0030	mg/L		15-SEP-20	R5224180
Antimony (Sb)-Total		0.00031		0.00010	mg/L		15-SEP-20	R5224180
Arsenic (As)-Total		0.00041		0.00010	mg/L		15-SEP-20	R5224180
Barium (Ba)-Total		0.0263		0.00010	mg/L		15-SEP-20	R5224180
Beryllium (Be)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L		15-SEP-20	R5224180
Boron (B)-Total		0.036		0.010	mg/L		15-SEP-20	R5224180
Cadmium (Cd)-Total		0.0000284		0.0000050	mg/L		15-SEP-20	R5224180
Calcium (Ca)-Total		83.0		0.050	mg/L		15-SEP-20	R5224180
Cesium (Cs)-Total		<0.000010		0.000010	mg/L		15-SEP-20	R5224180
Chromium (Cr)-Total		0.00035		0.00010	mg/L		15-SEP-20	R5224180

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-5 MW02								
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Total Metals								
Cobalt (Co)-Total		0.00027		0.00010	mg/L		15-SEP-20	R5224180
Copper (Cu)-Total		0.0103		0.00050	mg/L		15-SEP-20	R5224180
Iron (Fe)-Total		0.014		0.010	mg/L		15-SEP-20	R5224180
Lead (Pb)-Total		0.000337		0.000050	mg/L		15-SEP-20	R5224180
Lithium (Li)-Total		0.0352		0.0010	mg/L		15-SEP-20	R5224180
Magnesium (Mg)-Total		71.4		0.0050	mg/L		15-SEP-20	R5224180
Manganese (Mn)-Total		0.117		0.00010	mg/L		15-SEP-20	R5224180
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		15-SEP-20	R5223601
Molybdenum (Mo)-Total		0.00698		0.000050	mg/L		15-SEP-20	R5224180
Nickel (Ni)-Total		0.00449		0.00050	mg/L		15-SEP-20	R5224180
Phosphorus (P)-Total		<0.050		0.050	mg/L		15-SEP-20	R5224180
Potassium (K)-Total		9.14		0.050	mg/L		15-SEP-20	R5224180
Rubidium (Rb)-Total		0.00136		0.00020	mg/L		15-SEP-20	R5224180
Selenium (Se)-Total		0.000216		0.000050	mg/L		15-SEP-20	R5224180
Silicon (Si)-Total		3.71		0.10	mg/L		15-SEP-20	R5224180
Silver (Ag)-Total		<0.000010		0.000010	mg/L		15-SEP-20	R5224180
Sodium (Na)-Total		66.6		0.050	mg/L		15-SEP-20	R5224180
Strontium (Sr)-Total		0.328		0.00020	mg/L		15-SEP-20	R5224180
Sulfur (S)-Total		92.4		0.50	mg/L		15-SEP-20	R5224180
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		15-SEP-20	R5224180
Thallium (Tl)-Total		0.000013		0.000010	mg/L		15-SEP-20	R5224180
Thorium (Th)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Tin (Sn)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Titanium (Ti)-Total		0.00067		0.00030	mg/L		15-SEP-20	R5224180
Tungsten (W)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Uranium (U)-Total		0.0959		0.000010	mg/L		15-SEP-20	R5224180
Vanadium (V)-Total		<0.00050		0.00050	mg/L		15-SEP-20	R5224180
Zinc (Zn)-Total		<0.0030		0.0030	mg/L		15-SEP-20	R5224180
Zirconium (Zr)-Total		0.00061		0.00020	mg/L		15-SEP-20	R5224180
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					15-SEP-20	R5223539
Dissolved Metals Filtration Location		FIELD					11-SEP-20	R5222500
Aluminum (Al)-Dissolved		0.0238		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Antimony (Sb)-Dissolved		0.00034		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Arsenic (As)-Dissolved		0.00045		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Barium (Ba)-Dissolved		0.0257		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Beryllium (Be)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Bismuth (Bi)-Dissolved		<0.000050		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Boron (B)-Dissolved		0.033		0.010	mg/L	11-SEP-20	11-SEP-20	R5223444
Cadmium (Cd)-Dissolved		0.0000268		0.0000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Calcium (Ca)-Dissolved		85.5		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-5	MW02							
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Dissolved Metals								
Cesium (Cs)-Dissolved		0.000012		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Chromium (Cr)-Dissolved		0.00035		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Cobalt (Co)-Dissolved		0.00026		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Copper (Cu)-Dissolved		0.0107		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Iron (Fe)-Dissolved		0.017		0.010	mg/L	11-SEP-20	11-SEP-20	R5223444
Lead (Pb)-Dissolved		0.000329		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Lithium (Li)-Dissolved		0.0379		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Magnesium (Mg)-Dissolved		75.1		0.0050	mg/L	11-SEP-20	11-SEP-20	R5223444
Manganese (Mn)-Dissolved		0.117		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	15-SEP-20	15-SEP-20	R5223601
Molybdenum (Mo)-Dissolved		0.00637		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Nickel (Ni)-Dissolved		0.00460		0.00050	mg/L	11-SEP-20	11-SEP-20	R5223444
Phosphorus (P)-Dissolved		<0.050		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Potassium (K)-Dissolved		10.2		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Rubidium (Rb)-Dissolved		0.00160		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Selenium (Se)-Dissolved		0.000197		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Silicon (Si)-Dissolved		3.74		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Silver (Ag)-Dissolved		<0.000010		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Sodium (Na)-Dissolved		77.3		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Strontium (Sr)-Dissolved		0.356		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Sulfur (S)-Dissolved		88.7		0.50	mg/L	11-SEP-20	11-SEP-20	R5223444
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Thallium (Tl)-Dissolved		0.000011		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Tin (Sn)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Titanium (Ti)-Dissolved		0.00106		0.00030	mg/L	11-SEP-20	11-SEP-20	R5223444
Tungsten (W)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Uranium (U)-Dissolved		0.103		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Vanadium (V)-Dissolved		<0.00050		0.00050	mg/L	11-SEP-20	11-SEP-20	R5223444
Zinc (Zn)-Dissolved		0.0039		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Zirconium (Zr)-Dissolved		0.00059		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Volatile Organic Compounds								
Benzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Ethylbenzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Methyl t-butyl ether (MTBE)		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Styrene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Toluene		<0.00045		0.00045	mg/L	10-SEP-20	11-SEP-20	R5203993
ortho-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
meta- & para-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Xylenes		<0.00075		0.00075	mg/L		11-SEP-20	
F1 (C6-C10)		<0.10		0.10	mg/L	10-SEP-20	11-SEP-20	R5204137

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-5 MW02								
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Volatile Organic Compounds								
Surrogate: 4-Bromofluorobenzene (SS)		84.0		70-130	%		11-SEP-20	R5203993
Surrogate: 1,4-Difluorobenzene (SS)		114.5		70-130	%		11-SEP-20	R5203993
Hydrocarbons								
F1-BTEX		<0.10		0.10	mg/L		11-SEP-20	
F2 (C10-C16)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
F3 (C16-C34)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
F4 (C34-C50)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
Surrogate: 2-Bromobenzotrifluoride, F2-F4		82.6		60-140	%	11-SEP-20	15-SEP-20	R5200147
Surrogate: 3,4-Dichlorotoluene (SS)		83.6		70-130	%		11-SEP-20	R5204137
Polychlorinated Biphenyls								
Aroclor 1242		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1248		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1254		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1260		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Decachlorobiphenyl		74.8		50-150	%	15-SEP-20	15-SEP-20	R5224193
Total PCBs		<0.000040		0.000040	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Tetrachloro-m-xylene		86.3		50-150	%	15-SEP-20	15-SEP-20	R5224193
L2498615-6 MW02-D								
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Physical Tests								
Conductivity		1110		2.0	uS/cm		12-SEP-20	R5223184
Hardness (as CaCO3)		520		0.50	mg/L		15-SEP-20	
pH		7.59		0.10	pH		12-SEP-20	R5223184
Total Suspended Solids		<3.0		3.0	mg/L		11-SEP-20	R5222647
Total Dissolved Solids		758		20	mg/L		11-SEP-20	R5223182
Anions and Nutrients								
Bromide (Br)		<0.25	DLDS	0.25	mg/L		14-SEP-20	R5224181
Chloride (Cl)		52.1		2.5	mg/L		14-SEP-20	R5224181
Fluoride (F)		0.69		0.10	mg/L		14-SEP-20	R5224181
Nitrate (as N)		1.33		0.025	mg/L		14-SEP-20	R5224181
Nitrite (as N)		<0.0050	DLDS	0.0050	mg/L		14-SEP-20	R5224181
Sulfate (SO4)		245		1.5	mg/L		14-SEP-20	R5224181
Total Metals								
Aluminum (Al)-Total		0.0222		0.0030	mg/L		15-SEP-20	R5224180
Antimony (Sb)-Total		0.00031		0.00010	mg/L		15-SEP-20	R5224180
Arsenic (As)-Total		0.00041		0.00010	mg/L		15-SEP-20	R5224180
Barium (Ba)-Total		0.0264		0.00010	mg/L		15-SEP-20	R5224180
Beryllium (Be)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L		15-SEP-20	R5224180
Boron (B)-Total		0.036		0.010	mg/L		15-SEP-20	R5224180
Cadmium (Cd)-Total		0.0000288		0.0000050	mg/L		15-SEP-20	R5224180

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-6	MW02-D							
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Total Metals								
Calcium (Ca)-Total		82.1		0.050	mg/L		15-SEP-20	R5224180
Cesium (Cs)-Total		<0.000010		0.000010	mg/L		15-SEP-20	R5224180
Chromium (Cr)-Total		0.00033		0.00010	mg/L		15-SEP-20	R5224180
Cobalt (Co)-Total		0.00027		0.00010	mg/L		15-SEP-20	R5224180
Copper (Cu)-Total		0.0100		0.00050	mg/L		15-SEP-20	R5224180
Iron (Fe)-Total		0.015		0.010	mg/L		15-SEP-20	R5224180
Lead (Pb)-Total		0.000293		0.000050	mg/L		15-SEP-20	R5224180
Lithium (Li)-Total		0.0353		0.0010	mg/L		15-SEP-20	R5224180
Magnesium (Mg)-Total		71.8		0.0050	mg/L		15-SEP-20	R5224180
Manganese (Mn)-Total		0.115		0.00010	mg/L		15-SEP-20	R5224180
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		15-SEP-20	R5223601
Molybdenum (Mo)-Total		0.00694		0.000050	mg/L		15-SEP-20	R5224180
Nickel (Ni)-Total		0.00463		0.00050	mg/L		15-SEP-20	R5224180
Phosphorus (P)-Total		<0.050		0.050	mg/L		15-SEP-20	R5224180
Potassium (K)-Total		9.50		0.050	mg/L		15-SEP-20	R5224180
Rubidium (Rb)-Total		0.00134		0.00020	mg/L		15-SEP-20	R5224180
Selenium (Se)-Total		0.000218		0.000050	mg/L		15-SEP-20	R5224180
Silicon (Si)-Total		3.80		0.10	mg/L		15-SEP-20	R5224180
Silver (Ag)-Total		<0.000010		0.000010	mg/L		15-SEP-20	R5224180
Sodium (Na)-Total		68.1		0.050	mg/L		15-SEP-20	R5224180
Strontium (Sr)-Total		0.321		0.00020	mg/L		15-SEP-20	R5224180
Sulfur (S)-Total		93.7		0.50	mg/L		15-SEP-20	R5224180
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		15-SEP-20	R5224180
Thallium (Tl)-Total		0.000011		0.000010	mg/L		15-SEP-20	R5224180
Thorium (Th)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Tin (Sn)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Titanium (Ti)-Total		0.00067		0.00030	mg/L		15-SEP-20	R5224180
Tungsten (W)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Uranium (U)-Total		0.0955		0.000010	mg/L		15-SEP-20	R5224180
Vanadium (V)-Total		<0.00050		0.00050	mg/L		15-SEP-20	R5224180
Zinc (Zn)-Total		<0.0030		0.0030	mg/L		15-SEP-20	R5224180
Zirconium (Zr)-Total		0.00095		0.00020	mg/L		15-SEP-20	R5224180
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					15-SEP-20	R5223539
Dissolved Metals Filtration Location		FIELD					11-SEP-20	R5222500
Aluminum (Al)-Dissolved		0.0248		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Antimony (Sb)-Dissolved		0.00031		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Arsenic (As)-Dissolved		0.00046		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Barium (Ba)-Dissolved		0.0256		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Beryllium (Be)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Bismuth (Bi)-Dissolved		<0.000050		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-6 MW02-D								
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Dissolved Metals								
Boron (B)-Dissolved		0.035		0.010	mg/L	11-SEP-20	11-SEP-20	R5223444
Cadmium (Cd)-Dissolved		0.0000345		0.0000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Calcium (Ca)-Dissolved		86.1		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Cesium (Cs)-Dissolved		0.000011		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Chromium (Cr)-Dissolved		0.00038		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Cobalt (Co)-Dissolved		0.00026		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Copper (Cu)-Dissolved		0.0104		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Iron (Fe)-Dissolved		0.015		0.010	mg/L	11-SEP-20	11-SEP-20	R5223444
Lead (Pb)-Dissolved		0.000285		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Lithium (Li)-Dissolved		0.0391		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Magnesium (Mg)-Dissolved		74.0		0.0050	mg/L	11-SEP-20	11-SEP-20	R5223444
Manganese (Mn)-Dissolved		0.117		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	15-SEP-20	15-SEP-20	R5223601
Molybdenum (Mo)-Dissolved		0.00637		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Nickel (Ni)-Dissolved		0.00465		0.00050	mg/L	11-SEP-20	11-SEP-20	R5223444
Phosphorus (P)-Dissolved		<0.050		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Potassium (K)-Dissolved		9.94		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Rubidium (Rb)-Dissolved		0.00150		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Selenium (Se)-Dissolved		0.000230		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Silicon (Si)-Dissolved		3.65		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Silver (Ag)-Dissolved		<0.000010		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Sodium (Na)-Dissolved		74.4		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Strontium (Sr)-Dissolved		0.351		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Sulfur (S)-Dissolved		90.5		0.50	mg/L	11-SEP-20	11-SEP-20	R5223444
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Thallium (Tl)-Dissolved		0.000012		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Tin (Sn)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Titanium (Ti)-Dissolved		0.00089		0.00030	mg/L	11-SEP-20	11-SEP-20	R5223444
Tungsten (W)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Uranium (U)-Dissolved		0.106		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Vanadium (V)-Dissolved		<0.00050		0.00050	mg/L	11-SEP-20	11-SEP-20	R5223444
Zinc (Zn)-Dissolved		0.0031		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Zirconium (Zr)-Dissolved		0.00057		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Volatile Organic Compounds								
Benzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Ethylbenzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Methyl t-butyl ether (MTBE)		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Styrene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Toluene		<0.00045		0.00045	mg/L	10-SEP-20	11-SEP-20	R5203993
ortho-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-6 MW02-D								
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Volatile Organic Compounds								
meta- & para-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Xylenes		<0.00075		0.00075	mg/L		11-SEP-20	
F1 (C6-C10)		<0.10		0.10	mg/L	10-SEP-20	11-SEP-20	R5204137
Surrogate: 4-Bromofluorobenzene (SS)		85.8		70-130	%		11-SEP-20	R5203993
Surrogate: 1,4-Difluorobenzene (SS)		113.7		70-130	%		11-SEP-20	R5203993
Hydrocarbons								
F1-BTEX		<0.10		0.10	mg/L		11-SEP-20	
F2 (C10-C16)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
F3 (C16-C34)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
F4 (C34-C50)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
Surrogate: 2-Bromobenzotrifluoride, F2-F4		82.5		60-140	%	11-SEP-20	15-SEP-20	R5200147
Surrogate: 3,4-Dichlorotoluene (SS)		92.4		70-130	%		11-SEP-20	R5204137
Polychlorinated Biphenyls								
Aroclor 1242		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1248		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1254		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1260		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Decachlorobiphenyl		74.1		50-150	%	15-SEP-20	15-SEP-20	R5224193
Total PCBs		<0.000040		0.000040	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Tetrachloro-m-xylene		90.0		50-150	%	15-SEP-20	15-SEP-20	R5224193
L2498615-7 MW03								
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Physical Tests								
Conductivity		1930		2.0	uS/cm		12-SEP-20	R5223184
Hardness (as CaCO3)		608		0.50	mg/L		15-SEP-20	
pH		7.83		0.10	pH		12-SEP-20	R5223184
Total Suspended Solids		13.1		3.0	mg/L		11-SEP-20	R5222647
Total Dissolved Solids		1230		20	mg/L		11-SEP-20	R5223182
Anions and Nutrients								
Bromide (Br)		0.75		0.50	mg/L		14-SEP-20	R5224181
Chloride (Cl)		200		5.0	mg/L		14-SEP-20	R5224181
Fluoride (F)		0.79		0.20	mg/L		14-SEP-20	R5224181
Nitrate (as N)		0.221		0.050	mg/L		14-SEP-20	R5224181
Nitrite (as N)		<0.010	DLDS	0.010	mg/L		14-SEP-20	R5224181
Sulfate (SO4)		422		3.0	mg/L		14-SEP-20	R5224181
Total Metals								
Aluminum (Al)-Total		0.187		0.0030	mg/L		15-SEP-20	R5224180
Antimony (Sb)-Total		0.00026		0.00010	mg/L		15-SEP-20	R5224180
Arsenic (As)-Total		0.00094		0.00010	mg/L		15-SEP-20	R5224180
Barium (Ba)-Total		0.0288		0.00010	mg/L		15-SEP-20	R5224180
Beryllium (Be)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-7 MW03								
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Total Metals								
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L		15-SEP-20	R5224180
Boron (B)-Total		0.071		0.010	mg/L		15-SEP-20	R5224180
Cadmium (Cd)-Total		0.000151		0.0000050	mg/L		15-SEP-20	R5224180
Calcium (Ca)-Total		90.9		0.050	mg/L		15-SEP-20	R5224180
Cesium (Cs)-Total		0.000023		0.000010	mg/L		15-SEP-20	R5224180
Chromium (Cr)-Total		0.00163		0.00010	mg/L		15-SEP-20	R5224180
Cobalt (Co)-Total		0.00030		0.00010	mg/L		15-SEP-20	R5224180
Copper (Cu)-Total		0.0112		0.00050	mg/L		15-SEP-20	R5224180
Iron (Fe)-Total		0.123		0.010	mg/L		15-SEP-20	R5224180
Lead (Pb)-Total		0.000366		0.000050	mg/L		15-SEP-20	R5224180
Lithium (Li)-Total		0.0830		0.0010	mg/L		15-SEP-20	R5224180
Magnesium (Mg)-Total		86.0		0.0050	mg/L		15-SEP-20	R5224180
Manganese (Mn)-Total		0.0840		0.00010	mg/L		15-SEP-20	R5224180
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		15-SEP-20	R5223601
Molybdenum (Mo)-Total		0.0222		0.000050	mg/L		15-SEP-20	R5224180
Nickel (Ni)-Total		0.00461		0.00050	mg/L		15-SEP-20	R5224180
Phosphorus (P)-Total		<0.050		0.050	mg/L		15-SEP-20	R5224180
Potassium (K)-Total		30.6		0.050	mg/L		15-SEP-20	R5224180
Rubidium (Rb)-Total		0.00344		0.00020	mg/L		15-SEP-20	R5224180
Selenium (Se)-Total		0.000210		0.000050	mg/L		15-SEP-20	R5224180
Silicon (Si)-Total		3.51		0.10	mg/L		15-SEP-20	R5224180
Silver (Ag)-Total		<0.000010		0.000010	mg/L		15-SEP-20	R5224180
Sodium (Na)-Total		205		0.050	mg/L		15-SEP-20	R5224180
Strontium (Sr)-Total		0.536		0.00020	mg/L		15-SEP-20	R5224180
Sulfur (S)-Total		161		0.50	mg/L		15-SEP-20	R5224180
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		15-SEP-20	R5224180
Thallium (Tl)-Total		0.000081		0.000010	mg/L		15-SEP-20	R5224180
Thorium (Th)-Total		0.00012		0.00010	mg/L		15-SEP-20	R5224180
Tin (Sn)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Titanium (Ti)-Total		<0.0054	DLM	0.0054	mg/L		15-SEP-20	R5224180
Tungsten (W)-Total		0.00035		0.00010	mg/L		15-SEP-20	R5224180
Uranium (U)-Total		0.0756		0.000010	mg/L		15-SEP-20	R5224180
Vanadium (V)-Total		0.00097		0.00050	mg/L		15-SEP-20	R5224180
Zinc (Zn)-Total		0.0085		0.0030	mg/L		15-SEP-20	R5224180
Zirconium (Zr)-Total		0.00061		0.00020	mg/L		15-SEP-20	R5224180
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					15-SEP-20	R5223539
Dissolved Metals Filtration Location		FIELD					11-SEP-20	R5222500
Aluminum (Al)-Dissolved		0.176		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Antimony (Sb)-Dissolved		0.00028		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Arsenic (As)-Dissolved		0.00091		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-7 MW03								
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Dissolved Metals								
Barium (Ba)-Dissolved		0.0268		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Beryllium (Be)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Bismuth (Bi)-Dissolved		<0.000050		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Boron (B)-Dissolved		0.071		0.010	mg/L	11-SEP-20	11-SEP-20	R5223444
Cadmium (Cd)-Dissolved		0.000153		0.0000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Calcium (Ca)-Dissolved		94.0		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Cesium (Cs)-Dissolved		0.000027		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Chromium (Cr)-Dissolved		0.00123		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Cobalt (Co)-Dissolved		0.00024		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Copper (Cu)-Dissolved		0.0118		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Iron (Fe)-Dissolved		0.113		0.010	mg/L	11-SEP-20	11-SEP-20	R5223444
Lead (Pb)-Dissolved		0.000493		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Lithium (Li)-Dissolved		0.0858		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Magnesium (Mg)-Dissolved		90.6		0.0050	mg/L	11-SEP-20	11-SEP-20	R5223444
Manganese (Mn)-Dissolved		0.0866		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	15-SEP-20	15-SEP-20	R5223601
Molybdenum (Mo)-Dissolved		0.0220		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Nickel (Ni)-Dissolved		0.00491		0.00050	mg/L	11-SEP-20	11-SEP-20	R5223444
Phosphorus (P)-Dissolved		<0.050		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Potassium (K)-Dissolved		33.8		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Rubidium (Rb)-Dissolved		0.00384		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Selenium (Se)-Dissolved		0.000219		0.000050	mg/L	11-SEP-20	11-SEP-20	R5223444
Silicon (Si)-Dissolved		3.50		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Silver (Ag)-Dissolved		0.000010		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Sodium (Na)-Dissolved		222		0.050	mg/L	11-SEP-20	11-SEP-20	R5223444
Strontium (Sr)-Dissolved		0.622		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Sulfur (S)-Dissolved		157		0.50	mg/L	11-SEP-20	11-SEP-20	R5223444
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Thallium (Tl)-Dissolved		0.000094		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Tin (Sn)-Dissolved		<0.00010		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Titanium (Ti)-Dissolved		0.00586		0.00030	mg/L	11-SEP-20	11-SEP-20	R5223444
Tungsten (W)-Dissolved		0.00039		0.00010	mg/L	11-SEP-20	11-SEP-20	R5223444
Uranium (U)-Dissolved		0.0865		0.000010	mg/L	11-SEP-20	11-SEP-20	R5223444
Vanadium (V)-Dissolved		0.00087		0.00050	mg/L	11-SEP-20	11-SEP-20	R5223444
Zinc (Zn)-Dissolved		0.0103		0.0010	mg/L	11-SEP-20	11-SEP-20	R5223444
Zirconium (Zr)-Dissolved		0.00056		0.00020	mg/L	11-SEP-20	11-SEP-20	R5223444
Volatile Organic Compounds								
Benzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Ethylbenzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Methyl t-butyl ether (MTBE)		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-7 MW03 Sampled By: CLIENT on 28-AUG-20 @ 12:00 Matrix: WATER								
Volatile Organic Compounds								
Styrene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Toluene		<0.00045		0.00045	mg/L	10-SEP-20	11-SEP-20	R5203993
ortho-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
meta- & para-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Xylenes		<0.00075		0.00075	mg/L		11-SEP-20	
F1 (C6-C10)		<0.10		0.10	mg/L	10-SEP-20	11-SEP-20	R5204137
Surrogate: 4-Bromofluorobenzene (SS)		83.6		70-130	%		11-SEP-20	R5203993
Surrogate: 1,4-Difluorobenzene (SS)		113.9		70-130	%		11-SEP-20	R5203993
Hydrocarbons								
F1-BTEX		<0.10		0.10	mg/L		11-SEP-20	
F2 (C10-C16)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
F3 (C16-C34)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
F4 (C34-C50)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
Surrogate: 2-Bromobenzotrifluoride, F2-F4		79.1		60-140	%	11-SEP-20	15-SEP-20	R5200147
Surrogate: 3,4-Dichlorotoluene (SS)		86.0		70-130	%		11-SEP-20	R5204137
Polychlorinated Biphenyls								
Aroclor 1242		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1248		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1254		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1260		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Decachlorobiphenyl		86.8		50-150	%	15-SEP-20	15-SEP-20	R5224193
Total PCBs		<0.000040		0.000040	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Tetrachloro-m-xylene		92.3		50-150	%	15-SEP-20	15-SEP-20	R5224193
L2498615-8 MW04 Sampled By: CLIENT on 28-AUG-20 @ 12:00 Matrix: WATER								
Physical Tests								
Conductivity		1170		2.0	uS/cm		12-SEP-20	R5223184
Hardness (as CaCO3)		243		0.50	mg/L		16-SEP-20	
pH		7.87		0.10	pH		12-SEP-20	R5223184
Total Suspended Solids		16.5		3.0	mg/L		11-SEP-20	R5222647
Total Dissolved Solids		719		20	mg/L		11-SEP-20	R5223182
Anions and Nutrients								
Bromide (Br)		0.30		0.25	mg/L		14-SEP-20	R5224181
Chloride (Cl)		90.9		2.5	mg/L		14-SEP-20	R5224181
Fluoride (F)		0.50		0.10	mg/L		14-SEP-20	R5224181
Nitrate (as N)		0.455		0.025	mg/L		14-SEP-20	R5224181
Nitrite (as N)		<0.0050	DLDS	0.0050	mg/L		14-SEP-20	R5224181
Sulfate (SO4)		275		1.5	mg/L		14-SEP-20	R5224181
Total Metals								
Aluminum (Al)-Total		1.73		0.0030	mg/L		16-SEP-20	R5224805
Antimony (Sb)-Total		0.00040		0.00010	mg/L		16-SEP-20	R5224805

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-8	MW04							
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Total Metals								
Arsenic (As)-Total		0.00073		0.00010	mg/L		16-SEP-20	R5224805
Barium (Ba)-Total		0.0421		0.00010	mg/L		16-SEP-20	R5224805
Beryllium (Be)-Total		<0.00010		0.00010	mg/L		16-SEP-20	R5224805
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L		16-SEP-20	R5224805
Boron (B)-Total		0.084		0.010	mg/L		16-SEP-20	R5224805
Cadmium (Cd)-Total		0.0000549		0.0000050	mg/L		16-SEP-20	R5224805
Calcium (Ca)-Total		52.6		0.050	mg/L		16-SEP-20	R5224805
Cesium (Cs)-Total		0.000118		0.000010	mg/L		16-SEP-20	R5224805
Chromium (Cr)-Total		0.00216		0.00010	mg/L		16-SEP-20	R5224805
Cobalt (Co)-Total		0.00034		0.00010	mg/L		16-SEP-20	R5224805
Copper (Cu)-Total		0.00819		0.00050	mg/L		16-SEP-20	R5224805
Iron (Fe)-Total		0.853		0.010	mg/L		16-SEP-20	R5224805
Lead (Pb)-Total		0.000424		0.000050	mg/L		16-SEP-20	R5224805
Lithium (Li)-Total		0.0141		0.0010	mg/L		16-SEP-20	R5224805
Magnesium (Mg)-Total		33.6		0.0050	mg/L		16-SEP-20	R5224805
Manganese (Mn)-Total		0.0205		0.00010	mg/L		16-SEP-20	R5224805
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		15-SEP-20	R5223601
Molybdenum (Mo)-Total		0.0162		0.000050	mg/L		16-SEP-20	R5224805
Nickel (Ni)-Total		0.00353		0.00050	mg/L		16-SEP-20	R5224805
Phosphorus (P)-Total		<0.050		0.050	mg/L		16-SEP-20	R5224805
Potassium (K)-Total		20.2		0.050	mg/L		16-SEP-20	R5224805
Rubidium (Rb)-Total		0.00550		0.00020	mg/L		16-SEP-20	R5224805
Selenium (Se)-Total		0.000145		0.000050	mg/L		16-SEP-20	R5224805
Silicon (Si)-Total		5.68		0.10	mg/L		16-SEP-20	R5224805
Silver (Ag)-Total		0.000011		0.000010	mg/L		16-SEP-20	R5224805
Sodium (Na)-Total		168		0.050	mg/L		16-SEP-20	R5224805
Strontium (Sr)-Total		0.265		0.00020	mg/L		16-SEP-20	R5224805
Sulfur (S)-Total		106		0.50	mg/L		16-SEP-20	R5224805
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		16-SEP-20	R5224805
Thallium (Tl)-Total		0.000061		0.000010	mg/L		16-SEP-20	R5224805
Thorium (Th)-Total		0.00060		0.00010	mg/L		16-SEP-20	R5224805
Tin (Sn)-Total		0.00011		0.00010	mg/L		16-SEP-20	R5224805
Titanium (Ti)-Total		0.0524		0.00030	mg/L		16-SEP-20	R5224805
Tungsten (W)-Total		0.00071		0.00010	mg/L		16-SEP-20	R5224805
Uranium (U)-Total		0.0155		0.000010	mg/L		16-SEP-20	R5224805
Vanadium (V)-Total		0.00237		0.00050	mg/L		16-SEP-20	R5224805
Zinc (Zn)-Total		0.0071		0.0030	mg/L		16-SEP-20	R5224805
Zirconium (Zr)-Total		0.00177		0.00020	mg/L		16-SEP-20	R5224805
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					15-SEP-20	R5223539
Dissolved Metals Filtration Location		FIELD					15-SEP-20	R5224256

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-8 MW04								
Sampled By: CLIENT on 28-AUG-20 @ 12:00								
Matrix: WATER								
Dissolved Metals								
Aluminum (Al)-Dissolved		2.46	DTC	0.0010	mg/L	15-SEP-20	16-SEP-20	R5224908
Antimony (Sb)-Dissolved		0.00037		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Arsenic (As)-Dissolved		0.00075		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Barium (Ba)-Dissolved		0.0398		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Beryllium (Be)-Dissolved		<0.00010		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Bismuth (Bi)-Dissolved		<0.000050		0.000050	mg/L	15-SEP-20	16-SEP-20	R5224908
Boron (B)-Dissolved		0.078		0.010	mg/L	15-SEP-20	16-SEP-20	R5224908
Cadmium (Cd)-Dissolved		0.0000706		0.0000050	mg/L	15-SEP-20	16-SEP-20	R5224908
Calcium (Ca)-Dissolved		49.2		0.050	mg/L	15-SEP-20	16-SEP-20	R5224908
Cesium (Cs)-Dissolved		0.000186	DTC	0.000010	mg/L	15-SEP-20	16-SEP-20	R5224908
Chromium (Cr)-Dissolved		0.00324	DTC	0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Cobalt (Co)-Dissolved		0.00057	DTC	0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Copper (Cu)-Dissolved		0.00983		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Iron (Fe)-Dissolved		1.48	DTC	0.010	mg/L	15-SEP-20	16-SEP-20	R5224908
Lead (Pb)-Dissolved		0.000630	DTC	0.000050	mg/L	15-SEP-20	16-SEP-20	R5224908
Lithium (Li)-Dissolved		0.0147		0.0010	mg/L	15-SEP-20	16-SEP-20	R5224908
Magnesium (Mg)-Dissolved		29.1		0.0050	mg/L	15-SEP-20	16-SEP-20	R5224908
Manganese (Mn)-Dissolved		0.0313	DTC	0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	15-SEP-20	15-SEP-20	R5223601
Molybdenum (Mo)-Dissolved		0.0157		0.000050	mg/L	15-SEP-20	16-SEP-20	R5224908
Nickel (Ni)-Dissolved		0.00519	DTC	0.00050	mg/L	15-SEP-20	16-SEP-20	R5224908
Phosphorus (P)-Dissolved		<0.050		0.050	mg/L	15-SEP-20	16-SEP-20	R5224908
Potassium (K)-Dissolved		19.0		0.050	mg/L	15-SEP-20	16-SEP-20	R5224908
Rubidium (Rb)-Dissolved		0.00708		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Selenium (Se)-Dissolved		0.000120		0.000050	mg/L	15-SEP-20	16-SEP-20	R5224908
Silicon (Si)-Dissolved		5.95		0.050	mg/L	15-SEP-20	16-SEP-20	R5224908
Silver (Ag)-Dissolved		<0.000010		0.000010	mg/L	15-SEP-20	16-SEP-20	R5224908
Sodium (Na)-Dissolved		160		0.050	mg/L	15-SEP-20	16-SEP-20	R5224908
Strontium (Sr)-Dissolved		0.238		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Sulfur (S)-Dissolved		97.7		0.50	mg/L	15-SEP-20	16-SEP-20	R5224908
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Thallium (Tl)-Dissolved		0.000071		0.000010	mg/L	15-SEP-20	16-SEP-20	R5224908
Thorium (Th)-Dissolved		0.00066		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Tin (Sn)-Dissolved		0.00010		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Titanium (Ti)-Dissolved		0.0864	DTC	0.00030	mg/L	15-SEP-20	16-SEP-20	R5224908
Tungsten (W)-Dissolved		0.00068		0.00010	mg/L	15-SEP-20	16-SEP-20	R5224908
Uranium (U)-Dissolved		0.0141		0.000010	mg/L	15-SEP-20	16-SEP-20	R5224908
Vanadium (V)-Dissolved		0.00310		0.00050	mg/L	15-SEP-20	16-SEP-20	R5224908
Zinc (Zn)-Dissolved		0.0095		0.0010	mg/L	15-SEP-20	16-SEP-20	R5224908
Zirconium (Zr)-Dissolved		0.00181		0.00020	mg/L	15-SEP-20	16-SEP-20	R5224908
Volatile Organic Compounds								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-8 MW04 Sampled By: CLIENT on 28-AUG-20 @ 12:00 Matrix: WATER								
Volatile Organic Compounds								
Benzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Ethylbenzene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Methyl t-butyl ether (MTBE)		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Styrene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Toluene		<0.00045		0.00045	mg/L	10-SEP-20	11-SEP-20	R5203993
ortho-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
meta- & para-Xylene		<0.00050		0.00050	mg/L	10-SEP-20	11-SEP-20	R5203993
Xylenes		<0.00075		0.00075	mg/L		11-SEP-20	
F1 (C6-C10)		<0.10		0.10	mg/L	10-SEP-20	11-SEP-20	R5204137
Surrogate: 4-Bromofluorobenzene (SS)		85.3		70-130	%		11-SEP-20	R5203993
Surrogate: 1,4-Difluorobenzene (SS)		114.2		70-130	%		11-SEP-20	R5203993
Hydrocarbons								
F1-BTEX		<0.10		0.10	mg/L		11-SEP-20	
F2 (C10-C16)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
F3 (C16-C34)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
F4 (C34-C50)		<0.30		0.30	mg/L	11-SEP-20	15-SEP-20	R5200147
Surrogate: 2-Bromobenzotrifluoride, F2-F4		79.0		60-140	%	11-SEP-20	15-SEP-20	R5200147
Surrogate: 3,4-Dichlorotoluene (SS)		84.7		70-130	%		11-SEP-20	R5204137
Polychlorinated Biphenyls								
Aroclor 1242		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1248		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1254		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Aroclor 1260		<0.000020		0.000020	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Decachlorobiphenyl		82.8		50-150	%	15-SEP-20	15-SEP-20	R5224193
Total PCBs		<0.000040		0.000040	mg/L	15-SEP-20	15-SEP-20	R5224193
Surrogate: Tetrachloro-m-xylene		94.1		50-150	%	15-SEP-20	15-SEP-20	R5224193
L2498615-9 MW103 Sampled By: CLIENT on 30-AUG-20 @ 12:00 Matrix: WATER								
Physical Tests								
Conductivity		771		2.0	uS/cm		12-SEP-20	R5223184
Hardness (as CaCO3)		451		0.50	mg/L		15-SEP-20	
pH		8.21		0.10	pH		12-SEP-20	R5223184
Total Suspended Solids		33.3		3.0	mg/L		11-SEP-20	R5222647
Total Dissolved Solids		440		20	mg/L		11-SEP-20	R5223182
Anions and Nutrients								
Bromide (Br)		<0.25	DLDS	0.25	mg/L		14-SEP-20	R5224181
Chloride (Cl)		20.4		2.5	mg/L		14-SEP-20	R5224181
Fluoride (F)		<0.10	DLDS	0.10	mg/L		14-SEP-20	R5224181
Nitrate (as N)		5.50		0.025	mg/L		14-SEP-20	R5224181
Nitrite (as N)		<0.0050	DLDS	0.0050	mg/L		14-SEP-20	R5224181
Sulfate (SO4)		18.6		1.5	mg/L		14-SEP-20	R5224181

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-9 MW103								
Sampled By: CLIENT on 30-AUG-20 @ 12:00								
Matrix: WATER								
Anions and Nutrients								
Total Metals								
Aluminum (Al)-Total		0.192		0.0030	mg/L		15-SEP-20	R5224180
Antimony (Sb)-Total		0.00052		0.00010	mg/L		15-SEP-20	R5224180
Arsenic (As)-Total		0.00058		0.00010	mg/L		15-SEP-20	R5224180
Barium (Ba)-Total		0.0780		0.00010	mg/L		15-SEP-20	R5224180
Beryllium (Be)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L		15-SEP-20	R5224180
Boron (B)-Total		0.028		0.010	mg/L		15-SEP-20	R5224180
Cadmium (Cd)-Total		0.0000621		0.0000050	mg/L		15-SEP-20	R5224180
Calcium (Ca)-Total		69.3		0.050	mg/L		15-SEP-20	R5224180
Cesium (Cs)-Total		0.000038		0.000010	mg/L		15-SEP-20	R5224180
Chromium (Cr)-Total		0.0127		0.00010	mg/L		15-SEP-20	R5224180
Cobalt (Co)-Total		0.00045		0.00010	mg/L		15-SEP-20	R5224180
Copper (Cu)-Total		0.00861		0.00050	mg/L		15-SEP-20	R5224180
Iron (Fe)-Total		0.262		0.010	mg/L		15-SEP-20	R5224180
Lead (Pb)-Total		0.000649		0.000050	mg/L		15-SEP-20	R5224180
Lithium (Li)-Total		0.0020		0.0010	mg/L		15-SEP-20	R5224180
Magnesium (Mg)-Total		61.4		0.0050	mg/L		15-SEP-20	R5224180
Manganese (Mn)-Total		0.0203		0.00010	mg/L		15-SEP-20	R5224180
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		15-SEP-20	R5223601
Molybdenum (Mo)-Total		0.000591		0.000050	mg/L		15-SEP-20	R5224180
Nickel (Ni)-Total		0.00911		0.00050	mg/L		15-SEP-20	R5224180
Phosphorus (P)-Total		<0.050		0.050	mg/L		15-SEP-20	R5224180
Potassium (K)-Total		1.75		0.050	mg/L		15-SEP-20	R5224180
Rubidium (Rb)-Total		0.00091		0.00020	mg/L		15-SEP-20	R5224180
Selenium (Se)-Total		0.000114		0.000050	mg/L		15-SEP-20	R5224180
Silicon (Si)-Total		2.11		0.10	mg/L		15-SEP-20	R5224180
Silver (Ag)-Total		0.000017		0.000010	mg/L		15-SEP-20	R5224180
Sodium (Na)-Total		25.8		0.050	mg/L		15-SEP-20	R5224180
Strontium (Sr)-Total		0.105		0.00020	mg/L		15-SEP-20	R5224180
Sulfur (S)-Total		7.61		0.50	mg/L		15-SEP-20	R5224180
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		15-SEP-20	R5224180
Thallium (Tl)-Total		<0.000010		0.000010	mg/L		15-SEP-20	R5224180
Thorium (Th)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Tin (Sn)-Total		<0.00010		0.00010	mg/L		15-SEP-20	R5224180
Titanium (Ti)-Total		0.00559		0.00030	mg/L		15-SEP-20	R5224180
Tungsten (W)-Total		0.00011		0.00010	mg/L		15-SEP-20	R5224180
Uranium (U)-Total		0.00156		0.000010	mg/L		15-SEP-20	R5224180
Vanadium (V)-Total		0.00071		0.00050	mg/L		15-SEP-20	R5224180
Zinc (Zn)-Total		0.0529		0.0030	mg/L		15-SEP-20	R5224180
Zirconium (Zr)-Total		0.00091		0.00020	mg/L		15-SEP-20	R5224180

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2498615-9 MW103								
Sampled By: CLIENT on 30-AUG-20 @ 12:00								
Matrix: WATER								
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					15-SEP-20	R5223539
Dissolved Metals Filtration Location		FIELD					14-SEP-20	R5223376
Aluminum (Al)-Dissolved		0.244		0.0010	mg/L	14-SEP-20	14-SEP-20	R5223442
Antimony (Sb)-Dissolved		0.00044		0.00010	mg/L	14-SEP-20	14-SEP-20	R5223442
Arsenic (As)-Dissolved		0.00056		0.00010	mg/L	14-SEP-20	14-SEP-20	R5223442
Barium (Ba)-Dissolved		0.0826		0.00010	mg/L	14-SEP-20	14-SEP-20	R5223442
Beryllium (Be)-Dissolved		<0.00010		0.00010	mg/L	14-SEP-20	14-SEP-20	R5223442
Bismuth (Bi)-Dissolved		<0.000050		0.000050	mg/L	14-SEP-20	14-SEP-20	R5223442
Boron (B)-Dissolved		0.030		0.010	mg/L	14-SEP-20	14-SEP-20	R5223442
Cadmium (Cd)-Dissolved		0.0000597		0.0000050	mg/L	14-SEP-20	14-SEP-20	R5223442
Calcium (Ca)-Dissolved		77.9		0.050	mg/L	14-SEP-20	14-SEP-20	R5223442
Cesium (Cs)-Dissolved		0.000011		0.000010	mg/L	14-SEP-20	14-SEP-20	R5223442
Chromium (Cr)-Dissolved		0.00240		0.00010	mg/L	14-SEP-20	14-SEP-20	R5223442
Cobalt (Co)-Dissolved		0.00032		0.00010	mg/L	14-SEP-20	14-SEP-20	R5223442
Copper (Cu)-Dissolved		0.00759		0.00020	mg/L	14-SEP-20	14-SEP-20	R5223442
Iron (Fe)-Dissolved		0.214		0.010	mg/L	14-SEP-20	14-SEP-20	R5223442
Lead (Pb)-Dissolved		0.00115	DTMF	0.000050	mg/L	14-SEP-20	14-SEP-20	R5223442
Lithium (Li)-Dissolved		0.0020		0.0010	mg/L	14-SEP-20	14-SEP-20	R5223442
Magnesium (Mg)-Dissolved		62.2		0.0050	mg/L	14-SEP-20	14-SEP-20	R5223442
Manganese (Mn)-Dissolved		0.0227		0.00010	mg/L	14-SEP-20	14-SEP-20	R5223442
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	15-SEP-20	15-SEP-20	R5223601
Molybdenum (Mo)-Dissolved		0.000311		0.000050	mg/L	14-SEP-20	14-SEP-20	R5223442
Nickel (Ni)-Dissolved		0.00392		0.00050	mg/L	14-SEP-20	14-SEP-20	R5223442
Phosphorus (P)-Dissolved		<0.050		0.050	mg/L	14-SEP-20	14-SEP-20	R5223442
Potassium (K)-Dissolved		1.61		0.050	mg/L	14-SEP-20	14-SEP-20	R5223442
Rubidium (Rb)-Dissolved		0.00074		0.00020	mg/L	14-SEP-20	14-SEP-20	R5223442
Selenium (Se)-Dissolved		0.000142		0.000050	mg/L	14-SEP-20	14-SEP-20	R5223442
Silicon (Si)-Dissolved		2.17		0.050	mg/L	14-SEP-20	14-SEP-20	R5223442
Silver (Ag)-Dissolved		<0.000010		0.000010	mg/L	14-SEP-20	14-SEP-20	R5223442
Sodium (Na)-Dissolved		27.7		0.050	mg/L	14-SEP-20	14-SEP-20	R5223442
Strontium (Sr)-Dissolved		0.114		0.00020	mg/L	14-SEP-20	14-SEP-20	R5223442
Sulfur (S)-Dissolved		7.38		0.50	mg/L	14-SEP-20	14-SEP-20	R5223442
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	14-SEP-20	14-SEP-20	R5223442
Thallium (Tl)-Dissolved		<0.000010		0.000010	mg/L	14-SEP-20	14-SEP-20	R5223442
Thorium (Th)-Dissolved		0.00011		0.00010	mg/L	14-SEP-20	14-SEP-20	R5223442
Tin (Sn)-Dissolved		<0.00010		0.00010	mg/L	14-SEP-20	14-SEP-20	R5223442
Titanium (Ti)-Dissolved		0.00436		0.00030	mg/L	14-SEP-20	14-SEP-20	R5223442
Tungsten (W)-Dissolved		<0.00010		0.00010	mg/L	14-SEP-20	14-SEP-20	R5223442
Uranium (U)-Dissolved		0.00160		0.000010	mg/L	14-SEP-20	14-SEP-20	R5223442
Vanadium (V)-Dissolved		0.00052		0.00050	mg/L	14-SEP-20	14-SEP-20	R5223442
Zinc (Zn)-Dissolved		0.0453		0.0010	mg/L	14-SEP-20	14-SEP-20	R5223442

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Aluminum (Al)-Dissolved	B	L2498615-2, -4, -8
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2498615-9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2498615-9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2498615-9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2498615-9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2498615-9
Matrix Spike	Arsenic (As)-Total	MS-B	L2498615-1
Matrix Spike	Barium (Ba)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L2498615-1
Matrix Spike	Calcium (Ca)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L2498615-2, -4, -8
Matrix Spike	Cobalt (Co)-Total	MS-B	L2498615-1
Matrix Spike	Cobalt (Co)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Lithium (Li)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Lithium (Li)-Total	MS-B	L2498615-2, -4, -8
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2498615-1
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2498615-2, -4, -8
Matrix Spike	Manganese (Mn)-Total	MS-B	L2498615-1
Matrix Spike	Manganese (Mn)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Nickel (Ni)-Total	MS-B	L2498615-1
Matrix Spike	Nickel (Ni)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Nickel (Ni)-Total	MS-B	L2498615-2, -4, -8
Matrix Spike	Potassium (K)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Potassium (K)-Total	MS-B	L2498615-2, -4, -8
Matrix Spike	Rubidium (Rb)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L2498615-1
Matrix Spike	Sodium (Na)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L2498615-2, -4, -8
Matrix Spike	Strontium (Sr)-Total	MS-B	L2498615-1
Matrix Spike	Strontium (Sr)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L2498615-2, -4, -8
Matrix Spike	Sulfur (S)-Total	MS-B	L2498615-1
Matrix Spike	Sulfur (S)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Sulfur (S)-Total	MS-B	L2498615-2, -4, -8
Matrix Spike	Uranium (U)-Total	MS-B	L2498615-3, -5, -6, -7, -9
Matrix Spike	Uranium (U)-Total	MS-B	L2498615-2, -4, -8

Qualifiers for Sample Submission Listed:

Qualifier	Description
WSMD	Water sample(s) for dissolved mercury analysis was not submitted in glass or PTFE container with HCl preservative. Results may be biased low.
WSMT	Water sample(s) for total mercury analysis was not submitted in glass or PTFE container with HCl preservative. Results may be biased low.

Sample Parameter Qualifier key listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLA	Detection Limit adjusted for required dilution
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DTC	Dissolved concentration exceeds total. Results were confirmed by re-analysis.
DTMF	Dissolved concentration exceeds total for field-filtered metals sample. Metallic contaminants may have been introduced to dissolved sample during field filtration.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BR-L-IC-N-VA	Water	Bromide in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
CL-IC-N-VA	Water	Chloride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
EC-PCT-VA	Water	Conductivity (Automated)	APHA 2510 Auto. Conduc.
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
EC-SCREEN-VA	Water	Conductivity Screen (Internal Use Only)	APHA 2510
Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.			
F-IC-N-VA	Water	Fluoride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
F1-BTX-CALC-VA	Water	F1-Total BTX	CCME CWS PHC TIER 1 (2001)
This analysis is based on the "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method, Canadian Council of Ministers of the Environment, December 2000." For F1 (C6-C10), the sample undergoes a purge and trap extraction prior to analysis by GC/FID. The F1-BTEX result is calculated as follows:			
F1-BTEX: F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).			
F1-HSFID-VA	Water	CCME F1 By Headspace with GCFID	EPA 5021A/CCME CWS PHC (Pub# 1310)
This analysis is based on the "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method, Canadian Council of Ministers of the Environment, December 2000." For F1 (C6-C10), the sample undergoes a headspace purge prior to analysis by GC/FID.			
F1 (C6-C10): Sum of all hydrocarbons that elute between nC6 and nC10.			
F2-F4-ME-FID-VA	Water	CCME F2-F4 Hydrocarbons in Water	CCME CWS-PHC, Pub #1310, Dec 2001
F2-F4 is extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, Dec 2001.			
HARDNESS-CALC-VA	Water	Hardness	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
HG-D-CVAA-VA	Water	Diss. Mercury in Water by CVAAS or CVAFS	APHA 3030B/EPA 1631E (mod)
Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.			
HG-T-CVAA-VA	Water	Total Mercury in Water by CVAAS or CVAFS	EPA 1631E (mod)
Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.			
MET-D-CCMS-VA	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020A (mod)
Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
MET-T-CCMS-VA	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020A (mod)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
NO2-L-IC-N-VA	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-L-IC-N-VA	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
PCB-WT	Water	Polychlorinated Biphenyls	EPA 8082

PCBs are extracted from an aqueous sample at neutral pH with aliquots of dichloromethane using a modified separatory funnel technique. The extracts are analyzed by GC/MSD.

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H pH Value
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This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

SO4-IC-N-VA	Water	Sulfate in Water by IC	EPA 300.1 (mod)
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Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

TDS-VA	Water	Total Dissolved Solids by Gravimetric	APHA 2540 C - GRAVIMETRIC
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This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, TDS is determined by evaporating the filtrate to dryness at 180 degrees celsius.

TSS-VA	Water	Total Suspended Solids by Gravimetric	APHA 2540 D - GRAVIMETRIC
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This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.

VH-SURR-FID-VA	Water	VH Surrogates for Waters	BC Env. Lab Manual (VH in Solids)
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VOC7-HSMS-VA	Water	BTEX/MTBE/Styrene by Headspace GCMS	EPA 5021A/8260C
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The water sample, with added reagents, is heated in a sealed vial to equilibrium. The headspace from the vial is transfered into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.

VOC7/VOC-SURR-MS-VA	Water	VOC7 and/or VOC Surrogates for Waters	EPA 5035A/5021A/8260C
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XYLENES-CALC-VA	Water	Sum of Xylene Isomer Concentrations	CALCULATION
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Calculation of Total Xylenes

Total Xylenes is the sum of the concentrations of the ortho, meta, and para Xylene isomers. Results below detection limit (DL) are treated as zero. The DL for Total Xylenes is set to a value no less than the square root of the sum of the squares of the DLs of the individual Xylenes.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- mg/kg - milligrams per kilogram based on dry weight of sample
- mg/kg wwt - milligrams per kilogram based on wet weight of sample
- mg/kg lwt - milligrams per kilogram based on lipid weight of sample
- mg/L - unit of concentration based on volume, parts per million.
- < - Less than.
- D.L. - The reporting limit.
- N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L2498615

Report Date: 17-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HSFID-VA		Water						
Batch	R5204137							
WG3402276-3	DUP	L2498294-1						
F1 (C6-C10)		<0.10	<0.10	RPD-NA	mg/L	N/A	30	11-SEP-20
WG3402276-2	LCS							
F1 (C6-C10)			110.0		%		70-130	11-SEP-20
WG3402276-1	MB							
F1 (C6-C10)			<0.10		mg/L		0.1	11-SEP-20
F2-F4-ME-FID-VA		Water						
Batch	R5200147							
WG3402364-2	LCS							
F2 (C10-C16)			119.0		%		70-130	11-SEP-20
F3 (C16-C34)			110.0		%		70-130	11-SEP-20
F4 (C34-C50)			113.4		%		70-130	11-SEP-20
WG3402364-1	MB							
F2 (C10-C16)			<0.30		mg/L		0.3	11-SEP-20
F3 (C16-C34)			<0.30		mg/L		0.3	11-SEP-20
F4 (C34-C50)			<0.30		mg/L		0.3	11-SEP-20
Surrogate: 2-Bromobenzotrifluoride, F2-F4			69.6		%		60-140	11-SEP-20
HG-D-CVAA-VA		Water						
Batch	R5223601							
WG3404401-3	DUP	L2498615-7						
Mercury (Hg)-Dissolved		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	15-SEP-20
WG3404401-2	LCS							
Mercury (Hg)-Dissolved			96.8		%		80-120	15-SEP-20
WG3404401-1	MB							
Mercury (Hg)-Dissolved			<0.0000050		mg/L		0.000005	15-SEP-20
WG3404401-4	MS	L2500670-3						
Mercury (Hg)-Dissolved			95.9		%		70-130	15-SEP-20
HG-T-CVAA-VA		Water						
Batch	R5223601							
WG3404490-3	DUP	L2498423-1						
Mercury (Hg)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	15-SEP-20
WG3404490-2	LCS							
Mercury (Hg)-Total			96.8		%		80-120	15-SEP-20
WG3404490-1	MB							
Mercury (Hg)-Total			<0.0000050		mg/L		0.000005	15-SEP-20
WG3404490-4	MS	L2496996-1						
Mercury (Hg)-Total			96.3		%		70-130	15-SEP-20



Quality Control Report

Workorder: L2498615

Report Date: 17-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5223442							
WG3404183-3	DUP	L2498942-1						
Aluminum (Al)-Dissolved		0.0234	0.0242		mg/L	3.7	20	14-SEP-20
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-SEP-20
Arsenic (As)-Dissolved		0.00054	0.00053		mg/L	1.8	20	14-SEP-20
Barium (Ba)-Dissolved		0.00740	0.00767		mg/L	3.6	20	14-SEP-20
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-SEP-20
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	14-SEP-20
Boron (B)-Dissolved		0.065	0.071		mg/L	8.6	20	14-SEP-20
Cadmium (Cd)-Dissolved		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	14-SEP-20
Calcium (Ca)-Dissolved		44.5	47.2		mg/L	5.8	20	14-SEP-20
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	14-SEP-20
Chromium (Cr)-Dissolved		0.00024	0.00024		mg/L	2.4	20	14-SEP-20
Cobalt (Co)-Dissolved		0.00013	0.00012		mg/L	7.0	20	14-SEP-20
Copper (Cu)-Dissolved		0.00671	0.00670		mg/L	0.2	20	14-SEP-20
Iron (Fe)-Dissolved		0.085	0.086		mg/L	1.7	20	14-SEP-20
Lead (Pb)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	14-SEP-20
Lithium (Li)-Dissolved		0.0029	0.0031		mg/L	5.8	20	14-SEP-20
Magnesium (Mg)-Dissolved		11.6	11.9		mg/L	3.1	20	14-SEP-20
Manganese (Mn)-Dissolved		0.00626	0.00597		mg/L	4.6	20	14-SEP-20
Molybdenum (Mo)-Dissolved		0.000876	0.000933		mg/L	6.3	20	14-SEP-20
Nickel (Ni)-Dissolved		0.00112	0.00105		mg/L	6.5	20	14-SEP-20
Phosphorus (P)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	14-SEP-20
Potassium (K)-Dissolved		1.84	1.87		mg/L	1.3	20	14-SEP-20
Rubidium (Rb)-Dissolved		0.00084	0.00085		mg/L	1.4	20	14-SEP-20
Selenium (Se)-Dissolved		0.000364	0.000387		mg/L	6.3	20	14-SEP-20
Silicon (Si)-Dissolved		3.73	3.88		mg/L	3.8	20	14-SEP-20
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	14-SEP-20
Sodium (Na)-Dissolved		32.5	33.4		mg/L	2.7	20	14-SEP-20
Strontium (Sr)-Dissolved		0.0684	0.0743		mg/L	8.3	20	14-SEP-20
Sulfur (S)-Dissolved		19.0	20.0		mg/L	5.5	20	14-SEP-20
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	14-SEP-20
Thallium (Tl)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	14-SEP-20
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-SEP-20
Tin (Sn)-Dissolved		<0.00010	<0.00010		mg/L			14-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5223442							
WG3404183-3 DUP		L2498942-1						
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-SEP-20
Titanium (Ti)-Dissolved		0.00052	0.00048		mg/L	7.4	20	14-SEP-20
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-SEP-20
Uranium (U)-Dissolved		0.000225	0.000222		mg/L	1.1	20	14-SEP-20
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	14-SEP-20
Zinc (Zn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	14-SEP-20
Zirconium (Zr)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	14-SEP-20
WG3404183-2 LCS								
Aluminum (Al)-Dissolved			102.0		%		80-120	14-SEP-20
Antimony (Sb)-Dissolved			99.8		%		80-120	14-SEP-20
Arsenic (As)-Dissolved			96.6		%		80-120	14-SEP-20
Barium (Ba)-Dissolved			100.6		%		80-120	14-SEP-20
Beryllium (Be)-Dissolved			103.4		%		80-120	14-SEP-20
Bismuth (Bi)-Dissolved			109.7		%		80-120	14-SEP-20
Boron (B)-Dissolved			105.9		%		80-120	14-SEP-20
Cadmium (Cd)-Dissolved			100.3		%		80-120	14-SEP-20
Calcium (Ca)-Dissolved			101.7		%		80-120	14-SEP-20
Cesium (Cs)-Dissolved			96.9		%		80-120	14-SEP-20
Chromium (Cr)-Dissolved			95.9		%		80-120	14-SEP-20
Cobalt (Co)-Dissolved			98.2		%		80-120	14-SEP-20
Copper (Cu)-Dissolved			95.5		%		80-120	14-SEP-20
Iron (Fe)-Dissolved			87.8		%		80-120	14-SEP-20
Lead (Pb)-Dissolved			99.5		%		80-120	14-SEP-20
Lithium (Li)-Dissolved			102.2		%		80-120	14-SEP-20
Magnesium (Mg)-Dissolved			111.9		%		80-120	14-SEP-20
Manganese (Mn)-Dissolved			95.4		%		80-120	14-SEP-20
Molybdenum (Mo)-Dissolved			99.2		%		80-120	14-SEP-20
Nickel (Ni)-Dissolved			100.5		%		80-120	14-SEP-20
Phosphorus (P)-Dissolved			106.8		%		70-130	14-SEP-20
Potassium (K)-Dissolved			98.1		%		80-120	14-SEP-20
Rubidium (Rb)-Dissolved			101.6		%		80-120	14-SEP-20
Selenium (Se)-Dissolved			101.6		%		80-120	14-SEP-20
Silicon (Si)-Dissolved			103.3		%		60-140	14-SEP-20



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Client:

BluMetric Environmental Inc. (Ottawa)
 4916 49 St
 Yellowknife NT X1A 1P3

Contact:

Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5223442							
WG3404183-2		LCS						
Silver (Ag)-Dissolved			102.7		%		80-120	14-SEP-20
Sodium (Na)-Dissolved			111.6		%		80-120	14-SEP-20
Strontium (Sr)-Dissolved			104.8		%		80-120	14-SEP-20
Sulfur (S)-Dissolved			99.1		%		80-120	14-SEP-20
Tellurium (Te)-Dissolved			105.8		%		80-120	14-SEP-20
Thallium (Tl)-Dissolved			101.9		%		80-120	14-SEP-20
Thorium (Th)-Dissolved			94.3		%		80-120	14-SEP-20
Tin (Sn)-Dissolved			99.2		%		80-120	14-SEP-20
Titanium (Ti)-Dissolved			92.4		%		80-120	14-SEP-20
Tungsten (W)-Dissolved			101.2		%		80-120	14-SEP-20
Uranium (U)-Dissolved			102.4		%		80-120	14-SEP-20
Vanadium (V)-Dissolved			99.5		%		80-120	14-SEP-20
Zinc (Zn)-Dissolved			93.0		%		80-120	14-SEP-20
Zirconium (Zr)-Dissolved			99.2		%		80-120	14-SEP-20
WG3404183-1		MB						
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	14-SEP-20
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	14-SEP-20
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	14-SEP-20
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	14-SEP-20
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	14-SEP-20
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	14-SEP-20
Boron (B)-Dissolved			<0.010		mg/L		0.01	14-SEP-20
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	14-SEP-20
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	14-SEP-20
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	14-SEP-20
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	14-SEP-20
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	14-SEP-20
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	14-SEP-20
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	14-SEP-20
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	14-SEP-20
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	14-SEP-20
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	14-SEP-20
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	14-SEP-20
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	14-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA								
Water								
Batch	R5223442							
WG3404183-1 MB								
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	14-SEP-20
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	14-SEP-20
Potassium (K)-Dissolved			<0.050		mg/L		0.05	14-SEP-20
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	14-SEP-20
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	14-SEP-20
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	14-SEP-20
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	14-SEP-20
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	14-SEP-20
Strontium (Sr)-Dissolved			<0.00020		mg/L		0.0002	14-SEP-20
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	14-SEP-20
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	14-SEP-20
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	14-SEP-20
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	14-SEP-20
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	14-SEP-20
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	14-SEP-20
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	14-SEP-20
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	14-SEP-20
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	14-SEP-20
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	14-SEP-20
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	14-SEP-20
WG3404183-4 MS		L2498942-2						
Aluminum (Al)-Dissolved			97.9		%		70-130	14-SEP-20
Antimony (Sb)-Dissolved			103.4		%		70-130	14-SEP-20
Arsenic (As)-Dissolved			97.0		%		70-130	14-SEP-20
Barium (Ba)-Dissolved			92.4		%		70-130	14-SEP-20
Beryllium (Be)-Dissolved			102.7		%		70-130	14-SEP-20
Bismuth (Bi)-Dissolved			89.0		%		70-130	14-SEP-20
Boron (B)-Dissolved			97.6		%		70-130	14-SEP-20
Cadmium (Cd)-Dissolved			99.1		%		70-130	14-SEP-20
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	14-SEP-20
Cesium (Cs)-Dissolved			96.8		%		70-130	14-SEP-20
Chromium (Cr)-Dissolved			95.6		%		70-130	14-SEP-20
Cobalt (Co)-Dissolved			96.4		%		70-130	14-SEP-20
Copper (Cu)-Dissolved			91.3		%		70-130	14-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5223442							
WG3404183-4 MS		L2498942-2						
Iron (Fe)-Dissolved			94.8		%		70-130	14-SEP-20
Lead (Pb)-Dissolved			91.0		%		70-130	14-SEP-20
Lithium (Li)-Dissolved			108.5		%		70-130	14-SEP-20
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	14-SEP-20
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	14-SEP-20
Molybdenum (Mo)-Dissolved			100.8		%		70-130	14-SEP-20
Nickel (Ni)-Dissolved			95.9		%		70-130	14-SEP-20
Phosphorus (P)-Dissolved			107.6		%		70-130	14-SEP-20
Potassium (K)-Dissolved			107.4		%		70-130	14-SEP-20
Rubidium (Rb)-Dissolved			101.6		%		70-130	14-SEP-20
Selenium (Se)-Dissolved			107.5		%		70-130	14-SEP-20
Silicon (Si)-Dissolved			93.7		%		70-130	14-SEP-20
Silver (Ag)-Dissolved			98.8		%		70-130	14-SEP-20
Sodium (Na)-Dissolved			N/A	MS-B	%		-	14-SEP-20
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	14-SEP-20
Sulfur (S)-Dissolved			103.9		%		70-130	14-SEP-20
Tellurium (Te)-Dissolved			102.5		%		70-130	14-SEP-20
Thallium (Tl)-Dissolved			89.1		%		70-130	14-SEP-20
Thorium (Th)-Dissolved			92.9		%		70-130	14-SEP-20
Tin (Sn)-Dissolved			99.5		%		70-130	14-SEP-20
Titanium (Ti)-Dissolved			94.7		%		70-130	14-SEP-20
Tungsten (W)-Dissolved			97.4		%		70-130	14-SEP-20
Uranium (U)-Dissolved			97.0		%		70-130	14-SEP-20
Vanadium (V)-Dissolved			97.6		%		70-130	14-SEP-20
Zinc (Zn)-Dissolved			90.7		%		70-130	14-SEP-20
Zirconium (Zr)-Dissolved			111.6		%		70-130	14-SEP-20
Batch	R5223444							
WG3403109-3 DUP		L2498615-1						
Aluminum (Al)-Dissolved		0.405	0.427		mg/L	5.4	20	11-SEP-20
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-SEP-20
Arsenic (As)-Dissolved		0.00072	0.00069		mg/L	4.4	20	11-SEP-20
Barium (Ba)-Dissolved		0.120	0.121		mg/L	0.3	20	11-SEP-20
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5223444							
WG3403109-3	DUP	L2498615-1						
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	11-SEP-20
Boron (B)-Dissolved		0.018	0.017		mg/L	3.4	20	11-SEP-20
Cadmium (Cd)-Dissolved		0.0000773	0.0000758		mg/L	1.9	20	11-SEP-20
Calcium (Ca)-Dissolved		22.8	22.9		mg/L	0.5	20	11-SEP-20
Cesium (Cs)-Dissolved		0.000010	0.000011		mg/L	5.7	20	11-SEP-20
Chromium (Cr)-Dissolved		0.00197	0.00206		mg/L	4.1	20	11-SEP-20
Cobalt (Co)-Dissolved		0.00680	0.00690		mg/L	1.4	20	11-SEP-20
Copper (Cu)-Dissolved		0.0316	0.0325		mg/L	2.9	20	11-SEP-20
Iron (Fe)-Dissolved		0.133	0.151		mg/L	13	20	11-SEP-20
Lead (Pb)-Dissolved		0.000103	0.000096		mg/L	6.8	20	11-SEP-20
Lithium (Li)-Dissolved		0.0031	0.0030		mg/L	0.7	20	11-SEP-20
Magnesium (Mg)-Dissolved		8.69	9.16		mg/L	5.3	20	11-SEP-20
Manganese (Mn)-Dissolved		0.902	0.900		mg/L	0.2	20	11-SEP-20
Molybdenum (Mo)-Dissolved		0.000271	0.000267		mg/L	1.8	20	11-SEP-20
Nickel (Ni)-Dissolved		0.0295	0.0299		mg/L	1.4	20	11-SEP-20
Phosphorus (P)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	11-SEP-20
Potassium (K)-Dissolved		4.73	4.83		mg/L	2.1	20	11-SEP-20
Rubidium (Rb)-Dissolved		0.00424	0.00414		mg/L	2.4	20	11-SEP-20
Selenium (Se)-Dissolved		0.000202	0.000214		mg/L	5.6	20	11-SEP-20
Silicon (Si)-Dissolved		6.96	7.23		mg/L	3.7	20	11-SEP-20
Silver (Ag)-Dissolved		0.000047	0.000053		mg/L	12	20	11-SEP-20
Sodium (Na)-Dissolved		2.59	2.67		mg/L	3.2	20	11-SEP-20
Strontium (Sr)-Dissolved		0.235	0.240		mg/L	2.1	20	11-SEP-20
Sulfur (S)-Dissolved		0.61	0.65		mg/L	6.8	20	11-SEP-20
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	11-SEP-20
Thallium (Tl)-Dissolved		0.000015	0.000014		mg/L	9.2	20	11-SEP-20
Thorium (Th)-Dissolved		0.00054	0.00056		mg/L	3.0	20	11-SEP-20
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-SEP-20
Titanium (Ti)-Dissolved		0.00512	0.00617		mg/L	19	20	11-SEP-20
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-SEP-20
Uranium (U)-Dissolved		0.00176	0.00173		mg/L	1.5	20	11-SEP-20
Vanadium (V)-Dissolved		0.00072	0.00077		mg/L	6.8	20	11-SEP-20
Zinc (Zn)-Dissolved		0.0034	0.0031		mg/L			11-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5223444							
WG3403109-3	DUP	L2498615-1						
Zinc (Zn)-Dissolved		0.0034	0.0031		mg/L	7.7	20	11-SEP-20
Zirconium (Zr)-Dissolved		0.00260	0.00270		mg/L	4.0	20	11-SEP-20
WG3403109-2	LCS							
Aluminum (Al)-Dissolved			100.9		%		80-120	11-SEP-20
Antimony (Sb)-Dissolved			100.6		%		80-120	11-SEP-20
Arsenic (As)-Dissolved			106.2		%		80-120	11-SEP-20
Barium (Ba)-Dissolved			100.6		%		80-120	11-SEP-20
Beryllium (Be)-Dissolved			105.3		%		80-120	11-SEP-20
Bismuth (Bi)-Dissolved			116.1		%		80-120	11-SEP-20
Boron (B)-Dissolved			99.1		%		80-120	11-SEP-20
Cadmium (Cd)-Dissolved			103.9		%		80-120	11-SEP-20
Calcium (Ca)-Dissolved			101.5		%		80-120	11-SEP-20
Cesium (Cs)-Dissolved			100.2		%		80-120	11-SEP-20
Chromium (Cr)-Dissolved			104.1		%		80-120	11-SEP-20
Cobalt (Co)-Dissolved			105.8		%		80-120	11-SEP-20
Copper (Cu)-Dissolved			104.8		%		80-120	11-SEP-20
Iron (Fe)-Dissolved			98.8		%		80-120	11-SEP-20
Lead (Pb)-Dissolved			105.1		%		80-120	11-SEP-20
Lithium (Li)-Dissolved			106.7		%		80-120	11-SEP-20
Magnesium (Mg)-Dissolved			106.5		%		80-120	11-SEP-20
Manganese (Mn)-Dissolved			119.8		%		80-120	11-SEP-20
Molybdenum (Mo)-Dissolved			98.9		%		80-120	11-SEP-20
Nickel (Ni)-Dissolved			104.7		%		80-120	11-SEP-20
Phosphorus (P)-Dissolved			112.9		%		70-130	11-SEP-20
Potassium (K)-Dissolved			106.0		%		80-120	11-SEP-20
Rubidium (Rb)-Dissolved			112.2		%		80-120	11-SEP-20
Selenium (Se)-Dissolved			103.1		%		80-120	11-SEP-20
Silicon (Si)-Dissolved			107.7		%		60-140	11-SEP-20
Silver (Ag)-Dissolved			101.1		%		80-120	11-SEP-20
Sodium (Na)-Dissolved			114.5		%		80-120	11-SEP-20
Strontium (Sr)-Dissolved			109.5		%		80-120	11-SEP-20
Sulfur (S)-Dissolved			101.0		%		80-120	11-SEP-20
Tellurium (Te)-Dissolved			100.9		%		80-120	11-SEP-20
Thallium (Tl)-Dissolved			105.9		%		80-120	11-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5223444							
WG3403109-2	LCS							
Thorium (Th)-Dissolved			102.6		%		80-120	11-SEP-20
Tin (Sn)-Dissolved			100.3		%		80-120	11-SEP-20
Titanium (Ti)-Dissolved			104.0		%		80-120	11-SEP-20
Tungsten (W)-Dissolved			108.3		%		80-120	11-SEP-20
Uranium (U)-Dissolved			114.2		%		80-120	11-SEP-20
Vanadium (V)-Dissolved			102.5		%		80-120	11-SEP-20
Zinc (Zn)-Dissolved			106.9		%		80-120	11-SEP-20
Zirconium (Zr)-Dissolved			103.1		%		80-120	11-SEP-20
WG3403109-1	MB							
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	11-SEP-20
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	11-SEP-20
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	11-SEP-20
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	11-SEP-20
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	11-SEP-20
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	11-SEP-20
Boron (B)-Dissolved			<0.010		mg/L		0.01	11-SEP-20
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	11-SEP-20
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	11-SEP-20
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	11-SEP-20
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	11-SEP-20
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	11-SEP-20
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	11-SEP-20
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	11-SEP-20
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	11-SEP-20
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	11-SEP-20
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	11-SEP-20
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	11-SEP-20
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	11-SEP-20
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	11-SEP-20
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	11-SEP-20
Potassium (K)-Dissolved			<0.050		mg/L		0.05	11-SEP-20
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	11-SEP-20
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	11-SEP-20
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	11-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch R5223444								
WG3403109-1 MB								
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	11-SEP-20
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	11-SEP-20
Strontium (Sr)-Dissolved			<0.00020		mg/L		0.0002	11-SEP-20
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	11-SEP-20
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	11-SEP-20
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	11-SEP-20
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	11-SEP-20
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	11-SEP-20
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	11-SEP-20
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	11-SEP-20
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	11-SEP-20
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	11-SEP-20
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	11-SEP-20
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	11-SEP-20
Batch R5224908								
WG3405191-3 DUP		L2498615-2						
Aluminum (Al)-Dissolved		0.341	0.348		mg/L	1.9	20	16-SEP-20
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-SEP-20
Arsenic (As)-Dissolved		0.00064	0.00061		mg/L	5.1	20	16-SEP-20
Barium (Ba)-Dissolved		0.104	0.107		mg/L	3.2	20	16-SEP-20
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-SEP-20
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	16-SEP-20
Boron (B)-Dissolved		0.018	0.018		mg/L	2.5	20	16-SEP-20
Cadmium (Cd)-Dissolved		0.0000721	0.0000799		mg/L	10	20	16-SEP-20
Calcium (Ca)-Dissolved		22.8	22.3		mg/L	2.1	20	16-SEP-20
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	16-SEP-20
Chromium (Cr)-Dissolved		0.00187	0.00181		mg/L	3.6	20	16-SEP-20
Cobalt (Co)-Dissolved		0.00645	0.00639		mg/L	1.0	20	16-SEP-20
Copper (Cu)-Dissolved		0.0289	0.0290		mg/L	0.3	20	16-SEP-20
Iron (Fe)-Dissolved		0.135	0.136		mg/L	0.1	20	16-SEP-20
Lead (Pb)-Dissolved		0.000097	0.000094		mg/L	3.2	20	16-SEP-20
Lithium (Li)-Dissolved		0.0029	0.0029		mg/L	0.9	20	16-SEP-20
Magnesium (Mg)-Dissolved		7.18	7.38		mg/L	2.8	20	16-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5224908							
WG3405191-3	DUP	L2498615-2						
Manganese (Mn)-Dissolved		0.785	0.810		mg/L	3.1	20	16-SEP-20
Molybdenum (Mo)-Dissolved		0.000271	0.000271		mg/L	0.3	20	16-SEP-20
Nickel (Ni)-Dissolved		0.0275	0.0271		mg/L	1.4	20	16-SEP-20
Phosphorus (P)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	16-SEP-20
Potassium (K)-Dissolved		4.30	4.27		mg/L	0.7	20	16-SEP-20
Rubidium (Rb)-Dissolved		0.00355	0.00354		mg/L	0.4	20	16-SEP-20
Selenium (Se)-Dissolved		0.000223	0.000216		mg/L	2.9	20	16-SEP-20
Silicon (Si)-Dissolved		6.67	6.75		mg/L	1.2	20	16-SEP-20
Silver (Ag)-Dissolved		0.000044	0.000052		mg/L	15	20	16-SEP-20
Sodium (Na)-Dissolved		2.43	2.46		mg/L	1.4	20	16-SEP-20
Strontium (Sr)-Dissolved		0.198	0.211		mg/L	6.1	20	16-SEP-20
Sulfur (S)-Dissolved		0.72	0.81		mg/L	12	20	16-SEP-20
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	16-SEP-20
Thallium (Tl)-Dissolved		0.000020	0.000015	J	mg/L	0.000005	0.00002	16-SEP-20
Thorium (Th)-Dissolved		0.00041	0.00042		mg/L	0.9	20	16-SEP-20
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-SEP-20
Titanium (Ti)-Dissolved		0.00430	0.00405		mg/L	5.9	20	16-SEP-20
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-SEP-20
Uranium (U)-Dissolved		0.00150	0.00154		mg/L	2.6	20	16-SEP-20
Vanadium (V)-Dissolved		0.00063	0.00065		mg/L	2.5	20	16-SEP-20
Zinc (Zn)-Dissolved		0.0028	0.0029		mg/L	3.2	20	16-SEP-20
Zirconium (Zr)-Dissolved		0.00243	0.00247		mg/L	1.7	20	16-SEP-20
WG3405191-2	LCS							
Aluminum (Al)-Dissolved			95.2		%		80-120	16-SEP-20
Antimony (Sb)-Dissolved			107.1		%		80-120	16-SEP-20
Arsenic (As)-Dissolved			96.7		%		80-120	16-SEP-20
Barium (Ba)-Dissolved			96.9		%		80-120	16-SEP-20
Beryllium (Be)-Dissolved			94.6		%		80-120	16-SEP-20
Bismuth (Bi)-Dissolved			97.6		%		80-120	16-SEP-20
Boron (B)-Dissolved			96.2		%		80-120	16-SEP-20
Cadmium (Cd)-Dissolved			102.2		%		80-120	16-SEP-20
Calcium (Ca)-Dissolved			103.8		%		80-120	16-SEP-20
Cesium (Cs)-Dissolved			105.6		%		80-120	16-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5224908							
WG3405191-2	LCS							
Chromium (Cr)-Dissolved			97.3		%		80-120	16-SEP-20
Cobalt (Co)-Dissolved			99.5		%		80-120	16-SEP-20
Copper (Cu)-Dissolved			98.5		%		80-120	16-SEP-20
Iron (Fe)-Dissolved			100.1		%		80-120	16-SEP-20
Lead (Pb)-Dissolved			104.4		%		80-120	16-SEP-20
Lithium (Li)-Dissolved			95.6		%		80-120	16-SEP-20
Magnesium (Mg)-Dissolved			88.6		%		80-120	16-SEP-20
Manganese (Mn)-Dissolved			95.3		%		80-120	16-SEP-20
Molybdenum (Mo)-Dissolved			109.9		%		80-120	16-SEP-20
Nickel (Ni)-Dissolved			98.5		%		80-120	16-SEP-20
Phosphorus (P)-Dissolved			90.4		%		70-130	16-SEP-20
Potassium (K)-Dissolved			97.2		%		80-120	16-SEP-20
Rubidium (Rb)-Dissolved			99.3		%		80-120	16-SEP-20
Selenium (Se)-Dissolved			106.5		%		80-120	16-SEP-20
Silicon (Si)-Dissolved			104.7		%		60-140	16-SEP-20
Silver (Ag)-Dissolved			112.4		%		80-120	16-SEP-20
Sodium (Na)-Dissolved			98.6		%		80-120	16-SEP-20
Strontium (Sr)-Dissolved			113.0		%		80-120	16-SEP-20
Sulfur (S)-Dissolved			99.4		%		80-120	16-SEP-20
Tellurium (Te)-Dissolved			109.1		%		80-120	16-SEP-20
Thallium (Tl)-Dissolved			104.8		%		80-120	16-SEP-20
Thorium (Th)-Dissolved			95.5		%		80-120	16-SEP-20
Tin (Sn)-Dissolved			103.1		%		80-120	16-SEP-20
Titanium (Ti)-Dissolved			95.5		%		80-120	16-SEP-20
Tungsten (W)-Dissolved			102.8		%		80-120	16-SEP-20
Uranium (U)-Dissolved			106.9		%		80-120	16-SEP-20
Vanadium (V)-Dissolved			100.5		%		80-120	16-SEP-20
Zinc (Zn)-Dissolved			101.5		%		80-120	16-SEP-20
Zirconium (Zr)-Dissolved			105.3		%		80-120	16-SEP-20
WG3405191-1	MB							
Aluminum (Al)-Dissolved			0.0037	B	mg/L		0.001	16-SEP-20
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	16-SEP-20
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	16-SEP-20
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	16-SEP-20



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Client:

BluMetric Environmental Inc. (Ottawa)
 4916 49 St
 Yellowknife NT X1A 1P3

Contact:

Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5224908							
WG3405191-1	MB							
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	16-SEP-20
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	16-SEP-20
Boron (B)-Dissolved			<0.010		mg/L		0.01	16-SEP-20
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	16-SEP-20
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	16-SEP-20
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	16-SEP-20
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	16-SEP-20
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	16-SEP-20
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	16-SEP-20
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	16-SEP-20
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	16-SEP-20
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	16-SEP-20
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	16-SEP-20
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	16-SEP-20
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	16-SEP-20
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	16-SEP-20
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	16-SEP-20
Potassium (K)-Dissolved			<0.050		mg/L		0.05	16-SEP-20
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	16-SEP-20
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	16-SEP-20
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	16-SEP-20
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	16-SEP-20
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	16-SEP-20
Strontium (Sr)-Dissolved			<0.00020		mg/L		0.0002	16-SEP-20
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	16-SEP-20
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	16-SEP-20
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	16-SEP-20
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	16-SEP-20
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	16-SEP-20
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	16-SEP-20
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	16-SEP-20
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	16-SEP-20
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	16-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-VA		Water						
Batch	R5224908							
WG3405191-1 MB								
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	16-SEP-20
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	16-SEP-20
MET-T-CCMS-VA		Water						
Batch	R5223324							
WG3403461-3 DUP		L2498551-1						
Aluminum (Al)-Total		0.0223	0.0227		mg/L	1.6	20	14-SEP-20
Antimony (Sb)-Total		0.00012	0.00011		mg/L	9.5	20	14-SEP-20
Arsenic (As)-Total		0.00579	0.00557		mg/L	3.9	20	14-SEP-20
Barium (Ba)-Total		0.00980	0.00964		mg/L	1.6	20	14-SEP-20
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-SEP-20
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	14-SEP-20
Boron (B)-Total		0.041	0.041		mg/L	0.6	20	14-SEP-20
Cadmium (Cd)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	14-SEP-20
Calcium (Ca)-Total		25.6	24.3		mg/L	5.0	20	14-SEP-20
Cesium (Cs)-Total		0.000113	0.000116		mg/L	2.5	20	14-SEP-20
Chromium (Cr)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-SEP-20
Cobalt (Co)-Total		0.00054	0.00051		mg/L	6.4	20	14-SEP-20
Copper (Cu)-Total		0.00106	0.00102		mg/L	4.5	20	14-SEP-20
Iron (Fe)-Total		0.132	0.126		mg/L	4.4	20	14-SEP-20
Lead (Pb)-Total		<0.000050	0.000053	RPD-NA	mg/L	N/A	20	14-SEP-20
Lithium (Li)-Total		0.0161	0.0154		mg/L	4.1	20	14-SEP-20
Magnesium (Mg)-Total		6.09	5.81		mg/L	4.7	20	14-SEP-20
Manganese (Mn)-Total		0.0114	0.0110		mg/L	2.9	20	14-SEP-20
Molybdenum (Mo)-Total		0.000521	0.000463		mg/L	12	20	14-SEP-20
Nickel (Ni)-Total		0.00433	0.00413		mg/L	4.7	20	14-SEP-20
Phosphorus (P)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	14-SEP-20
Potassium (K)-Total		2.59	2.49		mg/L	4.3	20	14-SEP-20
Rubidium (Rb)-Total		0.00567	0.00539		mg/L	5.1	20	14-SEP-20
Selenium (Se)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	14-SEP-20
Silicon (Si)-Total		0.11	0.10		mg/L	6.1	20	14-SEP-20
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	14-SEP-20
Sodium (Na)-Total		10.2	9.79		mg/L	4.3	20	14-SEP-20
Strontium (Sr)-Total		0.157	0.161		mg/L	2.5	20	14-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5223324							
WG3403461-3	DUP	L2498551-1						
Sulfur (S)-Total		26.8	25.1		mg/L	6.5	20	14-SEP-20
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	14-SEP-20
Thallium (Tl)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	14-SEP-20
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-SEP-20
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-SEP-20
Titanium (Ti)-Total		0.00065	0.00070		mg/L	8.2	20	14-SEP-20
Tungsten (W)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-SEP-20
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	14-SEP-20
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	14-SEP-20
Zirconium (Zr)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	14-SEP-20
WG3403461-2	LCS							
Aluminum (Al)-Total			97.9		%		80-120	14-SEP-20
Antimony (Sb)-Total			104.8		%		80-120	14-SEP-20
Arsenic (As)-Total			96.4		%		80-120	14-SEP-20
Barium (Ba)-Total			99.0		%		80-120	14-SEP-20
Beryllium (Be)-Total			98.6		%		80-120	14-SEP-20
Bismuth (Bi)-Total			103.3		%		80-120	14-SEP-20
Boron (B)-Total			94.2		%		80-120	14-SEP-20
Cadmium (Cd)-Total			99.6		%		80-120	14-SEP-20
Calcium (Ca)-Total			100.4		%		80-120	14-SEP-20
Cesium (Cs)-Total			101.2		%		80-120	14-SEP-20
Chromium (Cr)-Total			98.9		%		80-120	14-SEP-20
Cobalt (Co)-Total			99.7		%		80-120	14-SEP-20
Copper (Cu)-Total			97.9		%		80-120	14-SEP-20
Iron (Fe)-Total			102.1		%		80-120	14-SEP-20
Lead (Pb)-Total			102.7		%		80-120	14-SEP-20
Lithium (Li)-Total			96.3		%		80-120	14-SEP-20
Magnesium (Mg)-Total			96.5		%		80-120	14-SEP-20
Manganese (Mn)-Total			99.5		%		80-120	14-SEP-20
Molybdenum (Mo)-Total			100.9		%		80-120	14-SEP-20
Nickel (Ni)-Total			98.6		%		80-120	14-SEP-20
Phosphorus (P)-Total			103.1		%		80-120	14-SEP-20
Potassium (K)-Total			99.4		%		80-120	14-SEP-20



Quality Control Report

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Client:

BluMetric Environmental Inc. (Ottawa)
 4916 49 St
 Yellowknife NT X1A 1P3

Contact:

Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5223324							
WG3403461-2 LCS								
Rubidium (Rb)-Total			98.0		%		80-120	14-SEP-20
Selenium (Se)-Total			102.1		%		80-120	14-SEP-20
Silicon (Si)-Total			101.0		%		80-120	14-SEP-20
Silver (Ag)-Total			102.7		%		80-120	14-SEP-20
Sodium (Na)-Total			104.2		%		80-120	14-SEP-20
Strontium (Sr)-Total			105.9		%		80-120	14-SEP-20
Sulfur (S)-Total			91.8		%		80-120	14-SEP-20
Tellurium (Te)-Total			97.3		%		80-120	14-SEP-20
Thallium (Tl)-Total			102.5		%		80-120	14-SEP-20
Thorium (Th)-Total			97.8		%		80-120	14-SEP-20
Tin (Sn)-Total			100.3		%		80-120	14-SEP-20
Titanium (Ti)-Total			93.4		%		80-120	14-SEP-20
Tungsten (W)-Total			100.8		%		80-120	14-SEP-20
Uranium (U)-Total			103.7		%		80-120	14-SEP-20
Vanadium (V)-Total			98.0		%		80-120	14-SEP-20
Zinc (Zn)-Total			104.4		%		80-120	14-SEP-20
Zirconium (Zr)-Total			99.6		%		80-120	14-SEP-20
WG3403461-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	14-SEP-20
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	14-SEP-20
Arsenic (As)-Total			<0.00010		mg/L		0.0001	14-SEP-20
Barium (Ba)-Total			<0.00010		mg/L		0.0001	14-SEP-20
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	14-SEP-20
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	14-SEP-20
Boron (B)-Total			<0.010		mg/L		0.01	14-SEP-20
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	14-SEP-20
Calcium (Ca)-Total			<0.050		mg/L		0.05	14-SEP-20
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	14-SEP-20
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	14-SEP-20
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	14-SEP-20
Copper (Cu)-Total			<0.00050		mg/L		0.0005	14-SEP-20
Iron (Fe)-Total			<0.010		mg/L		0.01	14-SEP-20
Lead (Pb)-Total			<0.000050		mg/L		0.00005	14-SEP-20
Lithium (Li)-Total			<0.0010		mg/L		0.001	14-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5223324							
WG3403461-1 MB								
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	14-SEP-20
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	14-SEP-20
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	14-SEP-20
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	14-SEP-20
Phosphorus (P)-Total			<0.050		mg/L		0.05	14-SEP-20
Potassium (K)-Total			<0.050		mg/L		0.05	14-SEP-20
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	14-SEP-20
Selenium (Se)-Total			<0.000050		mg/L		0.00005	14-SEP-20
Silicon (Si)-Total			<0.10		mg/L		0.1	14-SEP-20
Silver (Ag)-Total			<0.000010		mg/L		0.00001	14-SEP-20
Sodium (Na)-Total			<0.050		mg/L		0.05	14-SEP-20
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	14-SEP-20
Sulfur (S)-Total			<0.50		mg/L		0.5	14-SEP-20
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	14-SEP-20
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	14-SEP-20
Thorium (Th)-Total			<0.00010		mg/L		0.0001	14-SEP-20
Tin (Sn)-Total			<0.00010		mg/L		0.0001	14-SEP-20
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	14-SEP-20
Tungsten (W)-Total			<0.00010		mg/L		0.0001	14-SEP-20
Uranium (U)-Total			<0.000010		mg/L		0.00001	14-SEP-20
Vanadium (V)-Total			<0.00050		mg/L		0.0005	14-SEP-20
Zinc (Zn)-Total			<0.0030		mg/L		0.003	14-SEP-20
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	14-SEP-20
WG3403461-4 MS		L2498425-1						
Aluminum (Al)-Total			92.6		%		70-130	14-SEP-20
Antimony (Sb)-Total			99.2		%		70-130	14-SEP-20
Arsenic (As)-Total			N/A	MS-B	%		-	14-SEP-20
Barium (Ba)-Total			84.3		%		70-130	14-SEP-20
Beryllium (Be)-Total			100.5		%		70-130	14-SEP-20
Bismuth (Bi)-Total			96.9		%		70-130	14-SEP-20
Boron (B)-Total			92.2		%		70-130	14-SEP-20
Cadmium (Cd)-Total			98.5		%		70-130	14-SEP-20
Calcium (Ca)-Total			N/A	MS-B	%		-	14-SEP-20
Cesium (Cs)-Total			99.2		%		70-130	14-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5223324							
WG3403461-4 MS		L2498425-1						
Chromium (Cr)-Total			91.5		%		70-130	14-SEP-20
Cobalt (Co)-Total			N/A	MS-B	%		-	14-SEP-20
Copper (Cu)-Total			92.7		%		70-130	14-SEP-20
Iron (Fe)-Total			95.3		%		70-130	14-SEP-20
Lead (Pb)-Total			94.5		%		70-130	14-SEP-20
Lithium (Li)-Total			101.1		%		70-130	14-SEP-20
Magnesium (Mg)-Total			N/A	MS-B	%		-	14-SEP-20
Manganese (Mn)-Total			N/A	MS-B	%		-	14-SEP-20
Molybdenum (Mo)-Total			99.5		%		70-130	14-SEP-20
Nickel (Ni)-Total			N/A	MS-B	%		-	14-SEP-20
Phosphorus (P)-Total			102.5		%		70-130	14-SEP-20
Potassium (K)-Total			95.0		%		70-130	14-SEP-20
Rubidium (Rb)-Total			93.3		%		70-130	14-SEP-20
Selenium (Se)-Total			100.4		%		70-130	14-SEP-20
Silicon (Si)-Total			90.7		%		70-130	14-SEP-20
Silver (Ag)-Total			98.1		%		70-130	14-SEP-20
Sodium (Na)-Total			N/A	MS-B	%		-	14-SEP-20
Strontium (Sr)-Total			N/A	MS-B	%		-	14-SEP-20
Sulfur (S)-Total			N/A	MS-B	%		-	14-SEP-20
Tellurium (Te)-Total			98.5		%		70-130	14-SEP-20
Thallium (Tl)-Total			94.3		%		70-130	14-SEP-20
Thorium (Th)-Total			101.0		%		70-130	14-SEP-20
Tin (Sn)-Total			98.2		%		70-130	14-SEP-20
Titanium (Ti)-Total			92.4		%		70-130	14-SEP-20
Tungsten (W)-Total			94.3		%		70-130	14-SEP-20
Uranium (U)-Total			95.8		%		70-130	14-SEP-20
Vanadium (V)-Total			95.8		%		70-130	14-SEP-20
Zinc (Zn)-Total			98.2		%		70-130	14-SEP-20
Zirconium (Zr)-Total			102.6		%		70-130	14-SEP-20
Batch	R5224180							
WG3403910-3 DUP		L2501367-2						
Aluminum (Al)-Total		0.0099	0.0091		mg/L	8.6	20	15-SEP-20
Antimony (Sb)-Total		0.00276	0.00278		mg/L	0.8	20	15-SEP-20
Arsenic (As)-Total		0.00020	0.00019		mg/L			15-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5224180							
WG3403910-3	DUP	L2501367-2						
Arsenic (As)-Total		0.00020	0.00019		mg/L	2.7	20	15-SEP-20
Barium (Ba)-Total		0.0289	0.0294		mg/L	1.8	20	15-SEP-20
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	15-SEP-20
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	15-SEP-20
Boron (B)-Total		0.080	0.079		mg/L	0.7	20	15-SEP-20
Cadmium (Cd)-Total		0.000319	0.000322		mg/L	1.2	20	15-SEP-20
Calcium (Ca)-Total		324	332		mg/L	2.4	20	15-SEP-20
Cesium (Cs)-Total		0.000567	0.000576		mg/L	1.5	20	15-SEP-20
Chromium (Cr)-Total		0.00017	0.00023	J	mg/L	0.00006	0.0002	15-SEP-20
Cobalt (Co)-Total		0.0401	0.0401		mg/L	0.2	20	15-SEP-20
Copper (Cu)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	15-SEP-20
Iron (Fe)-Total		0.013	0.018	J	mg/L	0.005	0.02	15-SEP-20
Lead (Pb)-Total		0.00124	0.00121		mg/L	2.2	20	15-SEP-20
Lithium (Li)-Total		0.886	0.890		mg/L	0.4	20	15-SEP-20
Magnesium (Mg)-Total		126	127		mg/L	0.7	20	15-SEP-20
Manganese (Mn)-Total		0.255	0.253		mg/L	0.6	20	15-SEP-20
Molybdenum (Mo)-Total		0.00466	0.00456		mg/L	2.0	20	15-SEP-20
Nickel (Ni)-Total		0.196	0.195		mg/L	0.5	20	15-SEP-20
Phosphorus (P)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	15-SEP-20
Potassium (K)-Total		15.8	15.1		mg/L	5.1	20	15-SEP-20
Rubidium (Rb)-Total		0.0257	0.0260		mg/L	0.8	20	15-SEP-20
Selenium (Se)-Total		0.00290	0.00308		mg/L	6.0	20	15-SEP-20
Silicon (Si)-Total		3.48	3.51		mg/L	0.9	20	15-SEP-20
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	15-SEP-20
Sodium (Na)-Total		14.8	14.8		mg/L	0.2	20	15-SEP-20
Strontium (Sr)-Total		0.821	0.827		mg/L	0.7	20	15-SEP-20
Sulfur (S)-Total		169	173		mg/L	2.2	20	15-SEP-20
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	15-SEP-20
Thallium (Tl)-Total		0.000171	0.000163		mg/L	5.0	20	15-SEP-20
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	15-SEP-20
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	15-SEP-20
Titanium (Ti)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	15-SEP-20
Tungsten (W)-Total		<0.00010	<0.00010		mg/L			15-SEP-20



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Client:

BluMetric Environmental Inc. (Ottawa)

4916 49 St

Yellowknife NT X1A 1P3

Contact:

Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5224180							
WG3403910-3	DUP	L2501367-2						
Tungsten (W)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	15-SEP-20
Uranium (U)-Total		0.0240	0.0238		mg/L	0.8	20	15-SEP-20
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	15-SEP-20
Zinc (Zn)-Total		0.0322	0.0314		mg/L	2.5	20	15-SEP-20
Zirconium (Zr)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	15-SEP-20
WG3403910-2	LCS							
Aluminum (Al)-Total			104.0		%		80-120	15-SEP-20
Antimony (Sb)-Total			103.5		%		80-120	15-SEP-20
Arsenic (As)-Total			97.9		%		80-120	15-SEP-20
Barium (Ba)-Total			106.2		%		80-120	15-SEP-20
Beryllium (Be)-Total			98.4		%		80-120	15-SEP-20
Bismuth (Bi)-Total			101.1		%		80-120	15-SEP-20
Boron (B)-Total			95.8		%		80-120	15-SEP-20
Cadmium (Cd)-Total			100.6		%		80-120	15-SEP-20
Calcium (Ca)-Total			102.7		%		80-120	15-SEP-20
Cesium (Cs)-Total			99.7		%		80-120	15-SEP-20
Chromium (Cr)-Total			101.3		%		80-120	15-SEP-20
Cobalt (Co)-Total			99.0		%		80-120	15-SEP-20
Copper (Cu)-Total			100.0		%		80-120	15-SEP-20
Iron (Fe)-Total			101.2		%		80-120	15-SEP-20
Lead (Pb)-Total			100.0		%		80-120	15-SEP-20
Lithium (Li)-Total			97.3		%		80-120	15-SEP-20
Magnesium (Mg)-Total			100.2		%		80-120	15-SEP-20
Manganese (Mn)-Total			103.9		%		80-120	15-SEP-20
Molybdenum (Mo)-Total			104.9		%		80-120	15-SEP-20
Nickel (Ni)-Total			99.8		%		80-120	15-SEP-20
Phosphorus (P)-Total			107.5		%		80-120	15-SEP-20
Potassium (K)-Total			101.6		%		80-120	15-SEP-20
Rubidium (Rb)-Total			96.5		%		80-120	15-SEP-20
Selenium (Se)-Total			104.3		%		80-120	15-SEP-20
Silicon (Si)-Total			102.4		%		80-120	15-SEP-20
Silver (Ag)-Total			105.4		%		80-120	15-SEP-20
Sodium (Na)-Total			100.1		%		80-120	15-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5224180							
WG3403910-2	LCS							
Strontium (Sr)-Total			106.4		%		80-120	15-SEP-20
Sulfur (S)-Total			98.0		%		80-120	15-SEP-20
Tellurium (Te)-Total			94.2		%		80-120	15-SEP-20
Thallium (Tl)-Total			101.2		%		80-120	15-SEP-20
Thorium (Th)-Total			90.1		%		80-120	15-SEP-20
Tin (Sn)-Total			99.5		%		80-120	15-SEP-20
Titanium (Ti)-Total			92.0		%		80-120	15-SEP-20
Tungsten (W)-Total			100.1		%		80-120	15-SEP-20
Uranium (U)-Total			109.6		%		80-120	15-SEP-20
Vanadium (V)-Total			102.1		%		80-120	15-SEP-20
Zinc (Zn)-Total			101.1		%		80-120	15-SEP-20
Zirconium (Zr)-Total			101.2		%		80-120	15-SEP-20
WG3403910-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	15-SEP-20
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	15-SEP-20
Arsenic (As)-Total			<0.00010		mg/L		0.0001	15-SEP-20
Barium (Ba)-Total			<0.00010		mg/L		0.0001	15-SEP-20
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	15-SEP-20
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	15-SEP-20
Boron (B)-Total			<0.010		mg/L		0.01	15-SEP-20
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	15-SEP-20
Calcium (Ca)-Total			<0.050		mg/L		0.05	15-SEP-20
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	15-SEP-20
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	15-SEP-20
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	15-SEP-20
Copper (Cu)-Total			<0.00050		mg/L		0.0005	15-SEP-20
Iron (Fe)-Total			<0.010		mg/L		0.01	15-SEP-20
Lead (Pb)-Total			<0.000050		mg/L		0.00005	15-SEP-20
Lithium (Li)-Total			<0.0010		mg/L		0.001	15-SEP-20
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	15-SEP-20
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	15-SEP-20
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	15-SEP-20
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	15-SEP-20
Phosphorus (P)-Total			<0.050		mg/L		0.05	15-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
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Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5224180							
WG3403910-1 MB								
Potassium (K)-Total			<0.050		mg/L		0.05	15-SEP-20
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	15-SEP-20
Selenium (Se)-Total			<0.000050		mg/L		0.00005	15-SEP-20
Silicon (Si)-Total			<0.10		mg/L		0.1	15-SEP-20
Silver (Ag)-Total			<0.000010		mg/L		0.00001	15-SEP-20
Sodium (Na)-Total			<0.050		mg/L		0.05	15-SEP-20
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	15-SEP-20
Sulfur (S)-Total			<0.50		mg/L		0.5	15-SEP-20
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	15-SEP-20
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	15-SEP-20
Thorium (Th)-Total			<0.00010		mg/L		0.0001	15-SEP-20
Tin (Sn)-Total			<0.00010		mg/L		0.0001	15-SEP-20
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	15-SEP-20
Tungsten (W)-Total			<0.00010		mg/L		0.0001	15-SEP-20
Uranium (U)-Total			<0.000010		mg/L		0.00001	15-SEP-20
Vanadium (V)-Total			<0.00050		mg/L		0.0005	15-SEP-20
Zinc (Zn)-Total			<0.0030		mg/L		0.003	15-SEP-20
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	15-SEP-20
WG3403910-4 MS		L2501367-3						
Aluminum (Al)-Total			99.0		%		70-130	15-SEP-20
Antimony (Sb)-Total			101.3		%		70-130	15-SEP-20
Arsenic (As)-Total			100.6		%		70-130	15-SEP-20
Barium (Ba)-Total			N/A	MS-B	%		-	15-SEP-20
Beryllium (Be)-Total			96.7		%		70-130	15-SEP-20
Bismuth (Bi)-Total			87.6		%		70-130	15-SEP-20
Boron (B)-Total			88.3		%		70-130	15-SEP-20
Cadmium (Cd)-Total			95.9		%		70-130	15-SEP-20
Calcium (Ca)-Total			N/A	MS-B	%		-	15-SEP-20
Cesium (Cs)-Total			99.8		%		70-130	15-SEP-20
Chromium (Cr)-Total			97.0		%		70-130	15-SEP-20
Cobalt (Co)-Total			N/A	MS-B	%		-	15-SEP-20
Copper (Cu)-Total			88.6		%		70-130	15-SEP-20
Iron (Fe)-Total			95.3		%		70-130	15-SEP-20
Lead (Pb)-Total			89.8		%		70-130	15-SEP-20



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4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5224180							
WG3403910-4 MS		L2501367-3						
Lithium (Li)-Total			N/A	MS-B	%		-	15-SEP-20
Magnesium (Mg)-Total			N/A	MS-B	%		-	15-SEP-20
Manganese (Mn)-Total			N/A	MS-B	%		-	15-SEP-20
Molybdenum (Mo)-Total			105.3		%		70-130	15-SEP-20
Nickel (Ni)-Total			N/A	MS-B	%		-	15-SEP-20
Phosphorus (P)-Total			106.7		%		70-130	15-SEP-20
Potassium (K)-Total			N/A	MS-B	%		-	15-SEP-20
Rubidium (Rb)-Total			N/A	MS-B	%		-	15-SEP-20
Selenium (Se)-Total			108.4		%		70-130	15-SEP-20
Silicon (Si)-Total			95.6		%		70-130	15-SEP-20
Silver (Ag)-Total			100.0		%		70-130	15-SEP-20
Sodium (Na)-Total			N/A	MS-B	%		-	15-SEP-20
Strontium (Sr)-Total			N/A	MS-B	%		-	15-SEP-20
Sulfur (S)-Total			N/A	MS-B	%		-	15-SEP-20
Tellurium (Te)-Total			93.9		%		70-130	15-SEP-20
Thallium (Tl)-Total			88.6		%		70-130	15-SEP-20
Thorium (Th)-Total			99.9		%		70-130	15-SEP-20
Tin (Sn)-Total			100.2		%		70-130	15-SEP-20
Titanium (Ti)-Total			96.5		%		70-130	15-SEP-20
Tungsten (W)-Total			96.9		%		70-130	15-SEP-20
Uranium (U)-Total			N/A	MS-B	%		-	15-SEP-20
Vanadium (V)-Total			102.8		%		70-130	15-SEP-20
Zinc (Zn)-Total			91.6		%		70-130	15-SEP-20
Zirconium (Zr)-Total			111.7		%		70-130	15-SEP-20
Batch	R5224805							
WG3405217-3 DUP		L2498404-2						
Aluminum (Al)-Total		0.0147	0.0164		mg/L	11	20	16-SEP-20
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-SEP-20
Arsenic (As)-Total		0.00037	0.00040		mg/L	7.0	20	16-SEP-20
Barium (Ba)-Total		0.0195	0.0211		mg/L	8.2	20	16-SEP-20
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-SEP-20
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	16-SEP-20
Boron (B)-Total		0.016	0.016		mg/L	1.0	20	16-SEP-20



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Client:

BluMetric Environmental Inc. (Ottawa)
 4916 49 St
 Yellowknife NT X1A 1P3

Contact:

Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5224805							
WG3405217-2		LCS						
Aluminum (Al)-Total			105.4		%		80-120	16-SEP-20
Antimony (Sb)-Total			105.3		%		80-120	16-SEP-20
Arsenic (As)-Total			101.0		%		80-120	16-SEP-20
Barium (Ba)-Total			99.9		%		80-120	16-SEP-20
Beryllium (Be)-Total			101.5		%		80-120	16-SEP-20
Bismuth (Bi)-Total			106.3		%		80-120	16-SEP-20
Boron (B)-Total			99.0		%		80-120	16-SEP-20
Cadmium (Cd)-Total			101.2		%		80-120	16-SEP-20
Calcium (Ca)-Total			103.1		%		80-120	16-SEP-20
Cesium (Cs)-Total			101.8		%		80-120	16-SEP-20
Chromium (Cr)-Total			102.1		%		80-120	16-SEP-20
Cobalt (Co)-Total			101.5		%		80-120	16-SEP-20
Copper (Cu)-Total			99.5		%		80-120	16-SEP-20
Iron (Fe)-Total			101.4		%		80-120	16-SEP-20
Lead (Pb)-Total			102.1		%		80-120	16-SEP-20
Lithium (Li)-Total			95.7		%		80-120	16-SEP-20
Magnesium (Mg)-Total			101.5		%		80-120	16-SEP-20
Manganese (Mn)-Total			106.0		%		80-120	16-SEP-20
Molybdenum (Mo)-Total			100.1		%		80-120	16-SEP-20
Nickel (Ni)-Total			100.8		%		80-120	16-SEP-20
Phosphorus (P)-Total			105.4		%		80-120	16-SEP-20
Potassium (K)-Total			102.4		%		80-120	16-SEP-20
Rubidium (Rb)-Total			104.9		%		80-120	16-SEP-20
Selenium (Se)-Total			99.4		%		80-120	16-SEP-20
Silicon (Si)-Total			99.2		%		80-120	16-SEP-20
Silver (Ag)-Total			103.7		%		80-120	16-SEP-20
Sodium (Na)-Total			102.3		%		80-120	16-SEP-20
Strontium (Sr)-Total			104.9		%		80-120	16-SEP-20
Sulfur (S)-Total			115.8		%		80-120	16-SEP-20
Tellurium (Te)-Total			101.8		%		80-120	16-SEP-20
Thallium (Tl)-Total			102.3		%		80-120	16-SEP-20
Thorium (Th)-Total			100.8		%		80-120	16-SEP-20
Tin (Sn)-Total			103.2		%		80-120	16-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5224805							
WG3405217-2	LCS							
Titanium (Ti)-Total			97.0		%		80-120	16-SEP-20
Tungsten (W)-Total			105.0		%		80-120	16-SEP-20
Uranium (U)-Total			106.0		%		80-120	16-SEP-20
Vanadium (V)-Total			104.7		%		80-120	16-SEP-20
Zinc (Zn)-Total			103.5		%		80-120	16-SEP-20
Zirconium (Zr)-Total			101.8		%		80-120	16-SEP-20
WG3405217-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	16-SEP-20
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	16-SEP-20
Arsenic (As)-Total			<0.00010		mg/L		0.0001	16-SEP-20
Barium (Ba)-Total			<0.00010		mg/L		0.0001	16-SEP-20
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	16-SEP-20
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	16-SEP-20
Boron (B)-Total			<0.010		mg/L		0.01	16-SEP-20
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	16-SEP-20
Calcium (Ca)-Total			<0.050		mg/L		0.05	16-SEP-20
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	16-SEP-20
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	16-SEP-20
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	16-SEP-20
Copper (Cu)-Total			<0.00050		mg/L		0.0005	16-SEP-20
Iron (Fe)-Total			<0.010		mg/L		0.01	16-SEP-20
Lead (Pb)-Total			<0.000050		mg/L		0.00005	16-SEP-20
Lithium (Li)-Total			<0.0010		mg/L		0.001	16-SEP-20
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	16-SEP-20
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	16-SEP-20
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	16-SEP-20
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	16-SEP-20
Phosphorus (P)-Total			<0.050		mg/L		0.05	16-SEP-20
Potassium (K)-Total			<0.050		mg/L		0.05	16-SEP-20
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	16-SEP-20
Selenium (Se)-Total			<0.000050		mg/L		0.00005	16-SEP-20
Silicon (Si)-Total			<0.10		mg/L		0.1	16-SEP-20
Silver (Ag)-Total			<0.000010		mg/L		0.00001	16-SEP-20
Sodium (Na)-Total			<0.050		mg/L		0.05	16-SEP-20



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Client: BluMetric Environmental Inc. (Ottawa)
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Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5224805							
WG3405217-1 MB								
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	16-SEP-20
Sulfur (S)-Total			<0.50		mg/L		0.5	16-SEP-20
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	16-SEP-20
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	16-SEP-20
Thorium (Th)-Total			<0.00010		mg/L		0.0001	16-SEP-20
Tin (Sn)-Total			<0.00010		mg/L		0.0001	16-SEP-20
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	16-SEP-20
Tungsten (W)-Total			<0.00010		mg/L		0.0001	16-SEP-20
Uranium (U)-Total			<0.000010		mg/L		0.00001	16-SEP-20
Vanadium (V)-Total			<0.00050		mg/L		0.0005	16-SEP-20
Zinc (Zn)-Total			<0.0030		mg/L		0.003	16-SEP-20
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	16-SEP-20
WG3405217-4 MS		L2502291-1						
Aluminum (Al)-Total			102.0		%		70-130	16-SEP-20
Antimony (Sb)-Total			105.9		%		70-130	16-SEP-20
Arsenic (As)-Total			102.6		%		70-130	16-SEP-20
Barium (Ba)-Total			96.6		%		70-130	16-SEP-20
Beryllium (Be)-Total			102.8		%		70-130	16-SEP-20
Bismuth (Bi)-Total			98.2		%		70-130	16-SEP-20
Boron (B)-Total			98.1		%		70-130	16-SEP-20
Cadmium (Cd)-Total			98.9		%		70-130	16-SEP-20
Calcium (Ca)-Total			N/A	MS-B	%		-	16-SEP-20
Cesium (Cs)-Total			105.4		%		70-130	16-SEP-20
Chromium (Cr)-Total			101.1		%		70-130	16-SEP-20
Cobalt (Co)-Total			94.2		%		70-130	16-SEP-20
Copper (Cu)-Total			94.5		%		70-130	16-SEP-20
Iron (Fe)-Total			102.3		%		70-130	16-SEP-20
Lead (Pb)-Total			95.8		%		70-130	16-SEP-20
Lithium (Li)-Total			N/A	MS-B	%		-	16-SEP-20
Magnesium (Mg)-Total			N/A	MS-B	%		-	16-SEP-20
Manganese (Mn)-Total			93.2		%		70-130	16-SEP-20
Molybdenum (Mo)-Total			101.0		%		70-130	16-SEP-20
Nickel (Ni)-Total			N/A	MS-B	%		-	16-SEP-20
Phosphorus (P)-Total			109.0		%		70-130	16-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R5224805							
WG3405217-4 MS		L2502291-1						
Potassium (K)-Total			N/A	MS-B	%		-	16-SEP-20
Rubidium (Rb)-Total			98.7		%		70-130	16-SEP-20
Selenium (Se)-Total			106.7		%		70-130	16-SEP-20
Silicon (Si)-Total			94.2		%		70-130	16-SEP-20
Silver (Ag)-Total			102.4		%		70-130	16-SEP-20
Sodium (Na)-Total			N/A	MS-B	%		-	16-SEP-20
Strontium (Sr)-Total			N/A	MS-B	%		-	16-SEP-20
Sulfur (S)-Total			N/A	MS-B	%		-	16-SEP-20
Tellurium (Te)-Total			105.8		%		70-130	16-SEP-20
Thallium (Tl)-Total			95.1		%		70-130	16-SEP-20
Thorium (Th)-Total			106.3		%		70-130	16-SEP-20
Tin (Sn)-Total			103.1		%		70-130	16-SEP-20
Titanium (Ti)-Total			101.8		%		70-130	16-SEP-20
Tungsten (W)-Total			103.8		%		70-130	16-SEP-20
Uranium (U)-Total			N/A	MS-B	%		-	16-SEP-20
Vanadium (V)-Total			103.8		%		70-130	16-SEP-20
Zinc (Zn)-Total			99.6		%		70-130	16-SEP-20
Zirconium (Zr)-Total			108.2		%		70-130	16-SEP-20
NO2-L-IC-N-VA		Water						
Batch	R5224181							
WG3403335-3 DUP		L2498615-1						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	14-SEP-20
WG3403335-2 LCS			101.1		%		90-110	14-SEP-20
WG3403335-1 MB			<0.0010		mg/L		0.001	14-SEP-20
WG3403335-4 MS		L2498615-2	98.2		%		75-125	14-SEP-20
NO3-L-IC-N-VA		Water						
Batch	R5224181							
WG3403335-3 DUP		L2498615-1						
Nitrate (as N)		0.0342	0.0348		mg/L	2.0	20	14-SEP-20
WG3403335-2 LCS			102.0		%		90-110	14-SEP-20
WG3403335-1 MB								



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
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Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-L-IC-N-VA								
Water								
Batch	R5224181							
WG3403335-1	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	14-SEP-20
WG3403335-4	MS	L2498615-2						
Nitrate (as N)			100.3		%		75-125	14-SEP-20
PCB-WT								
Water								
Batch	R5224193							
WG3403672-2	LCS							
Aroclor 1242			97.7		%		65-130	15-SEP-20
Aroclor 1248			87.3		%		65-130	15-SEP-20
Aroclor 1254			94.4		%		65-130	15-SEP-20
Aroclor 1260			95.5		%		65-130	15-SEP-20
WG3403672-1	MB							
Aroclor 1242			<0.020		ug/L		0.02	15-SEP-20
Aroclor 1248			<0.020		ug/L		0.02	15-SEP-20
Aroclor 1254			<0.020		ug/L		0.02	15-SEP-20
Aroclor 1260			<0.020		ug/L		0.02	15-SEP-20
Surrogate: Decachlorobiphenyl			85.5		%		50-150	15-SEP-20
Surrogate: Tetrachloro-m-xylene			61.4		%		50-150	15-SEP-20
PH-PCT-VA								
Water								
Batch	R5223184							
WG3403340-2	CRM	VA-PH7-BUF						
pH			7.01		pH		6.9-7.1	12-SEP-20
WG3403340-4	DUP	L2498615-1						
pH		6.22	6.25	J	pH	0.03	0.3	12-SEP-20
SO4-IC-N-VA								
Water								
Batch	R5224181							
WG3403335-3	DUP	L2498615-1						
Sulfate (SO4)		1.58	1.58		mg/L	0.0	20	14-SEP-20
WG3403335-2	LCS							
Sulfate (SO4)			102.9		%		90-110	14-SEP-20
WG3403335-1	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	14-SEP-20
WG3403335-4	MS	L2498615-2						
Sulfate (SO4)			100.8		%		75-125	14-SEP-20
TDS-VA								
Water								



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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TDS-VA		Water						
Batch	R5223182							
WG3402705-6	DUP	L2498615-4						
Total Dissolved Solids		1980	2090		mg/L	5.1	20	11-SEP-20
WG3402705-5	LCS							
Total Dissolved Solids			101.6		%		85-115	11-SEP-20
WG3402705-4	MB							
Total Dissolved Solids			<10		mg/L		10	11-SEP-20
TSS-VA		Water						
Batch	R5222647							
WG3402701-3	DUP	L2497936-2						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	11-SEP-20
WG3402701-6	DUP	L2498914-1						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	11-SEP-20
WG3402701-2	LCS							
Total Suspended Solids			105.2		%		85-115	11-SEP-20
WG3402701-5	LCS							
Total Suspended Solids			102.8		%		85-115	11-SEP-20
WG3402701-1	MB							
Total Suspended Solids			<3.0		mg/L		3	11-SEP-20
WG3402701-4	MB							
Total Suspended Solids			<3.0		mg/L		3	11-SEP-20
VOC7-HSMS-VA		Water						
Batch	R5203993							
WG3402276-3	DUP	L2498294-1						
Benzene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	11-SEP-20
Ethylbenzene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	11-SEP-20
Methyl t-butyl ether (MTBE)		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	11-SEP-20
Styrene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	11-SEP-20
Toluene		<0.00045	<0.00045	RPD-NA	mg/L	N/A	30	11-SEP-20
meta- & para-Xylene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	11-SEP-20
ortho-Xylene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	11-SEP-20
WG3402276-2	LCS							
Benzene			98.4		%		70-130	11-SEP-20
Ethylbenzene			92.2		%		70-130	11-SEP-20
Methyl t-butyl ether (MTBE)			105.3		%		70-130	11-SEP-20
Styrene			87.8		%		70-130	11-SEP-20
Toluene			95.6		%		70-130	11-SEP-20

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Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
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Contact: Karen Phong

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC7-HSMS-VA		Water						
Batch	R5203993							
WG3402276-2	LCS							
meta- & para-Xylene			103.3		%		70-130	11-SEP-20
ortho-Xylene			93.4		%		70-130	11-SEP-20
WG3402276-1	MB							
Benzene			<0.00050		mg/L		0.0005	11-SEP-20
Ethylbenzene			<0.00050		mg/L		0.0005	11-SEP-20
Methyl t-butyl ether (MTBE)			<0.00050		mg/L		0.0005	11-SEP-20
Styrene			<0.00050		mg/L		0.0005	11-SEP-20
Toluene			<0.00045		mg/L		0.00045	11-SEP-20
meta- & para-Xylene			<0.00050		mg/L		0.0005	11-SEP-20
ortho-Xylene			<0.00050		mg/L		0.0005	11-SEP-20
WG3402276-5	MS	L2498615-1						
Benzene			97.0		%		50-150	11-SEP-20
Ethylbenzene			87.4		%		50-150	11-SEP-20
Methyl t-butyl ether (MTBE)			104.7		%		50-150	11-SEP-20
Styrene			84.3		%		50-150	11-SEP-20
Toluene			91.5		%		50-150	11-SEP-20
meta- & para-Xylene			99.0		%		50-150	11-SEP-20
ortho-Xylene			89.6		%		50-150	11-SEP-20

Quality Control Report

Workorder: L2498615

Report Date: 17-SEP-20

Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

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Contact: Karen Phong

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Report Date: 17-SEP-20

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ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Dissolved Solids by Gravimetric							
	1	27-AUG-20 12:00	11-SEP-20 12:30	7	15	days	EHTR
	2	27-AUG-20 12:00	11-SEP-20 12:30	7	15	days	EHTR
	4	28-AUG-20 12:00	11-SEP-20 12:30	7	14	days	EHTL
	5	28-AUG-20 12:00	11-SEP-20 12:30	7	14	days	EHTL
	6	28-AUG-20 12:00	11-SEP-20 12:30	7	14	days	EHTL
	7	28-AUG-20 12:00	11-SEP-20 12:30	7	14	days	EHTL
	8	28-AUG-20 12:00	11-SEP-20 12:30	7	14	days	EHTL
	9	30-AUG-20 12:00	11-SEP-20 12:30	7	12	days	EHT
Total Suspended Solids by Gravimetric							
	1	27-AUG-20 12:00	11-SEP-20 12:30	7	15	days	EHTR
	2	27-AUG-20 12:00	11-SEP-20 12:30	7	15	days	EHTR
	4	28-AUG-20 12:00	11-SEP-20 12:30	7	14	days	EHTL
	5	28-AUG-20 12:00	11-SEP-20 12:30	7	14	days	EHTL
	6	28-AUG-20 12:00	11-SEP-20 12:30	7	14	days	EHTL
	7	28-AUG-20 12:00	11-SEP-20 12:30	7	14	days	EHTL
	8	28-AUG-20 12:00	11-SEP-20 12:30	7	14	days	EHTL
	9	30-AUG-20 12:00	11-SEP-20 12:30	7	12	days	EHT
pH by Meter (Automated)							
	1	27-AUG-20 12:00	12-SEP-20 10:54	0.25	383	hours	EHTR-FM
	2	27-AUG-20 12:00	12-SEP-20 10:54	0.25	383	hours	EHTR-FM
	4	28-AUG-20 12:00	12-SEP-20 10:54	0.25	359	hours	EHTR-FM
	5	28-AUG-20 12:00	12-SEP-20 10:54	0.25	359	hours	EHTR-FM
	6	28-AUG-20 12:00	12-SEP-20 10:54	0.25	359	hours	EHTR-FM
	7	28-AUG-20 12:00	12-SEP-20 10:54	0.25	359	hours	EHTR-FM
	8	28-AUG-20 12:00	12-SEP-20 10:54	0.25	359	hours	EHTR-FM
	9	30-AUG-20 12:00	12-SEP-20 10:54	0.25	311	hours	EHTR-FM
Anions and Nutrients							
Nitrate in Water by IC (Low Level)							
	1	27-AUG-20 12:00	14-SEP-20 14:06	3	18	days	EHTR
	2	27-AUG-20 12:00	14-SEP-20 14:06	3	18	days	EHTR
	4	28-AUG-20 12:00	14-SEP-20 14:06	3	17	days	EHTR
	5	28-AUG-20 12:00	14-SEP-20 14:06	3	17	days	EHTR
	6	28-AUG-20 12:00	14-SEP-20 14:06	3	17	days	EHTR
	7	28-AUG-20 12:00	14-SEP-20 14:06	3	17	days	EHTR
	8	28-AUG-20 12:00	14-SEP-20 14:06	3	17	days	EHTR
	9	30-AUG-20 12:00	14-SEP-20 14:06	3	15	days	EHTR
Nitrite in Water by IC (Low Level)							
	1	27-AUG-20 12:00	14-SEP-20 14:06	3	18	days	EHTR
	2	27-AUG-20 12:00	14-SEP-20 14:06	3	18	days	EHTR
	4	28-AUG-20 12:00	14-SEP-20 14:06	3	17	days	EHTR
	5	28-AUG-20 12:00	14-SEP-20 14:06	3	17	days	EHTR
	6	28-AUG-20 12:00	14-SEP-20 14:06	3	17	days	EHTR
	7	28-AUG-20 12:00	14-SEP-20 14:06	3	17	days	EHTR
	8	28-AUG-20 12:00	14-SEP-20 14:06	3	17	days	EHTR
	9	30-AUG-20 12:00	14-SEP-20 14:06	3	15	days	EHTR
Hydrocarbons							
CCME F2-F4 Hydrocarbons in Water							
	1	27-AUG-20 12:00	11-SEP-20 04:08	14	15	days	EHT
	2	27-AUG-20 12:00	11-SEP-20 04:08	14	15	days	EHT
Polychlorinated Biphenyls							

Quality Control Report

Workorder: L2498615

Report Date: 17-SEP-20

Client: BluMetric Environmental Inc. (Ottawa)
4916 49 St
Yellowknife NT X1A 1P3

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Contact: Karen Phong

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Polychlorinated Biphenyls							
Polychlorinated Biphenyls							
	1	27-AUG-20 12:00	14-SEP-20 20:21	14	18	days	EHT
	2	27-AUG-20 12:00	14-SEP-20 20:21	14	18	days	EHT
	3	27-AUG-20 12:00	14-SEP-20 20:21	14	18	days	EHT
	4	28-AUG-20 12:00	14-SEP-20 20:21	14	17	days	EHT
	5	28-AUG-20 12:00	14-SEP-20 20:21	14	17	days	EHT
	6	28-AUG-20 12:00	14-SEP-20 20:21	14	17	days	EHT
	7	28-AUG-20 12:00	14-SEP-20 20:21	14	17	days	EHT
	8	28-AUG-20 12:00	14-SEP-20 20:21	14	17	days	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2498615 were received on 03-SEP-20 12:30.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

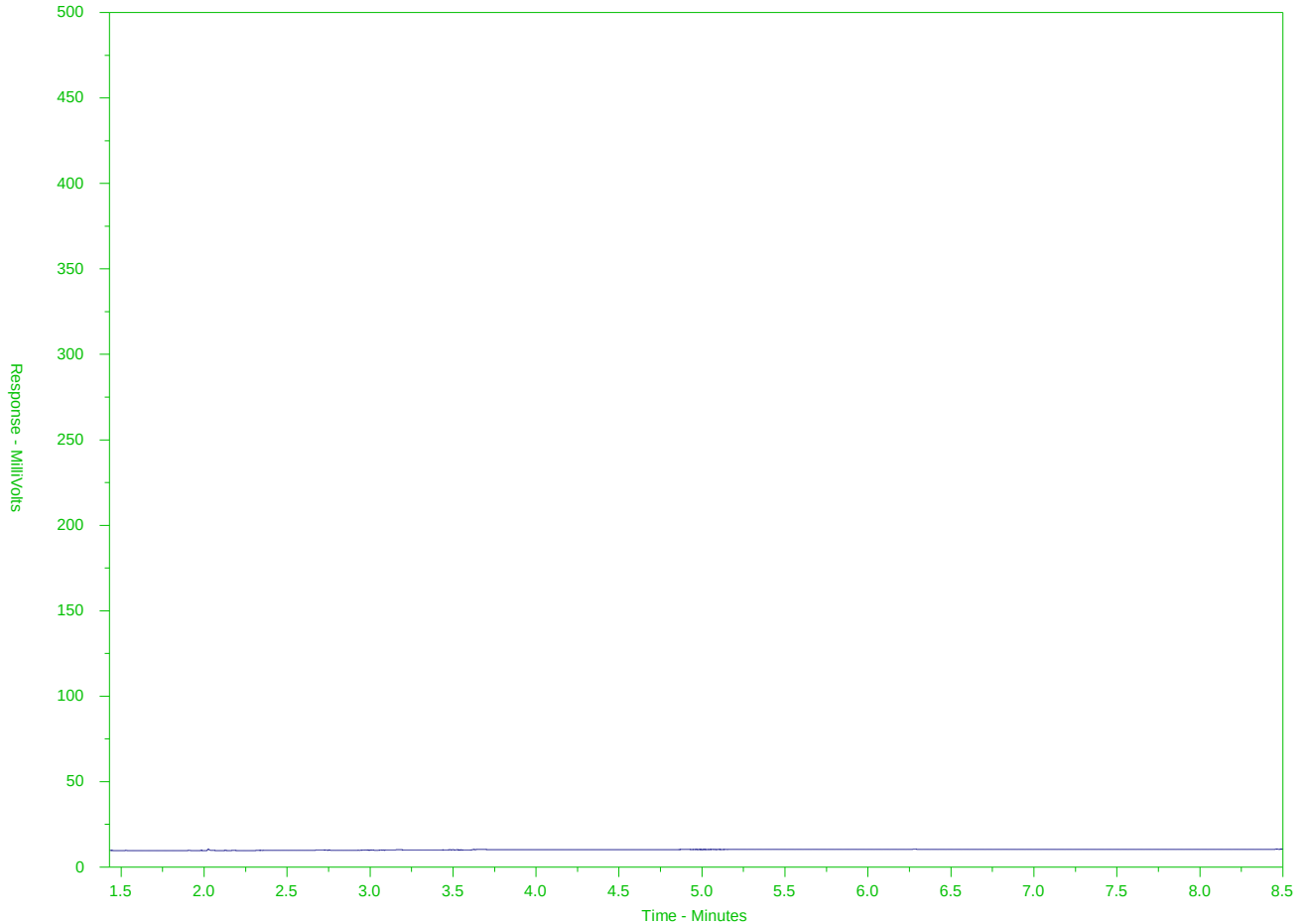
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2498615-C-1
Client Sample ID: MWLF-3



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34		nC50	
174°C	287°C	481°C		575°C	
346°F	549°F	898°F		1067°F	
← Gasoline →		← Motor Oils/ Lube Oils/ Grease →			
← Diesel/ Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

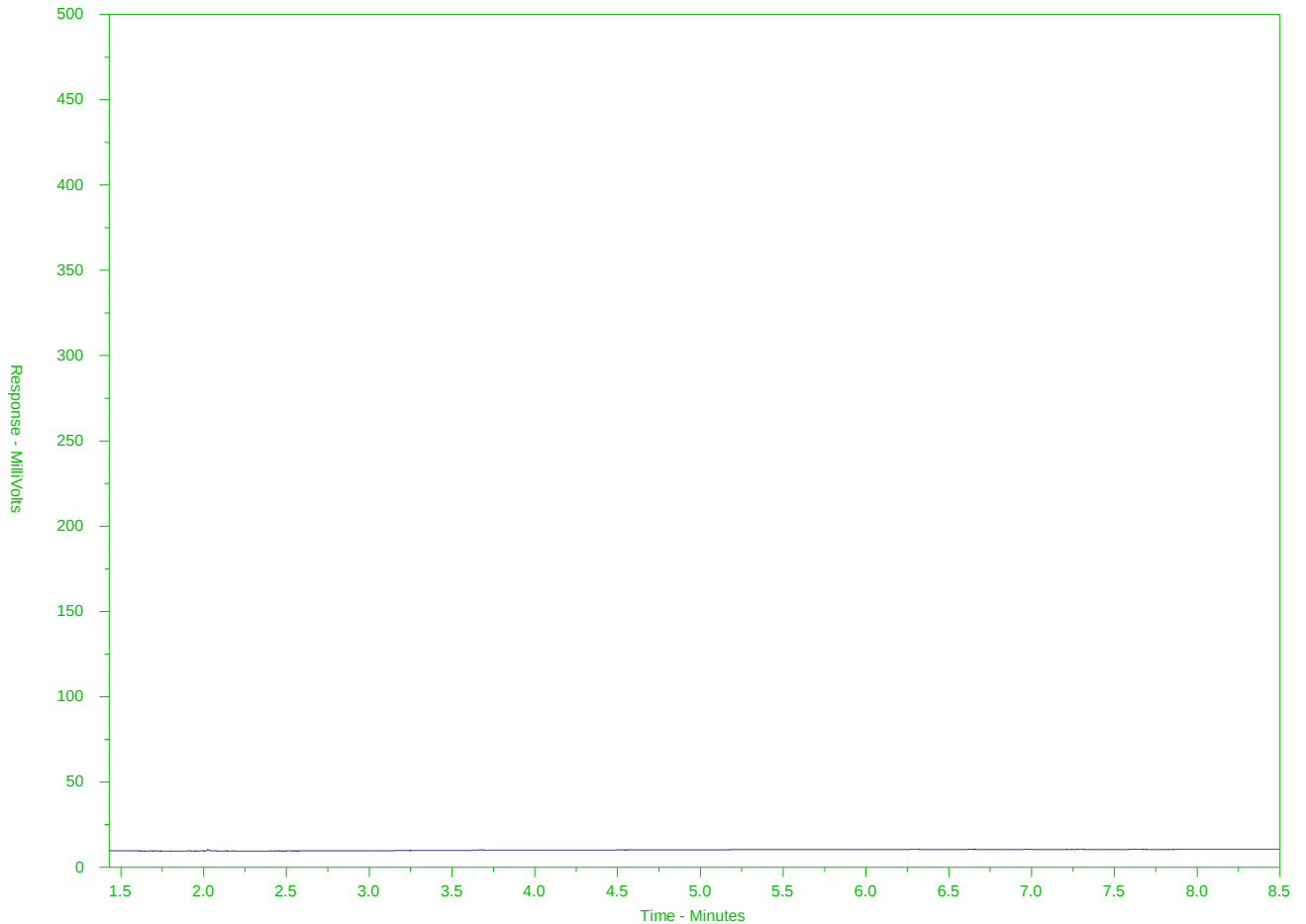
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2498615-C-2

Client Sample ID: MWLF-3-D



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34		nC50	
174°C	287°C	481°C		575°C	
346°F	549°F	898°F		1067°F	
← Gasoline →		← Motor Oils/ Lube Oils/ Grease →			
← Diesel/ Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

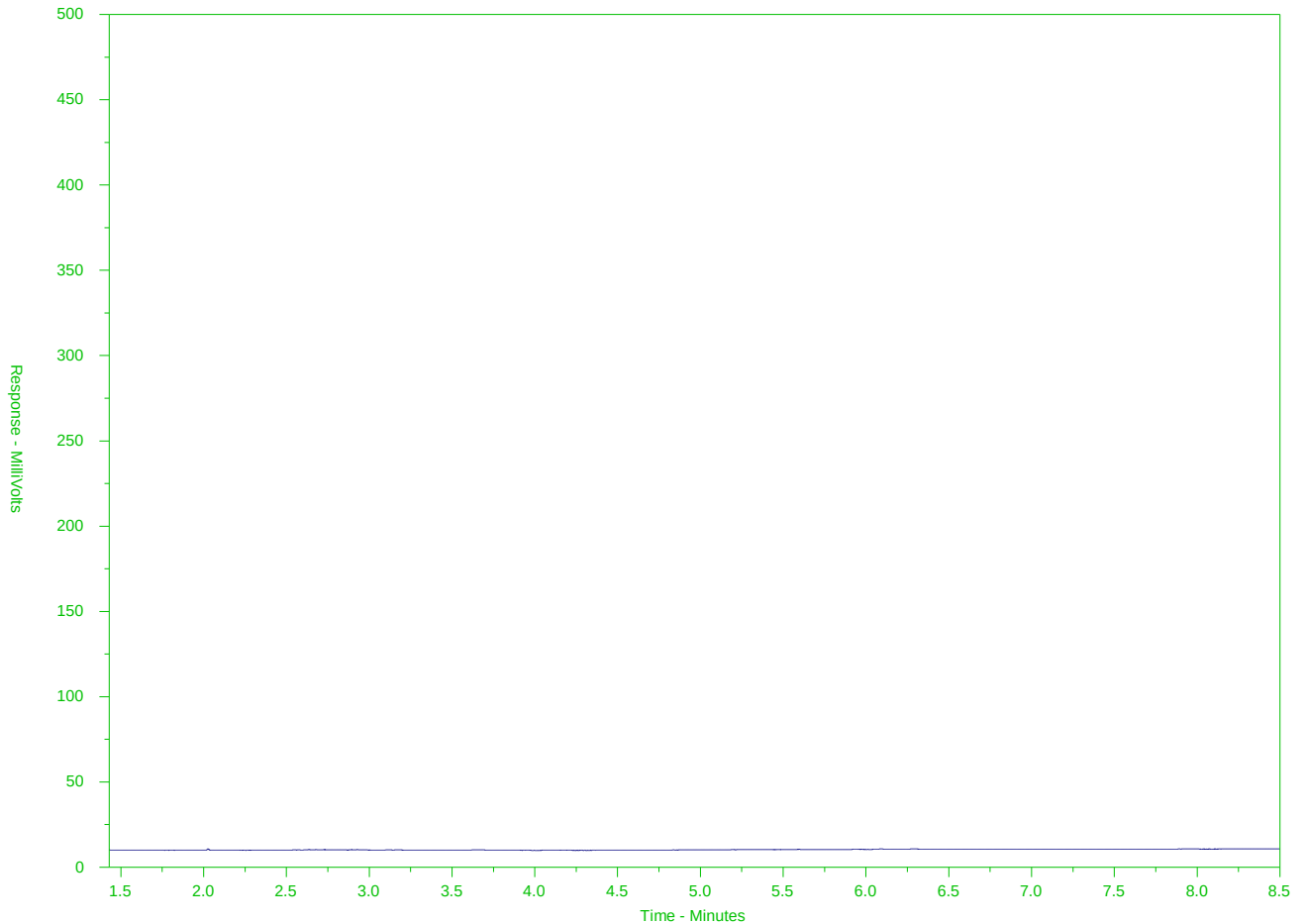
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2498615-C-4

Client Sample ID: MW01



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34		nC50	
174°C	287°C	481°C		575°C	
346°F	549°F	898°F		1067°F	
← Gasoline →		← Motor Oils/ Lube Oils/ Grease →			
← Diesel/ Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

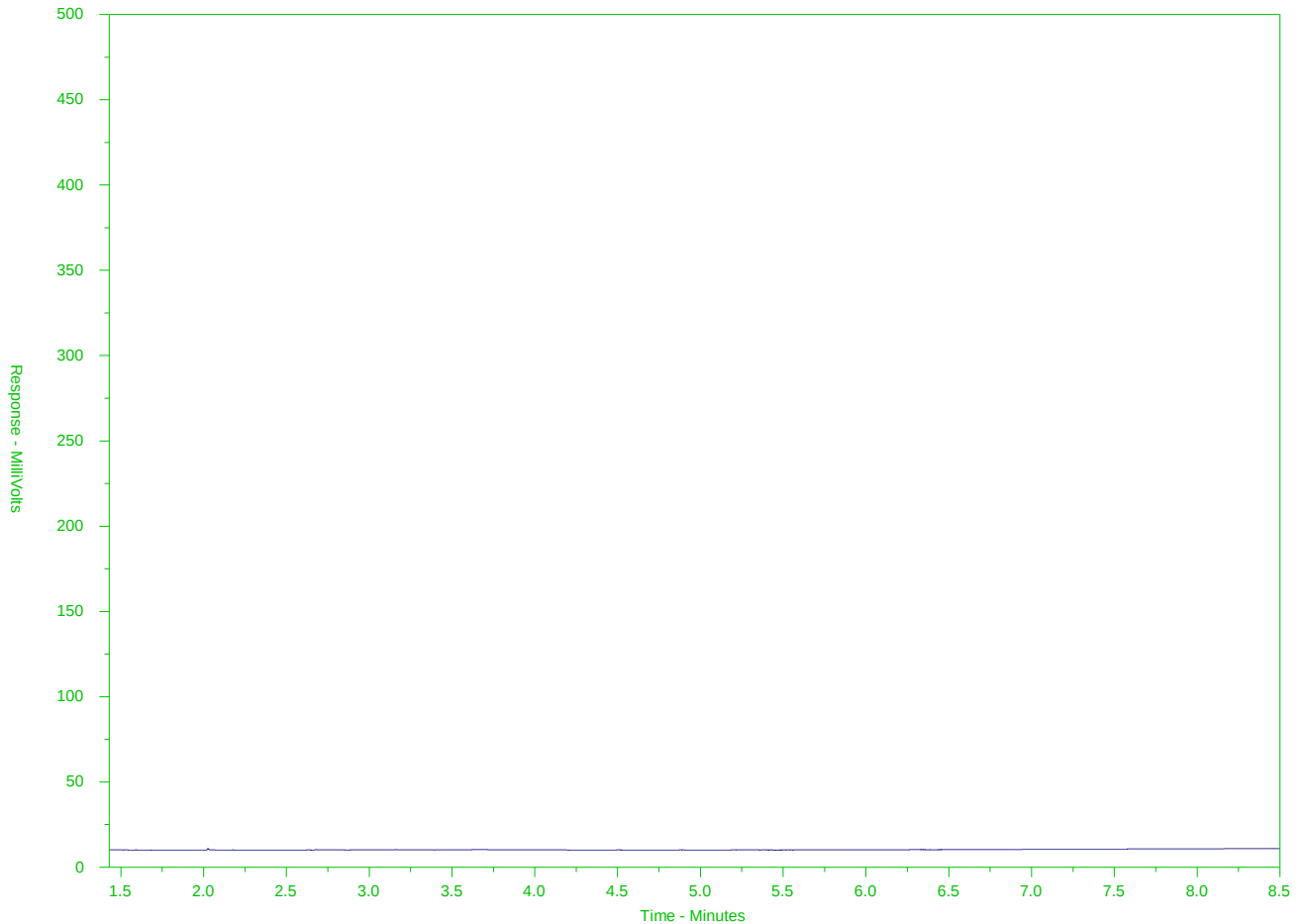
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2498615-C-5

Client Sample ID: MW02



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34		nC50	
174°C	287°C	481°C		575°C	
346°F	549°F	898°F		1067°F	
← Gasoline →		← Motor Oils/ Lube Oils/ Grease →			
← Diesel/ Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

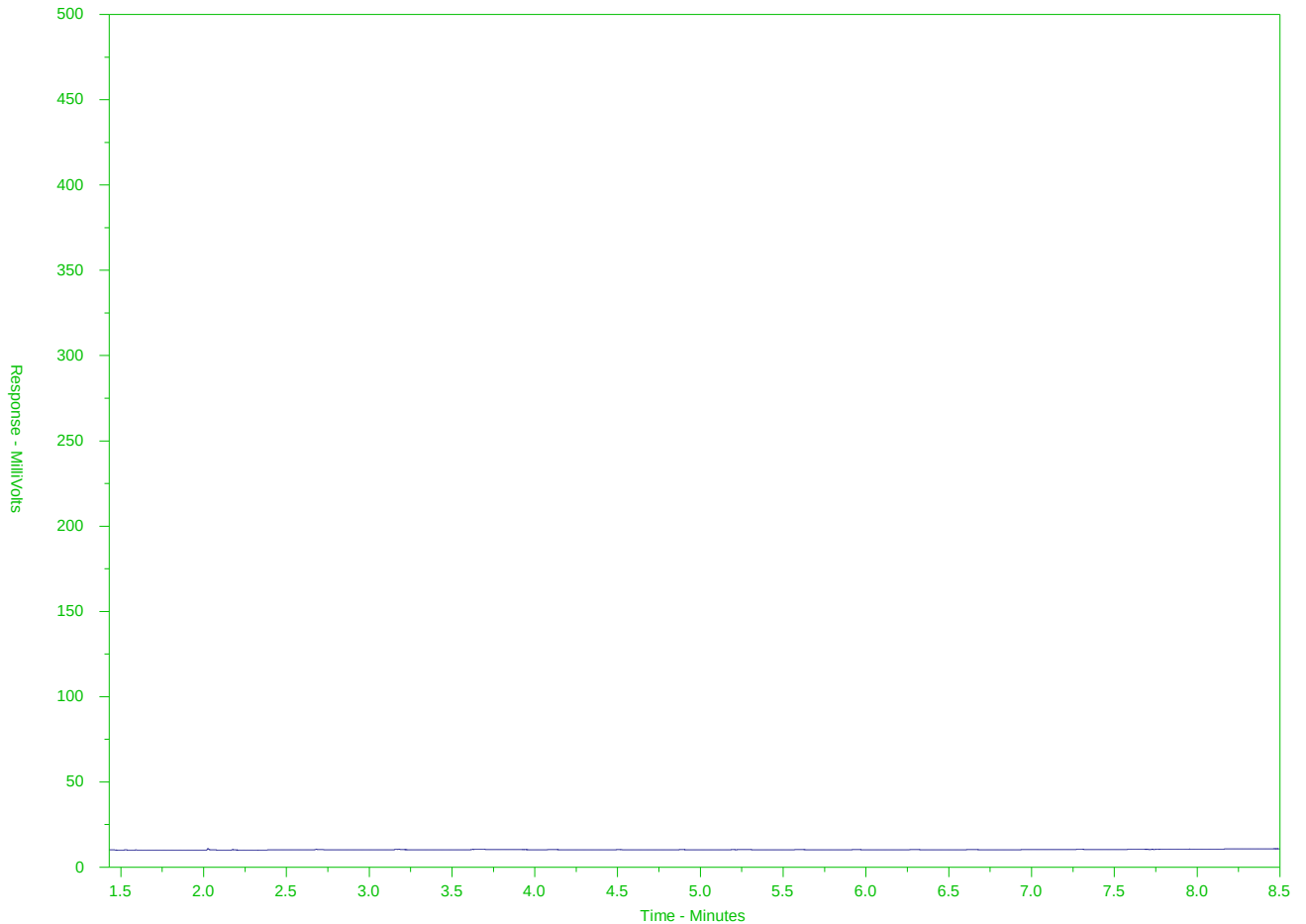
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2498615-C-6

Client Sample ID: MW02-D



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34		nC50	
174°C	287°C	481°C		575°C	
346°F	549°F	898°F		1067°F	
← Gasoline →		← Motor Oils/ Lube Oils/ Grease →			
← Diesel/ Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

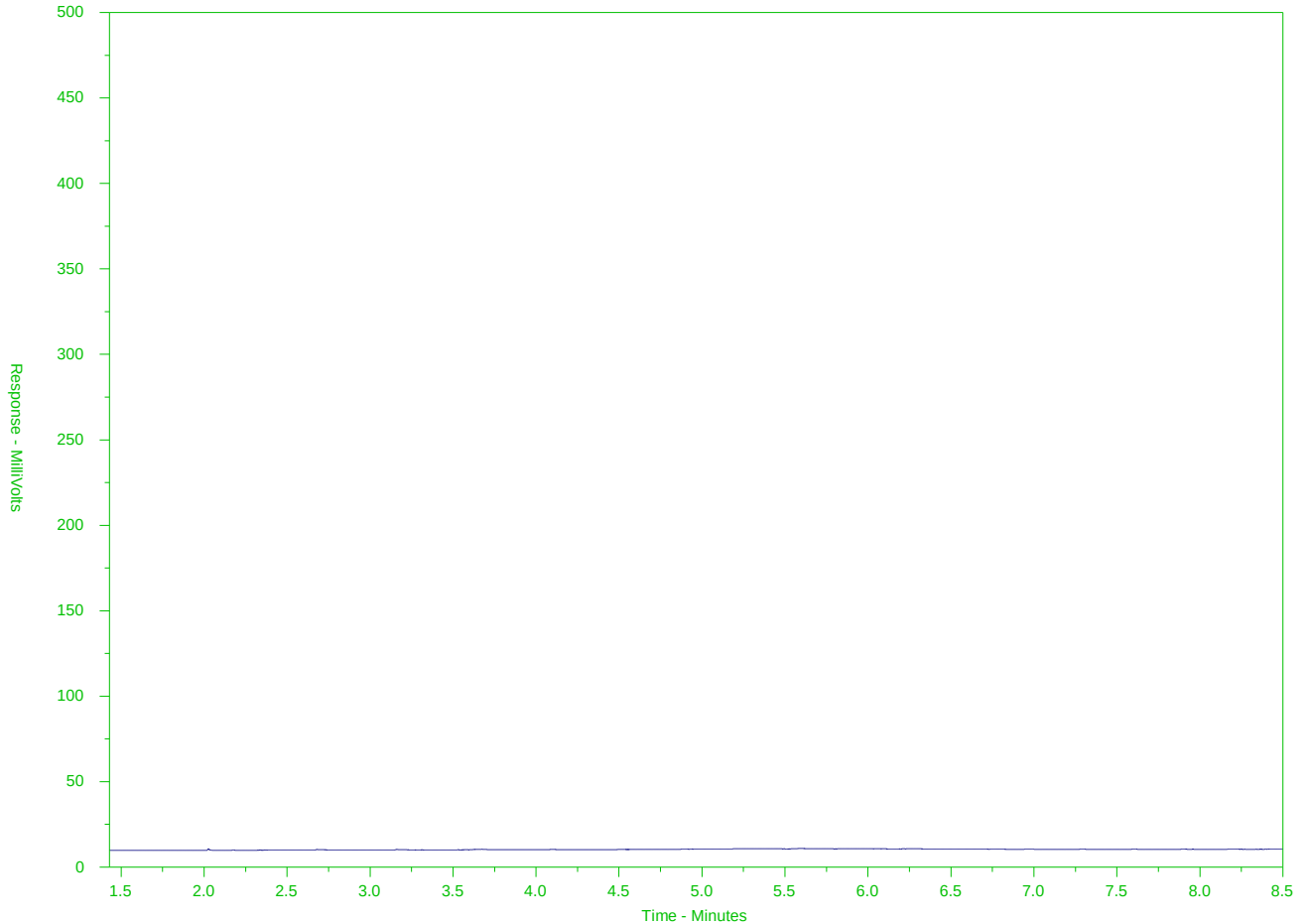
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2498615-C-7
Client Sample ID: MW03



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34		nC50	
174°C	287°C	481°C		575°C	
346°F	549°F	898°F		1067°F	
← Gasoline →		← Motor Oils/ Lube Oils/ Grease →			
← Diesel/ Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

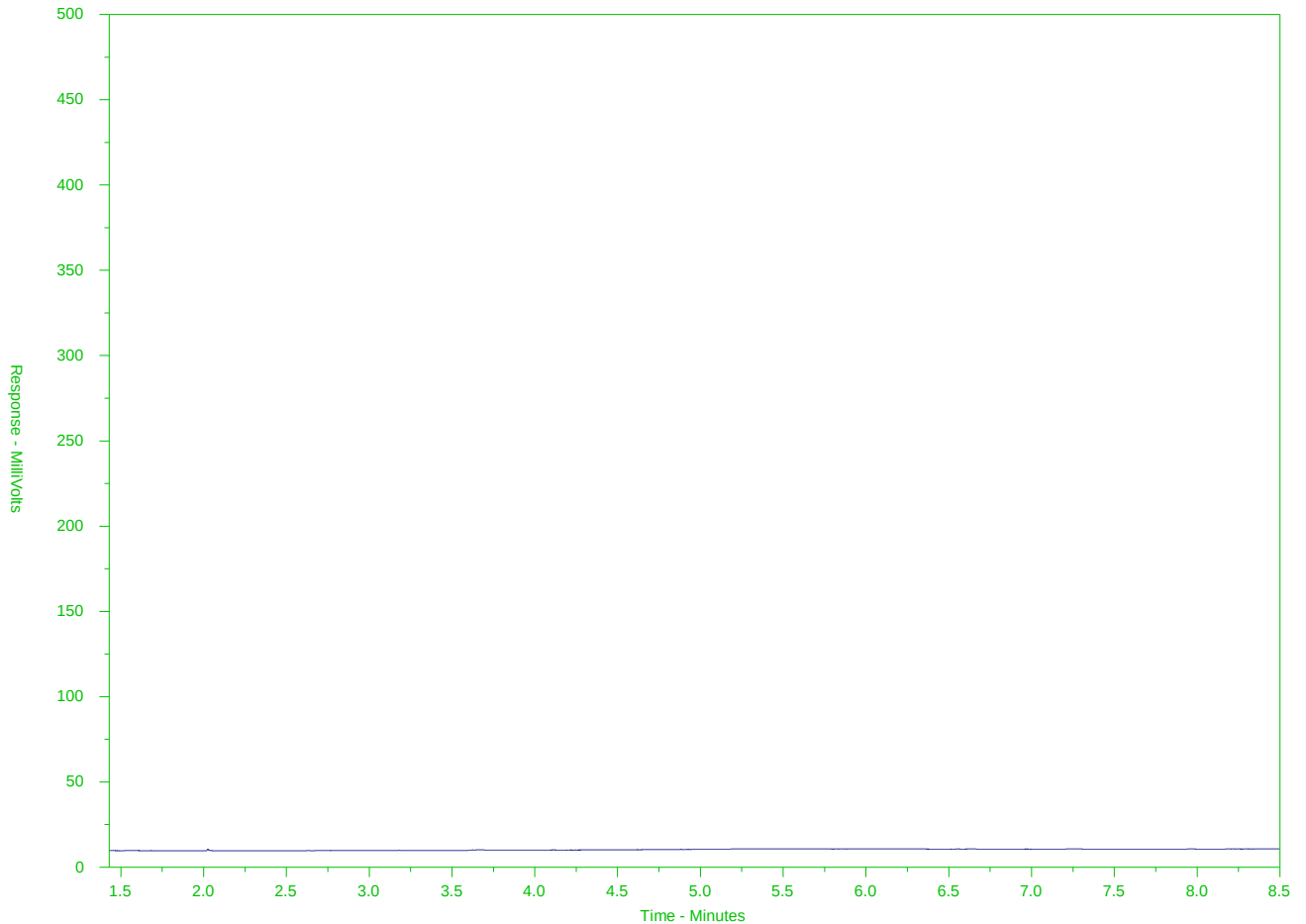
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2498615-C-8

Client Sample ID: MW04



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34		nC50	
174°C	287°C	481°C		575°C	
346°F	549°F	898°F		1067°F	
← Gasoline →		← Motor Oils/ Lube Oils/ Grease →			
← Diesel/ Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.

Report To Company: <u>BLM & R</u> Contact: <u>Karen Phang</u> Address: <u>4916 XIA 1st Yellowknife</u> Phone: <u>647 207 7765</u>		Report Format / Distribution Select Report Format: ☒ PDF ☐ EXCEL ☐ EDD (DIGITAL) Quality Control (QC) Report with Report ☐ Yes ☐ No Criteria on Report - provide details below if box checked Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: <u>KPhang@blmretail.ca</u> Email 2:		Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests) R ☒ Regular (Standard TAT if received by 3pm) P ☐ Priority (2-4 business days if received by 3pm) E ☐ Emergency (1-2 business days if received by 3pm) E2 ☐ Same day or weekend emergency if received by 10am - contact ALS for surcharge. Specify Date Required for E2, E or P:																																																				
Invoice To Same as Report To ☒ Yes ☐ No Copy of Invoice with Report ☒ Yes ☐ No Company: Contact:		Invoice Distribution Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: Email 2:		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																				
Project Information ALS Quote #: <u>200537</u> Job #: <u>200537</u> PO / AFE: LSD:		Oil and Gas Required Fields (client use) Approver ID: Cost Center: GL Account: Routing Code: Activity Code: Location:		Number of Containers																																																				
ALS Lab Work Order # (lab use only) <u>12498615</u>		ALS Contact: Sampler:																																																						
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Metal</td> <td>As-FY</td> <td>Li</td> <td>Gen Chem</td> <td>PCB</td> </tr> <tr><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> <tr><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> </table>		Metal	As-FY	Li	Gen Chem	PCB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Metal	As-FY	Li	Gen Chem	PCB																																																				
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	MWLF-3	27 Aug 20	PM	Water																																																				
	MWLF-3-D	27 Aug 20		Water																																																				
	MWLF-1	27 Aug 20																																																						
	MW01	28 Aug 20																																																						
	MW02	28 Aug 20																																																						
	MW02-D	28 Aug 20																																																						
	MW03	28 Aug 20																																																						
	MW04	28 Aug 20																																																						
	MW103	30 Aug 20																																																						

GENERAL TERMS AND CONDITIONS:

These terms and conditions are incorporated in and form part of the Agreement between ALS Group's Environmental Division and the party named in the Offer. (the "Client").

1. Definitions. Capitalized Terms not defined in these Terms and Conditions have the definitions set out in the other Agreement documents.
2. The Services. ALS will provide the Services to the Client as described in the Offer and in any change of custody form provided with any sample.
3. Prices. ALS may review and change all prices, fees, surcharges or other charges set out in the Agreement if there are changes to ALS's cost beyond ALS's control, including changes in legislative requirements, Client variations of sample numbers and Client requests for changes to standard reporting requirements. Notwithstanding Condition 3, all quotations are reviewed and updated on a yearly basis.
4. Payment Terms. The Client shall pay ALS within 30 days of the invoice date OAC. ALS may, for reasonable business reasons, require the Client to arrange for payment in advance.
5. Quotation Numbers. The Client shall provide the quotation number to ALS (where applicable) to ensure correct pricing.
6. Taxes. Applicable taxes are not included in prices, surcharges and additional fees and will be added at the time of invoicing.
7. Quality Control. ALS has an extensive QA/QC program. Clients' samples are analyzed using approved, referenced procedures followed by thorough data validation prior to reporting the analytical results.
8. Test Results are Not Guaranteed. Results are obtained from analytical measurements that are subject to inherent variability. Measurement results reflect characteristics of submitted test samples at time of analysis. The Client is responsible for informing itself on the limitation of test results and acknowledges that test results are not guaranteed.
9. Standard of Care. ALS will use reasonable care and diligence as required by the laws of the province or territory where the sample is tested.
10. Storage. Where possible, ALS will store samples for 30 days from the date a final report is issued to the Client, after which ALS may discard the samples.
11. Holds. If the Client requests a sample to be placed on hold, ALS will store the sample for 30 days from date of receipt, after which ALS will invoice the Client and discard the sample. Longer hold periods are available upon request.
12. Archives. If the Client requests a sample be archived, ALS will invoice in advance and store the sample for the period requested, after which ALS may discard the sample.
13. Handling Protocol. Legal sample handling protocol must be arranged before samples are collected. ALS charges a minimum 20% surcharge on the list price plus the hourly technologist or chemist rates for legal sample protocol. Additional charges will apply for samples that require storage by ALS.
14. Samples. The quality, condition, content and source of samples stored and tested are not known to ALS except as declared and described on the chain of custody form completed and submitted by the Client and accompanying the sample.
15. Risk of Loss. ALS will use reasonable care to protect samples during storage, however all samples are stored at the Client's risk and the Client is responsible for obtaining appropriate insurance, if desired. The Client acknowledges that during the performance of the Services samples may be altered, lost, damaged or destroyed and the Client releases ALS from any claim the Client may have for any loss or damage to the sample.
16. Environmental. The Client must comply with all applicable environment legislation, including labeling all hazardous samples to comply with WHMIS and TDG regulations, and must provide appropriate safety data sheets (previously referred to as 'MSDS') that include the nature of the hazard and a contact name and phone number to call for information. The Client will indemnify ALS for all loss or damages, including any fine or cost of complying with an order of any government authority, resulting from the Client's breach of this paragraph.
17. Hazardous Materials Disposal. ALS may return, at the Client's cost, hazardous material to the Client for disposal.
18. Hazardous Materials Surcharge. ALS may apply an additional surcharge for handling of hazardous samples or samples with Naturally Occurring Radioactive Materials (NORM), H2S, CN, etc.
19. Sample Containers. ALS may ship sample containers to the Client's location by the most cost effective means using ALS preferred courier suppliers, within the specified project timeline.
20. Additional Charges. ALS may charge the Client (a) its cost for emergency bottle shipments and shipments to and from a remote site, and (b) where pick up and delivery services are provided, subject in each instance to a minimum charge of \$25.00.
21. Re-Tests. ALS reserves the right to re-test any samples that remains in its possession. Re-tests requested by the Client may be charged.
22. Waiver. The Client is responsible for making any assessment regarding the suitability of the Services and the intended results for the Client's purposes and waives any claims against ALS it may have as a result of the interpretation of the results. The Client shall indemnify ALS for all claims made by any third party against ALS in respect of all losses however arising from the performance of the Services or the use of any report provided in the performance of the Services.
23. Limitation of Liability. In no event shall ALS be liable for any consequential, indirect, incidental, special, exemplary or punitive damages, whether foreseeable or unforeseeable, (including claims for loss of profits or revenue or losses caused by stoppage of other work or impairment of other assets) incurred by the Client arising out of breach or failure of express or implied warranty, breach of contract, breach of warranty, misrepresentation, negligence, strict liability in tort or otherwise. In any event, the liability of ALS to the Client shall be limited to the cost of testing the sample as requested in the chain of custody form under which the sample was originally deposited. For the purposes of this paragraph and paragraphs 8, 15, 16, 22 and 24, as the applicable, "ALS" includes without limitations its directors, officers, employees and affiliates and the "Client" includes without limitation any third party that may have a claim against ALS through the Client.
24. Notice of Liability. Notwithstanding paragraph 23, ALS shall not be liable to the Client unless the Client provides notice in writing to ALS of such loss or damage, together with full particulars thereof, within 30 days of the Client's receipt of the report of the analysis of the sample giving rise to such liability. The provisions of this paragraph allocate the risk under the Agreement between the Client and ALS, and the fees to be paid by the Client to ALS reflect this allocation of risks and the limitations of liability in this Agreement.
25. Entire Agreement. The Agreement is the entire agreement between the parties and supersedes and takes precedence over any terms and conditions contained in any documentation provided by the Client. ALS's execution of any subsequent documentation from the Client only acknowledges receipt and not acceptance of any terms or conditions therein. If there is a conflict between these terms and conditions and any other Agreement document, these terms and conditions prevail.
26. Term. Providing the first batch of samples to which this tender refers is submitted within three months of the starting date of this quotation, the following prices, terms and conditions will remain firm until the closing date. This offer, and terms and conditions will automatically lapse if the offer has not been accepted, and samples not delivered to ALS, within the Closing Date.
27. Termination. (a) Either party may terminate this Agreement for any reason by giving the other party thirty (30) days written notice (Notice Period). (b) If the Agreement is terminated pursuant to clause (a), then the Client must pay ALS for all Services performed up to the expiry of the Notice Period.

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